



Australian Government

Department of Communications and the Arts

# Review of Australian Broadcasting Services in the Asia Pacific

December 2018



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## Glossary of key terms

Key term	Description
Asia Pacific	For the purpose of this Review, the Asia and Pacific regions refer to the 40 countries listed in Section 1.2, noting that this excludes Australia and New Zealand. Definitions of the Asia Pacific region vary significantly, and use of the term in media/communication reports frequently includes just Australia and New Zealand as the “Pacific”.
Broadcasting services or broadcasts	For the purpose of this Review, the terms “broadcasting services” or “broadcasts” are used to refer to both: the more traditional definition (i.e. terrestrial, cable and satellite radio and television transmissions); as well as the distribution of online content services via internet communication services. This is a broader definition than is used for the purposes of the Broadcasting Services Act 1992 (see <a href="#">Appendix 2</a> ).
Broadcaster	For the purpose of this Review, a broadcaster is a provider of broadcasting services as defined above.
Demand for Australia’s Asia Pacific broadcasts	The “demand” for Australia’s Asia Pacific broadcasts refers to the quantities and types of those broadcasts that can either be potentially used, or are actually used, by Asia Pacific audiences. The “potential demand” for those services is the size of the audience who can potentially receive and understand those broadcasts. The “actual demand” for those services is the size of the audience who actually view, or listen to, those broadcasts.
Economic benefits	The economic benefits Australia derives from its publicly funded broadcasts to the Asia Pacific include: the direct benefits Australian broadcasters derive from those broadcasts; the benefits other Australian industries derive from those broadcasts (e.g. increased sales of tourism, education and health services to the Asia Pacific); as well as a range of indirect strategic policy objectives (e.g. foreign policy objectives).
Economic costs	The economic costs Australia incurs in order to provide publicly funded broadcasts to the Asia Pacific include: the direct costs Australian broadcasters incur to provide those broadcasts, the direct costs other Australian businesses incur to produce any additional goods and services that are supplied to the Asia Pacific as a result of those broadcasts; as well as the indirect costs Australia incurs in order to raise the taxation revenue required to fund those broadcasts.
Fortuitous audiences	Audiences who were not the intended or target audiences for those broadcasts, but still received and used those broadcasts.



Key term	Description
Narrowcasting	Narrowcasting is transmission of media content aimed at a narrowly defined audience. That meaning has shifted over the decades, increasingly applied to specialised transmission options and niche audiences.
Online content or online content services	Online content services refer to text, audio and video content delivered to consumers from broadcasters using internet communications services, including both free and subscriber services.
Supply of Australia's Asia Pacific broadcasts	The "supply" of Australia's Asia Pacific broadcasts refers to the quantities and types of broadcasting services that Australia provides to its potential audiences in that region. It is this supply of broadcasting services that determines the "potential reach" of those broadcasts—that is, the potential size of the audiences for Australia's broadcasts in the Asia Pacific region.
Target audiences	Target audiences are the intended audiences for broadcasts.
Traditional broadcasting services	Traditional broadcasting services include free and subscription services delivered by terrestrial radio and television transmissions, cable television transmission, and satellite radio and television transmissions.



## Executive summary

### 1. Objectives and scope of the Review

#### 1.1 Background

In September 2017, the Government agreed to conduct a review into the reach of Australian broadcasting services in the Asia Pacific region, including examining whether shortwave radio technology should be used (the “Review”).

The Review, which has been conducted jointly by the Department of Communications and the Arts (DoCA) and the Department of Foreign Affairs and Trade (DFAT) with the assistance of Sapere Research Group, is part of a package of media reform measures negotiated with the Nick Xenophon Team in September 2017.

In addition, the Review will also provide input into the Soft Power Review which was commenced by the Department of Foreign Affairs and Trade following the release of the 2017 Foreign Policy White Paper.

#### 1.2 Objectives and scope of the Review

As set out in the Terms of Reference of the Review, which were released on 4 June 2018 and are set out in [Appendix 1](#) of this report, the objective of the Review is to assess the reach of Australia’s media in the Asia Pacific region, including examining whether shortwave radio technology should be used. In particular, the Review analyses the:

- coverage and access to existing Australian media services in the Asia Pacific region, and
- use and value of Australian shortwave technology in the Asia Pacific region.

Consistent with its Terms of Reference, the scope of the Review covers:

- all media distribution platforms (i.e. television, radio and online)
- commercial, community and publicly funded services, and
- different types of technologies such as analog, digital and satellite radio and television services and online services.

As a result, the term “broadcasting services”, or “broadcasts”, is used in this report to refer to not only the more traditional terrestrial, cable and satellite radio and television transmissions, but also the distribution of online content via internet communication services.<sup>1</sup>

As set out in Table 1 of section 1.2, the scope of the Review includes the broadcasting services Australia supplies to 40 countries within the Asia Pacific region, which include 23 countries in Asia and 17 countries in the Pacific.<sup>2</sup>

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<sup>1</sup> This is a broader definition than is used for the purposes of the Broadcasting Services Act 1992 (see [Appendix 2](#)).

<sup>2</sup> It is noted that definitions of the Asia Pacific region vary—many public media industry reports include Australian and New Zealand as the main Pacific markets of consequence.

### 1.3 Approach adopted by the Review

The Review commenced with the publication of the Review Terms of Reference on 4 June 2018 calling for submissions from interested stakeholders by 3 August 2018.

A total of 433 submissions were received, including 310 pro forma submissions and 123 unique submissions of which 31 were from groups or organisations. Eighteen submissions were from people identifying as current or former Australian Broadcasting Corporation (ABC) staff or contractors. Submissions were received from Australia and countries in the Asia Pacific region, but also the United Kingdom, Germany, the United States of America and Peru.

Most submissions focused on issues surrounding broadcasting to the Pacific, with just seven explicitly discussing Asian markets. Those submissions discussing Asian markets were more likely to observe the diversity of markets, media and content and market trends away from broadcasting towards narrowcasting. Those discussing Pacific markets were more likely to focus on particular community needs and the role of shortwave broadcasting, particularly the ABC's cessation of shortwave broadcasting in the Pacific. There was little discussion of the cessation of shortwave broadcasting in the Asian markets.

The key themes that emerged from the submissions received by the Review, which are summarised in [Appendix 3](#) of this report, are as follows:

- Submissions highlighted the significant variation of media markets across and within countries of the Asia Pacific region. This included the highly competitive nature of some markets in Asia and dramatically changing historical patterns of media usage, which requires the use of a flexible “narrowcasting” approach that tailors content and distribution platforms to be fit for purpose for the target audiences in each country.
- Many submissions expressed concern that successive budget cutbacks have caused reductions in Australia's supplies of international broadcasting services, particularly to the Pacific. Consequently they advocated for the revitalisation of those international services, including alternative models for delivery and governance of Australian government funded international broadcasting services.
- The majority of submissions, which focused on the Pacific, advocated the restoration of ABC's shortwave services in the Pacific region.
- Submissions that were in favour of restoring shortwave services disputed the views that the technology has “limited and diminishing audiences” and disproportionately high costs.

Further discussions were held with a number of key stakeholders over the course of the review in order to clarify points raised in their submissions and to obtain additional information relevant to the Review.

The information and opinions contained in submissions and provided by key stakeholders were then verified against other independent sources of information, including:

- publicly available information
- confidential commercially available information, and
- information provided by Australia's diplomatic missions in the Asia Pacific region.



## 1.4 Objectives, structure and content of this report

This report presents the key findings of the Review regarding the:

- Reach of Australia's broadcasting services to the Asia Pacific. In order to assess the reach of Australia's Asia Pacific broadcasts, the Review conducted an analysis of the market for those broadcasts, including the:
  - supply of Australia's broadcasting services to the Asia Pacific region (section 2), which is what determines the "potential reach" of those broadcasts (i.e. the sizes of the audiences in the Asia Pacific that Australia's broadcasters can potentially reach), and
  - demand for those Asia Pacific broadcasting services (section 3), which is what determines the "actual reach" of those services (i.e. the actual sizes of the audiences in the Asia Pacific region who view, or listen to, those broadcasts).
- Costs and benefits of Australia's shortwave broadcasts to the Asia Pacific (section 4). In order to assess the value of Australia's shortwave broadcasts to the Asia Pacific, the Review conducted a quantitative analysis of the net benefits Australia has derived from its shortwave broadcasts to the Asia Pacific in the past, as well as a qualitative analysis of the net benefits Australia could expect to derive from resuming its shortwave broadcasts in the future.
- Opportunities to improve Australia's Asia Pacific broadcasts (section 5), including opportunities to increase the actual reach of those broadcasts, as well as the net benefits Australia and the Asia Pacific region derive from those broadcasts.

## 2. Australia's supply of broadcasting services to the Asia Pacific

### 2.1 Australia's Asia Pacific broadcasters

When Australia commenced its first regular international broadcasts in 1939, there was only one Australian broadcaster supplying regular shortwave broadcasts to the Asia Pacific region. Those first shortwave broadcasts, which were initially named "Australia Calling", were subsequently renamed "Radio Australia" and in 1950 became part of the Australian Broadcasting Commission, which is now the Australian Broadcasting Corporation.

Since then, however, advances in technology have resulted in the emergence of a much wider range of broadcasting platforms that can be used to reach audiences in the Asia Pacific region. Shortwave radio broadcasts are no longer the only way of reaching those audiences. Rather, it is now possible to reach those audiences using direct satellite broadcasts and indirect rebroadcasts through local Asia Pacific AM and FM radio stations, terrestrial and cable television stations as well as online content services.

As a result, Australia's publicly funded international broadcaster, the ABC, is no longer Australia's only Asia Pacific broadcaster. Rather, there is now a wide range of other Australian broadcasters who supply video and audio content to audiences in the Asia Pacific, including Australia's:

- publicly funded content suppliers (e.g. the ABC and SBS, as well as independent producers co-funded by Screen Australia and State Government equivalents)
- commercial broadcasters and content suppliers (e.g. Australia's commercial radio and television networks), and
- community groups and individuals who supply online content services over the internet.



## 2.2 Objectives of Australia's Asia Pacific broadcasts

Underlying the decision of successive Australian governments to publicly fund the provision of broadcasts to the Asia Pacific region is the recognition that:

- the welfare of Australia is heavily dependent on the welfare of the Asia Pacific region within which we reside—it is in Australia's best interests to work in partnership with its Asia Pacific nations to improve the welfare of the Asia Pacific region as a whole, and
- in the absence of those ongoing subsidies, Australia's broadcasters would fail to provide a socially optimal level of investment in, and provision of, broadcasting services to the Asia Pacific region.

## 2.3 Large and increasing potential reach of Australia's Asia Pacific broadcasts

The size of the potential audience for Australia's Asia Pacific broadcasts is very large, since the population of the Asia Pacific region comprises more than 65 per cent of the world's population. Almost all of the potential Asia Pacific audience for Australia's broadcasts lives in Asia (99.7 per cent of 4 billion people), with the remainder living in the Pacific (0.3 per cent), most of which live in Papua New Guinea (PNG) (70 per cent).

However, the potential audiences for Australia's Asia Pacific broadcasts are also extremely diverse. As a result, there is no one market for Australia's Asia Pacific broadcasts. Rather there are over 40 individual country markets between and within the 40 countries considered in the review, of which 23 are in Asia and 17 are in the Pacific. These individual country markets differ significantly in terms of their geographic size and population (e.g. they vary from very large countries such as China, which has a population of 1.4 billion, or 18.5 per cent of the world's population, through to very small countries such as Tokelau, which has a population of just 1,319), the numbers of different languages their populations use and understand, their cultural backgrounds and media preferences.

In practice, the ability of Australian broadcasters to reach the audiences within each of these diverse Asia Pacific markets is limited by a wide range of factors (e.g. geographic, technological, infrastructure constraints in the Asia Pacific region, information constraints regarding the demand for Australian broadcasts in the Asia Pacific, language barriers and cultural differences, legislative and regulatory constraints, as well as funding and cost constraints) that also differ significantly both across and within each of those markets.

## 2.4 Advances in technology have significantly increased potential reach of Australia's broadcasts

Advances in technology have increased the ability of Australian broadcasters to reach their audiences directly from Australia. Whereas Australian direct broadcasters were originally limited to using shortwave radio broadcasts to reach their target audiences in the Asia Pacific, since the 1990s they have been able to use satellite broadcasts to reach those audiences with much more reliable signals and much higher quantities and qualities of broadcasting services (e.g. high quality TV and radio broadcasts).

Similarly, advances in technology have also increased the ability of Australian broadcasters to reach their Asia Pacific audiences indirectly through the:

- provision of content to the large, and constantly increasing, numbers of local radio and TV stations in the Asia Pacific that are seeking unique international content to rebroadcast to their local audiences, and





- distribution of online content to Asia Pacific audiences via the internet. Virtually all radio and TV channels that are available to Australian audiences on the internet are now also available to audiences in the Asia Pacific.

However, the ability of Australia's broadcasters to indirectly reach each of the audiences in each of these diverse Asia Pacific markets is still constrained by the communications infrastructure available in those countries, which varies significantly both across and within those countries. In general, Australian broadcasters have the greatest potential to indirectly reach audiences in those countries where most of the population lives in urban areas and have relatively high incomes. By contrast, audiences in more remote areas of the Asia Pacific are much more difficult to reach indirectly using local radio, TV and internet broadcasts.

## 2.5 Content of Australia's broadcasts

Australian broadcasters provide a range of direct and indirect broadcasting services to the Asia Pacific region, including:

- Full channel content services, available 24 hours a day, 7 days per week (e.g. the ABC's television channel "ABC Australia" which is available on cable and satellite in all Pacific and all but four Asian countries, and "Radio Australia" which is available locally in Timor-Leste and six Pacific countries and across Asia and Pacific by satellite).
- Scheduled direct broadcasts (e.g. Christian television and radio broadcasts by 3ABN Australia, which supplies Australian content to international 3ABN's global satellite network to reach its audiences, and Reach Beyond Australia, Australia's remaining broadcaster using shortwave radio to reach its audiences in South Asia, South East Asia and East Asia).<sup>3</sup>
- Syndicated content services (e.g. programs or blocks of programming rebroadcast by local radio and TV stations in the Asia Pacific that are supplied by ABC Australia / Radio Australia, SBS, Seven Network, Nine Network, publicly funded content producers through Screen Australia, independent content producers such as Endemol Shine Australia which produces programs such as Masterchef and Offspring, as well as Macquarie Radio which distributes NRL broadcasts). Syndicated television content is available in all 40 countries in Asia and Pacific regions.
- Online content services delivered over the internet (e.g. ABC website, apps, and podcasts; SBS audio and language website; SkyNews website and news streams; Fox Sports website and app streaming of NRL and AFL content; TV network on demand services such as ABC's iview, SBS On Demand and Freeview TV; and online content provided by community and individual broadcasters). Online media services are used in every country in the Review scope except the small island nation of Wallis and Futuna, based on the set of services for which data was provided to the Review. This online demand is greatest in Thailand, followed by a group of Asian countries including Singapore, Japan, Indonesia, China, India, Philippines, Vietnam, Malaysia and South Korea. However, since aggregate demand for Australian online content from the Pacific region is ranked on a par with this group of Asian nations, the Pacific region leads demand for Australian online content on a per-capita basis.

<sup>3</sup> Note Australia's other main holder of current ACMA international broadcasting licences, the CVC Network ceased shortwave broadcasting in 2010 to focus on using the Internet as a broadcasting platform.



### 3. Demand for Australia's Asia Pacific broadcasting services

Although the potential reach of Australia's Asia Pacific broadcasts is large and increasing, the actual reach of those broadcasts is much smaller and more difficult to determine, since it also depends on the:

- ability of those potential audiences for Australia's broadcasts to receive and understand those broadcasts (i.e. it depends the size of the "potential demand" for those broadcasts), and
- willingness and ability of those potential audiences to pay for the cost of viewing, or listening to, those broadcasts (i.e. it depends on their "actual demand" for those broadcasts).

#### 3.1 Potential demand for Australia's Asia Pacific broadcasts

The greatest potential demand for Australia's broadcasts comes from those Asia Pacific audiences who have access to a TV. Over 50 per cent of the world's TVs are owned by audiences in the Asia Pacific, which reflects the preference that audiences in the Asia Pacific region have for watching video content rather than listening to audio content.

Significant potential demand for Australia's Asia Pacific broadcasts also continues to come from those audiences with access to an AM or FM radio receiver, albeit to a lesser extent than those audiences with access to a TV or access to the internet. For example, there are only 4 countries in the Asia Pacific where radio ownership exceeds TV ownership—Brunei, Laos, Timor-Leste and Nepal.

Significant increases in the potential demand for Australia's Asia Pacific broadcasts are also arising as a result of increases in the access that Asia Pacific audiences have to online content services:

- East, South and South East Asia represent the three largest online services markets and in combination comprise approximately half of the internet users worldwide
- the markets for mobile broadband access in most countries across both Asia and the Pacific have grown by between two and five times over the latest five year period for which data is available
- mobile broadband access rates now exceed 50 subscriptions per 100 person in most countries, compared with the maximum rate of 19 radio sets per 100 persons for countries for which there is data, and
- while Pacific nations may be starting from lower initial rates of mobile broadband market penetration (and correspondingly higher costs), some of the largest changes have occurred in these markets, closing the gap with Asian peers.

By contrast, there is relatively little potential demand for Australian shortwave radio broadcasts from the vast majority of the audiences who live in urban areas of the Asia Pacific. Rather, the information available to the Review:

- Highlights the utility of shortwave radio in particular communities for particular purposes.
- Confirms that the market for shortwave receivers is limited in relation to the market for alternative technologies (e.g. FM radios and mobile phones). Indeed, information provided by a number of distinct sources confirms that although shortwave radio broadcasts might seem to be an effective way of reaching more remote Pacific audiences, the actual reach of those broadcasts might be much less than expected since it can be difficult to find shortwave radio receivers to buy in the Pacific.



- Indicates that subsidies have been necessary in the past to encourage the ownership and use of shortwave radio receivers in the Pacific.

Since there are significant differences in the access that audiences in the Asia Pacific region have to the equipment and services required to receive Australia's broadcasts, there is no one broadcasting platform that is suited to reaching all of the audiences in each of those diverse markets. Rather, Australia's Asia Pacific broadcasters need to use those broadcasting platforms that provide the most effective and efficient way of reaching the target audiences in each one of those diverse markets.

### 3.2 Actual demand for Australia's Asia Pacific broadcasts

Ultimately, the actual demand for Australia's Asia Pacific broadcasts (i.e. the sizes of the audiences who actually view and listen to those broadcasts) is determined by the willingness and ability of Asia Pacific audiences to pay for those broadcasts. In general:

- Pacific audiences with similar cultural backgrounds as Australian audiences and fewer competing local broadcasters may have a higher willingness to pay for Australia's Asia Pacific broadcasts, but lower average incomes restricting their ability to meet the costs of accessing Australian broadcasts
- conversely Asian audiences with more cultural differences as well as large and dynamic local broadcasting markets have a lower willingness to pay while having higher ability to pay, and
- average incomes are rising across the Asia Pacific region, signalling the potential for significant growth in the potential demand for Australia's broadcasts to the Asia Pacific region.

There is relatively little information available on the extent to which Asia Pacific audiences actually view and listen to Australia's broadcasts, in view of the high cost of collecting that information. The limited information that is available indicates the actual reach is significantly smaller than the potential reach, for example:

- actual demand for Radio Australia may be between 46,000 and 172,000 in the seven nations where locally broadcast, compared to a potential reach of 1.3 million people based on the population within geographical broadcast reach, and
- one of the two Malaysian carriers (with 5 million subscribers) reported the average viewership of ABC Australia as 219,000 per month.

By contrast, there is an increasing amount of information available to Australia's broadcasters on the actual use of their online content by Asia Pacific audiences. In view of the commercial sensitivity of that information, however, only limited amounts of that information have been released publicly. Data specifically provided to the Review indicates that:

- the top 10 to 12 countries represent more than 90 per cent of demand from the Asia Pacific region
- the demand for Australia's broadcasts in India and China is significant, as is expected due to their population, internet access and use. In addition, the demand from the set of countries comprising Japan, South Korea, Philippines, Thailand, Vietnam, Cambodia and Malaysia is also significant across all services, which is consistent with the general finding above regarding the prominence of Asian internet users worldwide, and



- considered as a whole, the demand from audiences in the Pacific region is also significant across the services (with some exclusions and highlights). As a result, the demand for Australia's broadcasting services is disproportionately higher in the Pacific than would be suggested by the size of its population alone.

On the one hand, English language proficiency across these countries varies from low to high, so it is likely the accessibility of predominantly English language Australian content restricts demand to particular audiences in these countries, who are either more proficient than average or engaged in learning English.

On the other hand, there are sizeable Australian populations with heritage ties to these Asian and Pacific countries, so that it is likely that diaspora and expatriate communities are a driver of this demand, including from Australians while travelling in these countries and from Asian and Pacific residents interested in the lives of their Australian relations.

### 3.3 Advances in technology are changing the demand for Australia's Asia Pacific broadcasts

In addition to impacting supply, advances in technology are also having a profound effect on the demand for those broadcasts in the Asia Pacific region.

Advances in technology have reduced the cost of purchasing the equipment required to receive those broadcasts and increased the range of different types of broadcasts audiences can receive, which makes them more sensitive to the different prices they have to pay in order to access those broadcasts. In particular, advances in technology have given audiences greater flexibility to determine:

- what content they listen to and watch
- where they receive those broadcasts and that content
- when they receive those broadcasts and use that content
- how they search for broadcasts that contain the content they want to use, and
- how they form their views in relation to Australian broadcasts and other alternatives.

## 4. Costs and benefits of Australia's shortwave broadcasts

In order to assess the value of Australia's shortwave broadcasts to the Asia Pacific and determine whether Australia should use publicly funded shortwave broadcasts to reach its Asia Pacific audiences, the Review conducted a:

- quantitative analysis of the economic costs and benefits that Australia has incurred and derived from its provision of publicly funded shortwave broadcasts to the Asia Pacific in the past, and
- qualitative assessment of the economic costs and benefits that Australia would incur and derive if it was to resume its publicly funded shortwave broadcasts to a particular area of the Asia Pacific.

### 4.1 Objectives of Australia's shortwave broadcasts to the Asia Pacific

When opening Australia's first regular shortwave radio broadcasts to the Asia Pacific region, the then Prime Minister, Sir Robert Menzies, recognised Australia's place in the Asia Pacific region, the Government's desire to ultimately build a partnership between the countries in that region, and the important role that Australia's international broadcasts have in building that partnership.

Since then, successive Australian governments have continued to publicly fund the provision of broadcasts to the Asia Pacific region in recognition of the risk that, in the absence of that funding, Australian broadcasters would underinvest in the provision of broadcasts to the Asia Pacific region (i.e.



due to the existence of several potential sources of “market failure”). Although the ABC ceased its shortwave broadcasts to the Asia Pacific in 2017, the Australian Government, through the ABC, continues to publicly fund Australia’s broadcasts to the Asia Pacific region through a wide range of alternative platforms including satellite TV and radio broadcasts, rebroadcasts through local Asia Pacific AM and FM radio and TV stations, as well as the streaming of online content via the internet.

This ongoing commitment by the Australian Government to publicly fund Australia’s Asia Pacific broadcasts in order to maintain and build on its strong partnerships in the Asia Pacific, particularly with our Pacific neighbours, was confirmed in the Prime Minister’s recent address *Australia and the Pacific: A New Chapter*, which was delivered at Lavarack Barracks, Townsville on 8 November 2018. In that speech, the Prime Minister Scott Morrison announced the Australian Government’s recent decision to work with Australian commercial media operators to ensure that audiences in the Pacific have access to more quality Australian content on television and other platforms.

## 4.2 Economic costs of Australia’s shortwave broadcasts

Australia has had to incur a range of economic costs in order to supply publicly funded shortwave broadcasts to the Asia Pacific region in the past, which include the:

- direct costs incurred by those Australian businesses that were involved in supplying those publicly funded shortwave broadcasts to the Asia Pacific (e.g. the costs incurred by the ABC to supply those broadcasts, which include the costs of the content included in those broadcasts, as well as the costs of transmitting those broadcasts to audiences in the Asia Pacific region)
- direct costs incurred by other Australian businesses as a result of those shortwave broadcasts (e.g. Australian businesses who sold additional goods and services as a result of those broadcasts)
- direct costs incurred by Australians in order to listen to those shortwave broadcasts while they were living or travelling in other countries in the Asia Pacific, and
- indirect costs incurred by the rest of Australia in order to supply those shortwave broadcasts, which include the economic costs of raising the revenue required to subsidise those broadcasts (i.e. the “deadweight costs of taxation”) and the economic costs arising from any other unintended adverse effects that the provision of subsidised shortwave broadcasts have had on national welfare.

Using information supplied by the ABC on its expenditure on those shortwave broadcasts, the Review has estimated that since 2007–08, Australia has incurred \$80.6 million of economic costs, expressed in present value terms (i.e. 2018–19 dollars), in order to provide shortwave radio broadcasts to the Asia Pacific region. This included, expressed in present value terms:

- \$30.1 million of expenditure on providing shortwave broadcasts to Asia
- \$44.5 million of expenditure on providing shortwave broadcasts to the Pacific, and
- \$6.0 million of economic costs that Australia incurred in order to raise the taxation revenue required to fund those broadcasts.

These estimated economic costs are intended to be indicative only, since they exclude a range of other costs (e.g. the costs incurred by Australians living in or visiting the Asia Pacific and the economic costs Australia incurred as a result of any unintended adverse effects that the subsidisation of those broadcasts had on economic efficiency and distributional equity).



### 4.3 Economic benefits of Australia's shortwave broadcasts

The Review also used the information supplied by the ABC to estimate the magnitude of the economic benefits Australia has derived in the past from its shortwave broadcasts to the Asia Pacific region. In effect, the information that the ABC has supplied on the amount of money it was willing to spend on its past Asia Pacific shortwave broadcasts provides an indication of the economic benefits that the Australian Government expected to derive from those broadcasts.

Using that information, it is estimated that since 2007–08, Australia derived \$120.9 million of benefits, expressed in present value terms, from its provision of shortwave radio broadcasts to the Asia Pacific region, which included:

- \$48.8 million of benefits from providing shortwave broadcasts to Asia, and
- \$72.1 million of benefits from providing shortwave broadcasts to the Pacific.

By deducting the estimated economic costs of supplying those shortwave broadcasts from those estimated economic benefits, it is estimated that since 2007–08, Australia derived \$40.3 million of net benefits from its shortwave broadcasts to the Asia Pacific region, which included:

- \$16.3 million of benefits from the provision of shortwave broadcasts to Asia, and
- \$24.0 million of benefits from the provision of shortwave broadcasts to the Pacific.

Once again, it is important to note that these estimated net benefits are only intended to be indicative to the extent that they do not include a range of economic costs and benefits.

### 4.4 Potential net benefits from resuming Australia's Asia Pacific broadcasts

Although Australia is likely to have derived significant net benefits from its shortwave broadcasts to the Asia Pacific in the past, this does not necessarily mean that it would continue to derive those net benefits in the future if it resumed those broadcasts.

Rather, it is likely that ongoing advances in technology, as well as increases in the competition that publicly funded Australian shortwave broadcasters would face in the Asia Pacific markets for their broadcasts, would continue to decrease any net economic benefits Australia derived from those broadcasts by:

- increasing the direct costs of shortwave broadcasts in relation to the costs of using other broadcast platforms, and
- increasing the availability of alternative platforms that could be used to reach those target audiences.

This does not mean that Australia would not generate net benefits from resuming shortwave broadcasts to certain areas of the Asia Pacific, particularly those audiences living in the more remote areas who have little access to alternative broadcasts via terrestrial, cable or satellite radio and TV, or the internet.

However, it does mean that in order to ensure that public funding of those shortwave broadcasts is in Australia's best interests, it would be necessary to conduct a detailed evaluation of those proposed investments from the nation's perspective (i.e. conduct a detailed social cost benefit analysis) in order to establish that those shortwave broadcasts would:

- generate a net benefit for the nation as a whole
- generate a net benefit for the nation as a whole greater than alternative investments in other broadcasting platforms that could be used to reach the target audience, and





- generate a net benefit to the nation as a whole greater than alternative investments in broadcasts to reach other target audiences.

This would require the evaluation of alternative broadcasting investments, including any proposed investment in the provision of publicly funded shortwave broadcasts to a particular target audience in the Asia Pacific, using the same best practice evaluation guidelines that have been developed to assess the economic costs and benefits of other publicly funded infrastructure investments in Australia.

In the absence of a clear statement of the objectives Australia's Asia Pacific broadcasts (see section 5.1.1) and a clear articulation of the full range of alternative options for achieving those objectives, it is not possible to determine whether Australia would derive a net benefit from resuming its shortwave broadcasts to the Asia Pacific.

However, in the light of the evidence presented to this Review, it seems unlikely that shortwave broadcasts would generate the greatest net benefits compared to the alternatives given the:

- high costs of shortwave transmission services
- costs of subsidising the purchase of shortwave radios for some audiences
- low cost of alternative platforms or investments such as:
  - rebroadcasting through local AM/FM radio stations, for which receivers are widely available, and
  - online broadcasting, given that internet access is rapidly increasing, and costs are rapidly decreasing, across the Asia Pacific, and
- the significant uncertainty surrounding the actual use of shortwave broadcasts across Asia Pacific media markets.

## 5. Opportunities to improve Australia's Asia Pacific broadcasts

In the course of assessing the reach of Australia's Asia Pacific broadcasts and the economic costs and benefits of those broadcasts, the Review has also sought to identify a range of opportunities for Australia to improve those broadcasts by increasing their actual reach as well as the net benefits the nation as a whole derives from those broadcasts (section 5).

### 5.1 Opportunities to increase the actual reach of Australia's Asia Pacific broadcasts

#### Opportunities to clarify the objectives of Australia's Asia Pacific broadcasts

Australia has the opportunity to improve the actual reach of its broadcasts to the Asia Pacific region by clarifying the objectives of its Asia Pacific broadcasts and the practical constraints that limit the extent to which it can achieve those objectives.

Submissions received by the Review:

- confirmed the need to clarify the role that Australia's international broadcasts to the Asia Pacific are expected to play in achieving Australia's strategic policy objectives and identify the target audiences for those broadcasts, and
- identified a range of alternative approaches that could be used to achieve such a clarification.

Additional opportunities to clarify the objectives of Australia's international broadcasts will arise following the Government's consideration of the recommendations of the Soft Power Review and the Independent Review of the Public Governance Performance and Accountability Act (PGPA Act).

In particular, there are opportunities for the key stakeholders involved in Asia Pacific Broadcasts (e.g. the Department of Communications and the Arts, the Department of Foreign Affairs and Trade,



Australia's publicly funded broadcasters and suppliers of content, commercial broadcasters, as well as community groups and individuals) to work together in partnership on the development of integrated strategic plans to increase the actual reach of Australia's Asia Pacific broadcasts in order to achieve those broader strategic policy objectives.

#### Giving Australia's Asia Pacific broadcasters the opportunity to perform their role efficiently

In addition to clarifying the role that Australia's Asia Pacific broadcasts are expected to play in achieving Australia's strategic policy objectives, it is also important to ensure that Australia's Asia Pacific broadcasters are given the opportunity to determine the most effective and efficient way of achieving both their statutory objectives and those broader strategic policy objectives.

In particular, it is important to ensure Australia's public funded Asia Pacific broadcasters are provided with the autonomy they need to determine the most effective and efficient:

- broadcasting platforms to use in order to reach those target audiences, and
- language and content to use in order to ensure that Australia's broadcasts are understood and enjoyed by those target audiences.

#### Opportunities to improve the content of Australia's Asia Pacific broadcasts

The main barriers to increasing the actual reach of Australia's Asia Pacific broadcasters are no longer technological. Whereas Australian broadcasters originally used to have to rely on shortwave radio broadcasts for direct reach to their Asia Pacific audiences in the past, they now have a much wider range of direct and indirect broadcasting platforms to use (e.g. satellite TV broadcasts, rebroadcasting through local AM and FM radio stations, TV stations, and online content streaming over the internet). Although some audiences are more difficult and costly to reach (e.g. audiences in the more remote areas of the Asia Pacific region), those audiences only comprise a very small proportion of the actual and potential demand for Australia's broadcasts.

Rather, the main barriers that continue to constrain the actual reach of Australia's broadcasts are the:

- ability of Asia Pacific audiences to understand Australia's broadcasts. Since there are significant differences in the languages that are spoken by the audiences in Australia's diverse Asia Pacific markets for its broadcasts, the use of one language (e.g. English, which is the predominantly language used by most of Australia's Asia Pacific broadcasts) continues to constrain both the potential and actual demand for those broadcasts, and
- willingness and ability of Asia Pacific audiences to pay for Australia's Asia Pacific broadcasts, which largely depends on the extent to which they find the content of Australia's broadcasts interesting and entertaining in relation to the content of other competing broadcasts.

Submissions received by the Review:

- highlighted the importance of selecting the most appropriate language and content to reach Australia's disparate audiences in the Asia Pacific
- identified the type of content they considered should be included in Australia's broadcasts to its different audiences in the Pacific (e.g. enhanced news and current affairs programs, emergency broadcasting and "near news" and other programs, including environment, music, culture and the arts would be a priority along with sports broadcasts and programs connecting Australian Pacific diaspora communities and South Pacific communities in Australia with their home nation communities) and Asia (e.g. English language lessons, news and "near news" bulletins including up-to-the-minute material on topics such as health, agriculture, science, environment, business, arts and culture, sport or technology), and





- highlighted the significant opportunity that Australia has to work in partnership with Australia's large and increasing "diaspora" communities to produce and distribute content that is more appropriate to suit the languages spoken by, broadcasting platforms used by, and preferences of, Australia's Asia Pacific audiences. These opportunities are discussed further in section 5.2 of the report.

## 5.2 Opportunities to increase the net benefits from Australia's Asia Pacific broadcasts

Australia and its partners in the Asia Pacific region also have a range of opportunities to increase the potential benefits they derive from Australia's Asia Pacific broadcasts.

### Opportunities to improve the evaluation of alternative broadcasting investments

In particular, the recommendations by the Independent Review of the PGPA Act to improve the quality of performance reporting, through the use of more effective evaluation of the impacts of government programs, provides an opportunity to improve both the:

- evaluation of major investment decisions made by Australia's publicly funded international broadcasters (e.g. whether or not to continue or cease shortwave broadcasts to the Asia Pacific). When making major social infrastructure investment decisions, public broadcasters need to apply the same best practice approaches to evaluating alternative options as do the other government agencies that are responsible for making infrastructure investments decisions on behalf of the Government; and
- documentation, transparency and public understanding of those decisions. In addition to undertaking more rigorous evaluations of proposed investment decisions to ensure they are in the nation's best interests, it is also important to ensure that the results of those evaluations are documented and publicly available.

### Opportunities to leverage Australia's multicultural resources and diaspora communities

Australia is home to large and constantly growing multicultural communities of immigrants who maintain close ties with their families and friends back home.

In addition, each year increasing numbers of people from the Asia Pacific region visit Australia for a wide variety of reasons including running their businesses in Australia, working in Australia, going on holidays, visiting families and friends, attending our schools and universities and receiving medical treatment from our hospitals and other health service providers.

Both the 2017 Foreign Policy White Paper and submissions received by the Review recognise the unique opportunity these large and growing "diaspora communities" provide for Australia to improve its Asia Pacific broadcasts.

In particular, the 2017 Foreign Policy White Paper recognises the strength of Australia's diaspora communities and its commitment to working with those diaspora communities to promote Australia's image and reputation, to encourage trade and investment and, where appropriate, to support our development assistance program.

In addition, submissions received by the Review highlighted the significant opportunities Australia has to:

- improve the content of Australia's broadcasts through the use of Australia's diasporic language content (e.g. the multilingual content developed by Australia's publicly funded broadcaster, the SBS, as well as the content developed by Australia's Asia Pacific multicultural communities), and



- improve the distribution of that content by continuing to shift away from more traditional transmission-based models of delivery to inter- and intra-country-specific “narrowcasting” model using multiple broadcasting platforms.

The composition of Australia’s diaspora communities should assist in this regard. In general, Australia’s largest Asian diaspora communities (e.g. China and India, but also Vietnam, Philippines, Malaysia, Sri Lanka, South Korea, Indonesia, Thailand and Pakistan) come from those countries in the Asia Pacific where the potential demand for Australia’s broadcasting services is greatest (e.g. in alphabetical order, China, India, Indonesia, Japan, Malaysia, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam). That is, Australia’s scope to increase the actual reach of its Asia Pacific markets, and the soft power it exerts in those markets, is greatest for those countries that are strongly tied to Australia through Asian diaspora communities.

In addition, Australia’s long history of strong economic and cultural ties with its Pacific neighbours means that, on a population adjusted basis, Australia’s ability to actually reach those audiences and exert its soft power influence in the Pacific region, is greater than its current ability to reach and influence its audiences in Asia.

#### Opportunities to facilitate the growth of innovative partnerships

There are also opportunities to increase the net benefits that both Australia and the Asia Pacific region derive from Australia’s Asia Pacific broadcasts by facilitating the growth of innovative partnerships between public, commercial, community and individual broadcasters that:

- build on the Australia Government’s recent decision to work with Australian commercial media operators to ensure that audiences in the Pacific have access to more quality Australian content on television and other platforms
- learn from Australia’s other successful international partnerships, and
- apply contracting arrangements that are more suited to those innovative partnerships (e.g. “alliance contracting” models).



# 1. Introduction

## 1.1 Background to the Review

On 4 June 2018, the Department of Communications and the Arts (DoCA) released the Terms of Reference for a review of Australian media services (the “Review”) and, in particular, the role of shortwave broadcasting.

The Review, which has been conducted jointly by the DoCA and the Department of Foreign Affairs and Trade (DFAT) with the assistance of Sapere Research Group, is part of a package of media reform measures negotiated with the Nick Xenophon Team (NXT) in September 2017.

In addition, the Review will also provide input into the Soft Power Review which was commenced by the DFAT following the release of the 2017 Foreign Policy White Paper. While separate to this review of Australian media services, the Soft Power Review is expected to consider the role of Australian media as a facilitator of soft power.

## 1.2 Terms of Reference

As set out in the Terms of Reference (see [Appendix 1](#)), the objective of the Review is to assess the reach of Australia’s media in the Asia Pacific region, including examining whether shortwave radio technology should be used.

Specifically, the scope of the Review involves an analysis of the:

- coverage and access of existing Australian media services in the Asia Pacific region, and
- use and value of Australian shortwave technology in the Asia Pacific region.

The Review covers:

- all media distribution platforms (i.e. television, radio and online), with the exception of print media
- commercial, community and publicly funded services, and
- different types of technologies such as analog, digital, satellite radio and television services, as well as online services.

For the purposes of this report, these media services are collectively referred to as “broadcasting services”, or “broadcasts”. That is, the term “broadcasts” is used to refer to not only the more traditional terrestrial, cable and satellite radio and television transmissions, but also the distribution of content via the internet. This is a broader definition than is used for the purposes of the *Broadcasting Services Act 1992* (see [Appendix 2](#)).

The scope of the Review includes the broadcasting services Australia supplies to 40 countries within the Asia Pacific region as detailed in Table 1 below, which include 23 countries in Asia and 17 countries in the Pacific.



Table 1: Asia Pacific countries within the scope of the Review

Asian countries	Pacific countries
Bangladesh	Cook Islands
Bhutan	Fiji
Brunei Darussalam	French Polynesia
Cambodia	Kiribati
China	Marshall Islands
India	Micronesia
Indonesia	Nauru
Japan	New Caledonia
Laos	Niue
Malaysia	Palau
Maldives	Papua New Guinea
Mongolia	Samoa
Myanmar	Solomon Islands
Nepal	Tokelau
Pakistan	Tonga
Philippines	Tuvalu
Singapore	Vanuatu
South Korea	
Sri Lanka	
Taiwan	
Thailand	
Timor-Leste	
Vietnam	

## 1.3 Approach to the Review

### 1.3.1 Consultation with key stakeholders

The Review commenced with the publication of the Review Terms of Reference on 4 June 2018 calling for submissions from interested stakeholders by 3 August 2018.<sup>4</sup>

The submissions received were analysed and a summary of the key points raised in those submissions was prepared. As outlined in [Appendix 3](#), a total of 433 submissions were received, including 310 pro forma submissions and 123 unique submissions of which 31 were from groups or organisations. Eighteen submissions were from people identifying as current or former Australian Broadcasting Corporation (ABC) staff or contractors. Submissions were received from Australia and countries in the Asia Pacific region, as well as the United Kingdom, Germany, the United States of America and Peru.

Most submissions focused on issues surrounding broadcasting to the Pacific, with just seven explicitly discussing Asian markets. Those submissions discussing Asian markets were more likely to observe the diversity of markets, media and content and market trends away from broadcasting towards narrowcasting. Those discussing Pacific markets were more likely to focus on particular community needs and the role of shortwave broadcasting, particularly the ABC's cessation of shortwave broadcasting in the Pacific. There was little discussion of the cessation of shortwave broadcasting in the Asian markets.

<sup>4</sup> See <https://www.communications.gov.au/have-your-say/review-australian-broadcasting-services-asia-pacific>



The key themes raised in submissions, which are summarised in [Appendix 3](#), include:

- the significant variation of media markets across and within countries of the Asia Pacific region, including the highly competitive nature of some markets in Asia and dramatically changing historical patterns of media usage, requiring a flexible “narrowcasting” approach that tailors content and distribution platforms to be fit for purpose for the target audiences in each country
- many submissions expressed concern that successive budget cutbacks have caused reductions in international services, particularly in the Pacific. Consequently they advocated for the revitalisation of international services, including alternative models for delivery and governance of Australian government funded international services
- the majority of submissions, focused on the Pacific, advocated for restoration of ABC’s shortwave services in the Pacific region, and
- submissions that were in favour of restoring shortwave services disputed the views that the technology has “limited and diminishing audiences” and disproportionately high costs.<sup>5</sup>

Further discussions were held with a number of key stakeholders over the course of the review in order to clarify points raised in their submissions and to obtain additional information relevant to the Review.

The information and opinions contained in submissions and provided by key stakeholders were then verified against other independent sources of information, including:

- publicly available information
- confidential commercially available information, and
- information provided by Australia’s diplomatic missions in the Asia Pacific region.

### 1.3.2 Analysis of the market for Australia’s broadcasting services in the Asia Pacific region

In order to assess the reach of Australia’s media in the Asia Pacific, the Review has analysed the market for those broadcasting services in that region.

This has involved an analysis of both the:

- supply of Australian broadcasting services to the Asia Pacific region, which determines the “potential reach” of those services (i.e. the sizes of the audiences in the Asia Pacific region who potentially could listen to and view Australian broadcasts if they had the equipment required to receive those broadcasts, were able to understand those broadcasts and were interested in the content of those broadcasts), and
- demand for Australian broadcasting services in the Asia Pacific region, which ultimately determines the “actual reach” of those broadcasts (i.e. the sizes of the audiences in the Asia Pacific region who actually receive, store, understand and use Australia’s broadcasts either for entertainment or business purposes).

The information used to conduct this analysis included:

- information provided in submissions to the Review and in follow up discussions with key stakeholders
- commercially available information on the reach of Australia’s Asia Pacific broadcasts, and
- information provided by Australia’s diplomatic missions in the Asia Pacific region.

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<sup>5</sup> Australian Broadcasting Corporation, *Submission to the Senate Environment and Communications Legislation Committee, Inquiry into the Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*, May 2017



### 1.3.3 Estimation of the costs and benefits of Australia's Asia Pacific shortwave broadcasts

In addition to assessing the reach of Australia's broadcasts to the Asia Pacific region, the Review also conducted a cost benefit analysis of Australia's shortwave radio broadcasts to that region. This involved an analysis of the economic costs and benefits of Australia's shortwave services to the Asia Pacific region, both in the past and if they were restored and continued into the future. Once again, this analysis has used quantitative data, where available, from submissions received and secondary data sources, and qualitative analysis where data were not available.

## 1.4 Purpose, structure and content of this report

This report presents the key findings of the Review. The structure and content of the remaining sections of the report are as follows:

- Australia's supply of broadcasting services to the Asia Pacific region (section 2) presents the key findings of the Review regarding the potential reach of those services and seeks to answer the following key questions:
  - Who broadcasts from Australia to the Asia Pacific region? (section 2.1)
  - Why does Australia broadcast to the Asia Pacific region? (section 2.2)
  - What is the potential reach of Australia's Asia Pacific broadcasts? (section 2.3)
  - How are advances in technology changing Australia's supplies of broadcasts? (section 2.4)
  - What is the content of Australia's Asia Pacific broadcasts? (section 2.5)
- Demand for Australia's Asia Pacific broadcasting services (section 3) presents the key findings of the Review regarding the actual reach (i.e. reception, understanding and use) of those broadcasts, and seeks to answer the following key questions:
  - What is the potential demand for Australia's Asia Pacific broadcasts? (section 3.1)
  - What is the actual demand for Australia's Asia Pacific broadcasts? (section 3.2)
  - How are advances in technology changing the demand for Australia's broadcasts? (section 3.3)
- Costs and benefits of Australia's Asia Pacific shortwave broadcasts (section 4) presents the key findings of the Review regarding the net benefits that Australia has derived from its provision of those services in the past, as well as the potential future net benefits it would derive if those services were restored, and seeks to answer the following key questions:
  - What were the objectives of Australia's shortwave broadcasts? (section 4.1)
  - What were the economic costs of Australia's shortwave broadcasts? (section 4.2)
  - What economic benefits has Australia derived from its shortwave broadcasts? (section 4.2)
  - Would Australia derive net benefits from resuming its shortwave broadcasts? (section 4.3)
- Opportunities to improve Australia's Asia Pacific broadcasts (section 5), which seeks to answer the following key questions:
  - How can Australia improve the actual reach of its Asia Pacific broadcasts? (section 5.1), and
  - How can Australia improve the net benefits derived from its Asia Pacific broadcasts? (section 5.2)

The report concludes with a brief overview of those opportunities to improve Australia's Asia Pacific broadcasts (section 5.3).

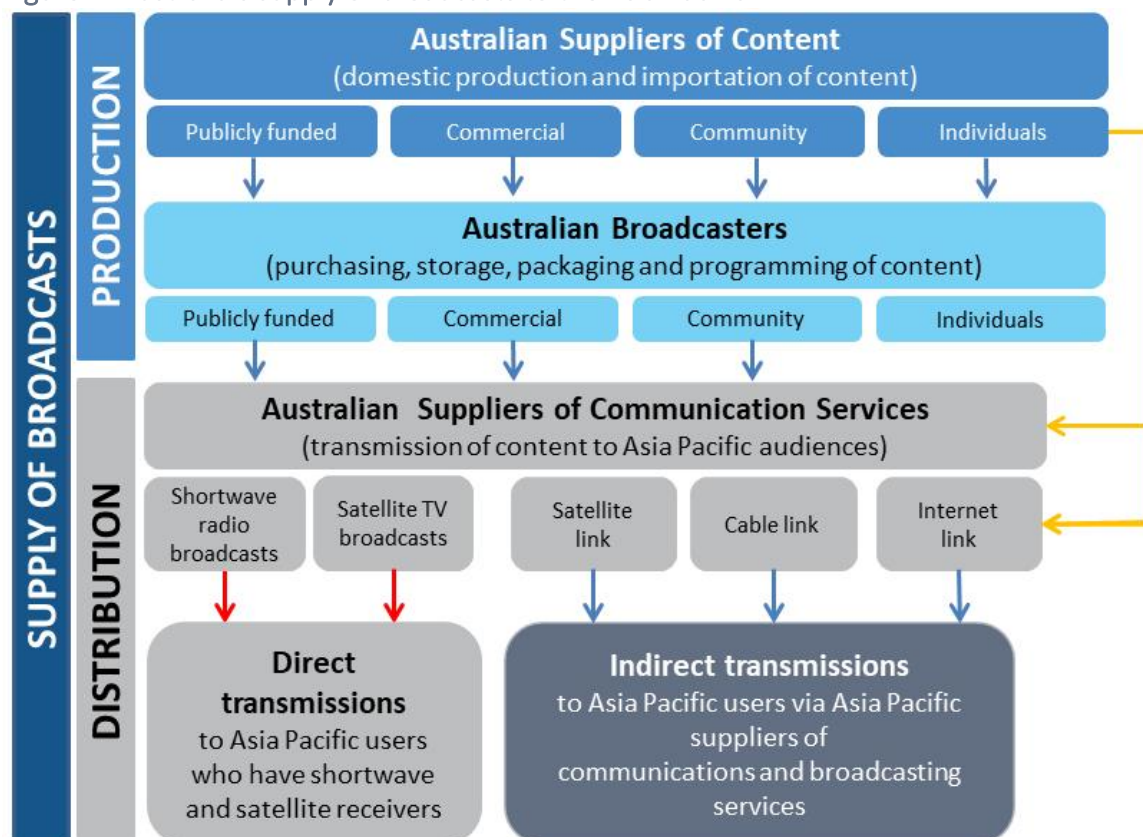




## 2. Australia's Supply of Broadcasting Services to the Asia Pacific

The potential reach of Australia's broadcasts to the Asia Pacific region is determined by the types, quantities and content of the broadcasts that Australia supplies to potential audiences in that region (i.e. Australia's supplies of broadcasting services to the Asia Pacific). This is the first part of the "supply chain" through which Australia's broadcasts to the Asia Pacific pass before they reach their intended audiences in the Asia Pacific.

Figure 1: Australia's supply of broadcasts to the Asia Pacific



As illustrated in Figure 1, Australia's supplies of broadcasts to the Asia Pacific are determined by the combined activities of the:

- Australian suppliers of the content that is included in Australia's broadcasts to the Asia Pacific region. These content suppliers include:
  - publicly funded suppliers of content (e.g. ABC, SBS and Screen Australia)
  - commercial suppliers of content (e.g. independents like Endemol Shine Australia and networks like Seven Studios and Sky News Australia)
  - community groups, and
  - individual Australians who produce content for broadcast over the internet.
- Australian broadcasters that are involved in the purchase, storage and packaging of that content to produce the programs that are broadcast to the Asia Pacific, which include:
  - publicly funded broadcasters (e.g. the ABC and SBS)
  - commercial broadcasters (e.g. Australia's commercial radio and TV networks)
  - community broadcasters, and
  - individual Australians who broadcast content over the internet.



- Australian suppliers of communications services that are involved in the storage and transmission of Australian content either:
  - directly to audiences in the Asia Pacific region (as marked in red) using:
    - shortwave radio broadcasts (e.g. Broadcast Australia, which used to transmit the ABC's shortwave broadcasts to the Asia Pacific region)
    - satellite TV, radio and internet broadcasts
  - indirectly to audiences in the Asia Pacific region (as marked in blue) via:
    - Asia Pacific suppliers of communication services who receive and rebroadcast Australian content to Asia Pacific audiences on behalf of Asia Pacific broadcasters using terrestrial TV, radio, cable and internet broadcasts, and
    - Asia Pacific broadcasters who purchase, store and repackage Australian content for rebroadcast to their local Asia Pacific audiences.

It is important to note that the flows illustrated in Figure 1 symbolise the:

- broadcasting platform that is used to reach Asia Pacific audiences
- content of those broadcasts, and
- legal right to receive and rebroadcast that content to audiences in the Asia Pacific region.

Australia's broadcasts to the Asia Pacific include content that is supplied online to Australian audiences, but is also accessed by "fortuitous" audiences in the Asia Pacific.

## 2.1 Who broadcasts from Australia to the Asia Pacific region?

### Key findings

- In this Review, the term "broadcasting services" is defined to include both: more traditional terrestrial, cable and satellite radio and TV broadcasts; and the distribution of online content using internet communications to the Asia Pacific.
- As a result, Australia's publicly funded international broadcaster, the ABC, is no longer Australia's only Asia Pacific broadcaster. Rather, there is now a wide range of other Australian broadcasters who supply audio and video content to audiences in the Asia Pacific, including: publicly funded ABC and SBS; independent producers co-funded by governments; commercial broadcasters and content suppliers; and community groups and individuals who supply online content services over the internet.
- Although broadcasters are often classified according to their primary source of funding (e.g. public, commercial, community and individually funded broadcasters), in reality the broadcasting sector is a complex mixed economy featuring varying degrees of vertical and horizontal integration and complex co-production arrangements funding the supply and international broadcasting of Australian content to Asia Pacific audiences.
- For the purposes of this report, the types of broadcasting services Australian international broadcasters employ have been categorised in four groups:
  - "full channel" 24 hour, 7 day "broadcasts" available on cable and FM in specific nations and across Asia and Pacific by satellite
  - "scheduled direct broadcasts" using satellite radio and TV and shortwave radio
  - "syndicated content", sold or freely distributed programs or blocks of programming for broadcast including free-to-air, subscriber or video-on-demand services, and
  - "online content services" provided by many Australian suppliers of content, including but not limited to most digital enabled radio and television broadcasters and content producers employing global platforms like YouTube.





### 2.1.1 Identifying Australia's Asia Pacific broadcasters

As noted in section 1.2, consistent with the requirements of the Terms of Reference for this Review, for the purposes of this report the terms “broadcasting services” or “broadcasts” are defined to include both Australia's:

- more traditional broadcasts to the Asia Pacific (e.g. direct broadcasts using shortwave and satellite broadcasts to the Asia Pacific, as well as indirect broadcasts via local Asia Pacific terrestrial and cable radio and TV stations), and
- distribution of online audio and video content to the Asia Pacific.

Using this definition of broadcasting services, Australia's Asia Pacific broadcasters include its:

- publicly funded international broadcaster, the ABC
- publicly funded content suppliers, which include:
  - the Special Broadcasting Service Corporation (SBS), which provides its services online that can be accessed by Asia Pacific audiences who use widely available software and virtual private networks to defeat the geoblocking of those services
  - independent producers funded or co-funded by Screen Australia or State equivalents, which sell their content to the Asia Pacific region
- commercial broadcasters (e.g. Australia's commercial radio and TV networks which also sell content to the Asia Pacific as well as virtually all of Australia's radio broadcasts are now available on the internet, as are Australia's TV stations, despite the geoblocking of that content)
- commercial suppliers of content that either sell their content to Australia's Asia Pacific broadcasters or directly sell their content to broadcasters in the Asia Pacific
- community broadcasters (e.g. Christian community groups who use satellite broadcasts and shortwave radio to reach their audiences in the Asia Pacific, as well as other community groups that distribute their content via the internet)
- individual broadcasters who produce and distribute their own content on the internet. The emergence and exponential expansion of internet communication services and the concomitant reduction in costs now mean that any Australian supplier of digital content or digital broadcast services can provide parallel access to content through online media services—including both community broadcasters and individuals, for example through YouTube channels and podcasting. Building audiences through individual content production and broadcasting has become an established pathway by content creators for entry to corporatized broadcasters:

*The world's number one online DIY automotive and adventure show isn't run by mechanics. It's written, filmed, presented and produced by two regular Aussie guys, and hosted on YouTube. That's what makes Mighty Car Mods videos so appealing, its relatable...Fast forward ten years and Mighty Car Mods has almost two and a half million subscribers and their videos average over 370,000 views per day... The Mighty Car Mods channel is so popular that Blair and Marty has signed a deal with Discovery Networks to broadcast existing episodes on Foxtel locally as well as internationally into Europe, Africa, The Middle East and the USA, opening up an entirely new audience.<sup>6</sup>*

<sup>6</sup> YouTube, *The Australian Story*, 2017 <https://australia.googleblog.com/2017/11/youtube-australian-story.html>



It is important to note that this definition of “broadcasting services” differs from the much narrower definition of the term that is used for the purposes of the *Australian Broadcasting Corporation Act 1983*.

As noted in [Appendix 2](#), the ABC Act:

- specifies that the ABC, or its prescribed companies, are to be the only providers of Commonwealth-funded international broadcasting services, and
- defines the term “broadcasting service” to be radio or television program delivered by traditional “broadcast” technologies such as free-to-air, cable or satellite platforms, but excludes online media services including specifically on-demand point-to-point services.

Under the broader definition of broadcasting services used for the purposes of this report, however, the ABC’s more traditional international broadcasts are a subset of a much broader set of broadcasting services that also includes the distribution of online media services by the ABC and other suppliers of content.

For the purposes of this report the types of broadcasting services Australian international broadcasters employ have been categorised in four groups:

- “full channel” 24 hour, 7 day “broadcasts” delivered by free-to-air or subscriber services
- “scheduled direct broadcasts” (shortwave and satellite)
- “syndicated content”, sold or freely distributed for broadcast by domestic broadcasters including free-to-air, subscriber or video-on-demand services , and
- “online media services”.

### 2.1.2 Vertical and horizontal integration within the broadcast industry

Figure 1 necessarily simplifies a much more complex broadcasting industry structure where there is some:

- vertical integration in the supply of broadcasting services (e.g. some broadcasters continue to supply some or all of their content internally and maintain an involvement in the transmission of their services to their audiences), and
- horizontal integration in the supply of broadcasting services (e.g. some broadcasters provide a wide range of media services and distribute those services across multiple markets, including the Asia Pacific).

#### Vertical integration

In the past, before the advent of media storage, Australia’s broadcasters were involved not only in the in-house production of their own content, but also in the production and transmission of that content to their audiences (e.g. “live broadcasts”).

With the advent of improved magnetic tape storage of audio and video in 1960s, however, broadcasters had much greater flexibility to store, distribute and make repeated use of content, which enabled them to purchase, or co-produce, content from both domestic and international content producers.

In addition, as the demand for broadcasts increased, and the production of content and its transmission to international audiences became more complex, most of Australia’s large broadcasters chose to subcontract out the creation of content and transmission of that content to specialist suppliers.



Despite these trends, however, Australia's major broadcasters continue to create some of their content in-house, as do most small community and individual broadcasters, who also continue to create, produce and distribute their own content (e.g. either via Australia's remaining community funded shortwave transmissions to the Asia Pacific, or through streaming audio and video on the internet).

### Horizontal integration

There is also considerable horizontal integration of the provision of broadcasting services, both across geographic boundaries and types of media services, which reflects the significant cost savings that can be derived from those practices (i.e. it reflects the existence of "economies of scope").

Geographically, as technical capabilities in media storage and distribution communications have improved, individual local broadcasters have merged into networks that reduce costs by sharing content. The Australian Broadcasting Commission was established as a national service in part to deliver services in regions that were not served by commercial broadcasters that focused on local advertising markets at that time.

Some entities may also be horizontally integrated across types of media—principally both Australia's public broadcasters, the ABC and SBS, have been engaged in both television and radio media. Australia's cross-media ownership laws regulate the concentration of media in domestic markets, so that horizontal integration between commercial businesses has been gradual and focused on combining text and video media resources, particularly in the era of online media services where the two complement each other.

Currently, nearly all television and radio broadcasters provide a mixture of media services. This ranges from the smallest community radio stations that provide digital streams of on-air radio, to the provision of web based text, audio, video content distinct from television and radio content, while social media has become integral to all broadcasters' brand management.

### 2.1.3 Sources of funds

For convenience, Australia's domestic and international broadcasters are often classified according to their primary sources of funds into:

- publicly funded broadcasters (ABC and SBS) and suppliers of content (e.g. through Screen Australia funding)
- commercially funded broadcasters (e.g. Australia's commercial radio and TV broadcasters, which primarily rely on advertising revenue)
- community funded broadcasters (e.g. community groups that primarily rely on funding from the communities they represent), and
- individually funded broadcasters (e.g. those individuals who rely primarily on their own personal finances to fund those broadcasts).

In reality, however, this masks the complexity of the actual arrangements that are used to fund domestic and international broadcasts in most countries, including Australia:

*The worldwide broadcasting sector has developed into a mixed economy in which companies generate revenues from three major sources: advertising, subscription fees and public revenues. Broadcasters funded by advertising and public revenues are typically free-to-air, aiming to transmit to the widest possible audience in their markets. The main vocation of advertising-funded or commercial broadcasters is to reach mass audiences or those of the most interest to advertisers (typically the most economically active). Publicly-funded*



*broadcasters ... place more of an emphasis on fulfilling public service goals of delivering information, education and entertainment to their national populations.<sup>7</sup>*

Co-production arrangements between funding sectors are now common:

- “pre-sale” arrangements enable public/commercial broadcasters to fund part of the production costs of commercial/public suppliers of content in return for domestic and other regional broadcast rights
- commercial broadcasters and content providers also receive government funding for some of their broadcasts and content (e.g. funding from Screen Australia and State based equivalent funding agencies)
- the community sector is partially funded by government grants, and
- individuals may be supported through a combination of public, commercial, community or self-funding.

#### 2.1.4 Platforms used to broadcast content to Asia Pacific audiences

The broadcasting platforms that are used by Australian broadcasters to reach their target audiences in the Asia Pacific include:

- direct broadcasts via:
  - shortwave radio transmissions<sup>8</sup>
  - satellite transmissions (e.g. satellite TV, radio and internet communication services)
- indirect broadcasts via:
  - local terrestrial AM and FM radio broadcasts and TV stations
  - local satellite transmissions (i.e. local satellite TV, radio and internet communication services)
  - streaming and download of video and audio content over the internet.

Australian suppliers of content also distribute their content to Asia Pacific audiences both:

- directly through their sales of content to Asia Pacific broadcasters (e.g. as is illustrated by the orange arrows in Figure 1). For example, some:
  - Australian production companies may directly negotiate international “broadcast” rights, including through their own international parent company (e.g. Endemol Shine Australia is the local production company of Endemol Shine Global)
  - Australian broadcasting networks engage distributors to negotiate international rights on their behalf
  - Australian sporting events, such as cricket, football, as well as the Olympic and Commonwealth Games, may involve supplying a “clean feed” to an international broadcaster that employs its own commentary and graphics, and
- indirectly through their sales of imported and domestically produced content to Australian broadcasters who supply broadcasts directly or indirectly to their audiences in the Asia Pacific.

<sup>7</sup> Standing Committee on Copyright and Related Rights, *Current Market and Technology Trends in the Broadcasting Sector*, World Intellectual Property Organisation, June 2015

<sup>8</sup> The ACMA Register of Radiocommunications Licences shows current international broadcasting licences are held primarily by Australian branches of two global Christian broadcasting groups, Reach Beyond Australia with production facilities in Melbourne and transmission facilities in far north Western Australia, and CVC Network with production facilities in Maroochydore, but closed its Darwin shortwave site in 2010 to focus on using the Internet as a broadcasting platform.



### 2.1.5 Overview of the availability of Australia's broadcasts in the Asia Pacific

Following the typology introduced above, Australian broadcasters provide a range of broadcasting services to the Asia Pacific region, including:

- Full channel media services, broadcast 24 hours a day, 7 days per week:
  - ABC provides a television channel (currently branded "ABC Australia") available on cable and satellite and a radio station (Radio Australia) broadcast in FM under contract by local broadcasters in specific nations and across Asia and Pacific by satellite
- Scheduled direct broadcasts:
  - 3ABN Australia is the official regional branch of 3ABN, a 24-hour Christian television and radio network, supplying Australian content to international programming. 3ABN has global coverage using nine satellites<sup>9</sup>
  - Reach Beyond Australia is the regional branch of the international Reach Beyond Worldwide (formerly HCJB), producing content in 30 languages in Melbourne to broadcast to South Asia, South East Asia and East Asia from Kununurra, far north Western Australia, using shortwave<sup>10</sup>
- Syndicated content, rebroadcast by domestic broadcasters in the Asia Pacific:
  - Programs or blocks of programming from ABC Australia/ Radio Australia are rebroadcast by partners in certain countries
  - Other Australian television networks including SBS, Seven Network, Nine Network, Sky News Australia and Fox Sports sell the rights to broadcast programs or items in Asia Pacific territories
  - Similarly content producers sell broadcast rights in Asia Pacific territories, including those publicly funded through Screen Australia and equivalent state agencies and independent content producers (for example Endemol Shine Australia (producer of, for example, Masterchef, Offspring, Blue Water High The Adventures of Bottle Top Bill)
  - The Macquarie Radio network distributes NRL broadcasts
- Online media services are provided by many Australian suppliers of content, including but not limited to most digital enabled radio and television broadcasters and content producers employing global platforms like YouTube. Some example include:
  - A suite of ABC online media services including apps, streaming radio, podcasts and websites
  - TV network on demand services ABC iview, SBS On Demand, FreeviewTV (perhaps used in conjunction with a VPN where geoblocked)
  - SBS audio and language websites
  - Sky News Australia website/ international app streaming content of Australia News Channel or Sky News Australia content
  - Fox Sports website/international app streaming NRL and AFL content
  - Community broadcasters that stream digital ready transmissions, such as Sydney radio station Samoa FM streaming<sup>11</sup>, and building the online media capacity of community organisations to produce content for specific audiences (e.g. Victorian AIDS Council,

<sup>9</sup> <https://www.3abnaustralia.org.au>

<sup>10</sup> <https://www.reachbeyond.org.au>

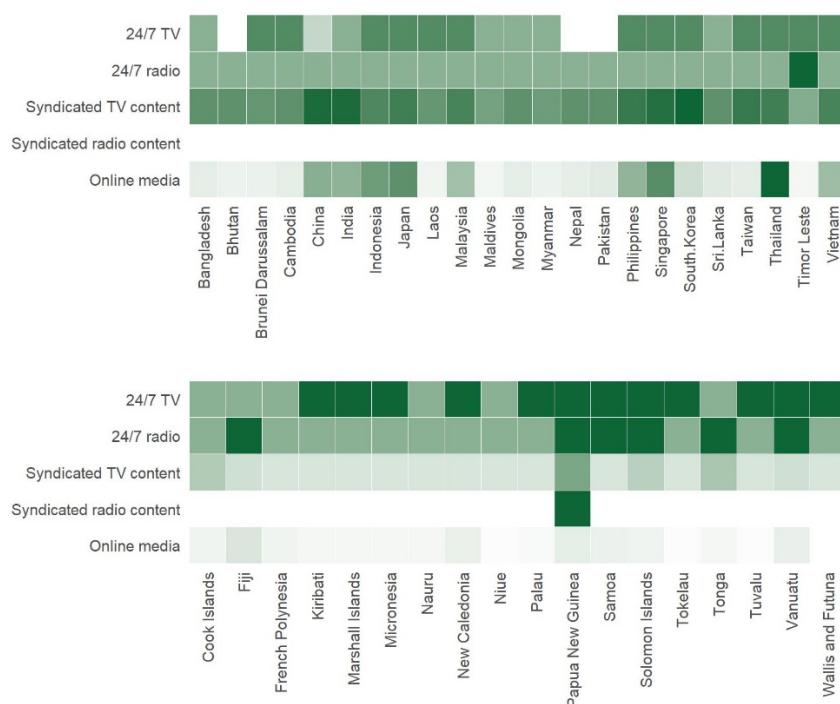
<sup>11</sup> <http://samoafmsydney.com.au/>



- Melbourne International Comedy Festival and live streaming events like Victorian Open Swimming Championship finals),<sup>12</sup> and
- The estimated 230,000 people involved in online video creation and more than 2,000 Australian YouTube channels earning more than \$1,000.<sup>13</sup>

An overview of the availability of these services in the 23 Asian and 17 Pacific countries in the Review scope is provided in Figure 2 below for the three categories (full channel, syndicated content and online media services) where data were available to the Review.

Figure 2: Overview of the availability of Australian content in Asia and Pacific regions



For each media service, a block of colour indicates that service is available in that country. The intensity of the colour reflects the relative availability/use of each service across both Asia and Pacific. This is intended to provide an indication of the minimum level of service available in each category as available data only provides a sample of total services.

Figure 2 indicates that:

- Full channel television is available in all Pacific and all but four Asian countries, equally 24 hours a day, 7 days per week.
- Full channel radio is available locally in Timor-Leste and six Pacific countries and across Asia Pacific by satellite, equally 24 hours a day, 7 days per week
- Syndicated television content is available in all 40 countries in Asia and Pacific regions, with the greatest volume in PNG, by minimum estimated hours based on available data, with relatively higher volumes in most countries in Asia as well as Cook Islands, Solomon Islands, Tonga and Vanuatu.<sup>14</sup>

<sup>12</sup> <https://www.c31.org.au/community-builder>

<sup>13</sup> AlphaBeta, *Bigger Picture The new age of screen content*, 2016; YouTube, *The Australian Story*, 2017

<sup>14</sup> Note estimations based on licenced rights to content hours assuming broadcast once, although rights vendors do not know if, when (e.g. prime time or overnight), or how many times licenced material is broadcast.



- Online media services, which are universally accessible wherever there is an internet connection, have been utilised in every country in the Review scope except Wallis and Futuna, based on the set of services for which data was provided to the Review (see specific services in section 2.5.3). This demand is greatest in Thailand, followed by a group of Asian countries including Singapore, Japan, Indonesia, China, India, Philippines, Vietnam, Malaysia and South Korea. Fiji shows the greatest demand in the Pacific, although in aggregate the demand for Australian online content from the Pacific region is on a par with the middle of this group and leads on a per-capita basis.

A more detailed discussion of these types of broadcasting services is provided in section 2.5.3 of this report.

## 2.2 Why does Australia broadcast to the Asia Pacific region?

### Key findings

- Australian broadcasters supply services to audiences in the Asia Pacific region in order to achieve a range of:
  - commercial objectives (e.g. to increase the sales of Australian broadcasting services, as well as sales of other Australian goods and services, including tourism and education services)
  - broader community, national and international strategic policy objectives of the Australian Government and community groups, which subsidise the supply of broadcasts both within Australia and to the Asia Pacific region.
- This subsidisation, or “public funding”, of Australia’s Asia Pacific broadcasts seeks to improve the welfare of Australia by:
  - increasing the efficiency with which the market for broadcasting services works (i.e. increasing “economic efficiency”). In the absence of such government intervention, there is a risk that commercial broadcasters would supply less than socially optimal levels and types of broadcasts both the Australian and international audiences as a result of the existence of a number of potential sources of “market failure”, and
  - improving the extent to which Australia achieves its broader equity objectives (i.e. improving “distributional equity”), which include the broader community, national and strategic policy objectives of community groups and the Australian Government that are intended to improve the overall welfare of the Asia Pacific region and its residents.

### 2.2.1 Commercial objectives

All of Australia’s Asia Pacific broadcasters, including its publicly funded, commercial, community and individual broadcasters, seek to raise revenue to varying degrees from a range of commercial activities, including the:

- sale of broadcasting content, and
- advertising of other goods and services on behalf of other Australian businesses.



### 2.2.2 Broader community, national and international strategic policy objectives

In practice, however, there are several reasons why, in the absence of intervention by the Australian Government and community groups, commercial incentives alone might fail to encourage Australia's international broadcasters to provide socially optimal levels and types of broadcasts to the Asia Pacific region, including the:

- nature of the information provided by those broadcasting services, which exhibits the features of a “public good” since:
  - the use of broadcasts by one individual does not reduce the quantity of broadcasts that can be used by other individuals (i.e. there is some “jointness in consumption” in the use of broadcasts)
  - it can be difficult, and undesirable in many cases, to exclude those individuals who have not paid for broadcasts from enjoying the benefits obtained from listening to those broadcasts (i.e. the benefits are “non-excludable” to some extent)
- large, up front, capital costs associated with providing broadcasting services (i.e. the existence of “economies of scale” in the supply of shortwave broadcasting services). This means that the incremental (i.e. “marginal”) costs of supplying additional broadcasting services tend to be relatively low, so that even if users were charged an efficient price for those services (i.e. a price equal to the marginal cost of supplying those services), this would fail to raise sufficient revenue to finance those capital costs. This raises the question as to how these up front capital costs can be funded in a manner that imposes the lowest economic costs on Australia
- “external benefits” that Australia would derive from the provision of broadcasting services to the Asia Pacific region that would not be taken into account by other private and overseas public broadcasters when making their investment decisions regarding their provision of services to that region. It is recognised that the welfare of Australia depends heavily on the welfare of the Asia Pacific region as a whole, and that Australia's international broadcasts have an important role to play in improving the welfare of all residents in that region. These external benefits include the:
  - strategic benefits that Australia would derive from providing those services (e.g. the benefits that Australia would derive from using those broadcasting services to exercise its “soft power” in the region) and clarifying any misconceptions created by other, less objective, information sources in that region (e.g. by correcting for the existence of any “information asymmetries” regarding Australia)
  - other external benefits that Australia derives from expanding its broadcasting network into the Asia Pacific region (e.g. the “economies of scope” and “network economies” that Australia derives from expanding the size of its communications network into the Asia Pacific region. Expanding the size of any network, including Australia's broadcast network in the Asia Pacific region, not only generates additional benefits for all existing and future users of that network, but it also generates potential benefits for other individuals who have the potential to use that network at some time in the future, which has a “real option” value to those individuals, even if they never actually use the services provided by that network)
- insufficient competition between the suppliers of broadcasting services in the Asia Pacific region (i.e. “imperfect competition” due to the dominance, in the past, of a few major national suppliers of shortwave services in the Asia Pacific region).





It is for these reasons that community groups in Australia and the Australian government seek to subsidise Australia's Asia Pacific broadcasts in order to improve the overall welfare of the nation as a whole by:

- increasing the efficiency with which the market for broadcasting services works (i.e. increasing "economic efficiency"). In the absence of such government intervention, there is a risk that broadcasters would supply less than socially optimal levels and types of broadcasts both the Australian and international audiences as a result of the existence of a number of potential sources of "market failure", and
- improving the extent to which Australia achieves its broader equity objectives (i.e. improving "distributional equity"), which include the broader community, national and strategic policy objectives of community groups and the Australian Government that are intended to improve the overall welfare of the Asia Pacific region and its residents.

## 2.3 What is the potential reach of Australia's Asia Pacific broadcasts?

### Key findings

- In theory, the potential size of audience for Australia's Asia Pacific broadcasts is the entire population of that region, which includes more than 65 per cent of the world's population:
  - almost all (99.7 per cent of 4 billion people) of the potential Asia Pacific audience for Australia's broadcasts lives in Asia
  - just 0.3 per cent, or approximately 11 million people, are located in the Pacific Islands, of which 72 per cent are located in PNG.
- However, the potential audiences for Australia's Asia Pacific broadcasts are also extremely diverse. There is no one market for Australia's Asia Pacific broadcasts, rather there are 40 individual national markets, each with further internal markets. These individual country markets differ significantly in terms of their geographic size and population:
  - from the world's largest country China, which has a population of 1.4 billion, or 18.5 per cent of the world's population
  - to very small countries such as Tokelau, which has a population of just 1,319.
- In practice, the ability of Australian broadcasters to reach the audiences within each of these diverse Asia Pacific markets is limited by a wide range of factors that also differ significantly both across and within each of those markets, for example: geographic; technological; infrastructure constraints in the Asia Pacific region (e.g. information constraints regarding the demand for Australian broadcasts in the Asia Pacific); language barriers and cultural differences; legislative and regulatory constraints; as well as funding and cost constraints.
- In general, Australian broadcasters have the greatest potential to indirectly reach the vast majority of the audiences (4 billion people) in those countries who live in urban areas and have relatively high incomes. In general:
  - the degree of urbanisation varies greatly across both Asia and Pacific, from wholly urban populations (Singapore and Nauru) to just 18 per cent in Sri Lanka and 13 per cent in PNG, and
  - audiences in more remote areas of the Asia Pacific are much more difficult to reach indirectly using local radio, TV and internet broadcasts.



### 2.3.1 Potential audience for Australia's Asia Pacific broadcasts

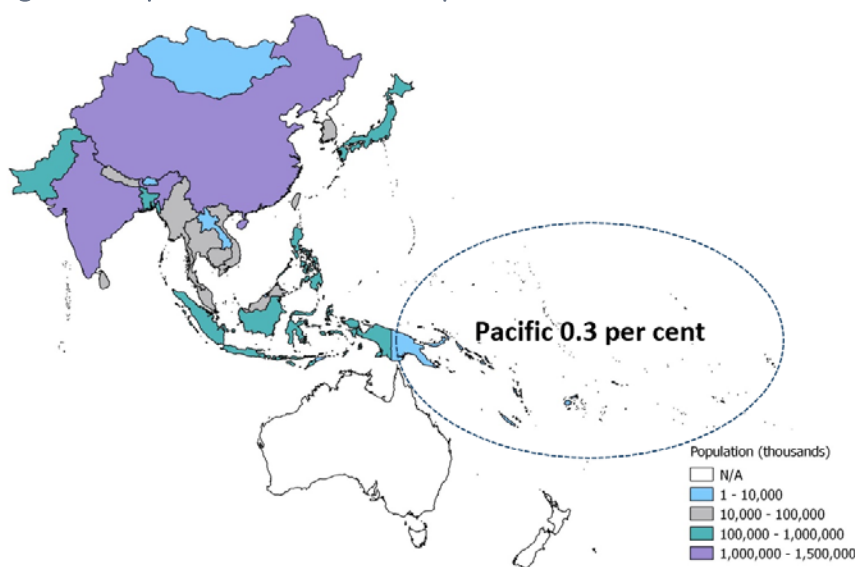
In theory, the potential size of the audience for Australia's Asia Pacific broadcasts is the entire population of that region, which includes more than 65 per cent of the world's population.

As illustrated in Figure 3, the populations of the nations in the Asia Pacific region, and the media markets these represent, vary significantly and include:

- three of the world's top five most populated nations in the world, namely:
  - China (1.41 billion)
  - India (1.34 billion)
  - Indonesia (263.9 million)
- some of the most populated nations in the world, namely:
  - Pakistan (197.0 million)
  - Bangladesh (164.7 million)
  - Japan (127.5 million), and
  - Philippines (104.9 million), and
  - Vietnam (95.5 million), and
- some of the smallest and least populated nations, namely:
  - Niue (around 1,600), and
  - Tokelau (around 1,300).

Across the region of interest, 99.7 per cent of the market by population is in the countries of South, South East and East Asia. Just 0.3 per cent, or approximately 11 million people, are located in the Pacific Islands, of which 72 per cent are located in Papua New Guinea.

Figure 3: Population as measure of potential market size



Source: International Telecommunication Union, World Bank, GSM Association

### 2.3.2 Constraints that limit the potential reach of Australia's Asia Pacific broadcasts

In practice, however, the potential size of the audience for Australia's Asia Pacific broadcasts is limited by a wide range of factors that constrain the ability of Australian broadcasters to reach that audience, which are discussed further below.



### Geographic constraints—the tyranny of distance

As illustrated in Figure 3, Australia is located a long distance away from most of the major Asia Pacific markets for its goods and services, including (approximately):

- China (7,000—9,000 km)
- India (9,000—11,000 km)
- Indonesia (4,000—7,000 km)
- Pakistan (11,000 km)
- Bangladesh (9,100 km)
- Japan (7,800 km)
- Philippines (6,300 km), and
- Vietnam (7,800 km).

Even Australia’s Pacific markets are quite remote, including:

- Papua New Guinea (3,200 km)
- Fiji (3,200 km)
- Samoa (4,300 km)
- Vanuatu (2,600 km)
- Solomon Islands (2,900 km)
- Niue (4,200 km), and
- Tokelau (4,600 km).<sup>15</sup>

These significant distances have constrained, and continue to constrain, Australia’s ability to export its goods and services to those markets, including its exports of broadcasting services (i.e. the “tyranny of distance” between Australia and its Asia Pacific export markets).

In addition, both the size and topography of those countries potentially impose even further constraints on the ability of Australia to export its broadcasting services to those markets. Large countries with the most dispersed populations pose the greatest challenge. However, even small countries can pose a challenge when there are significant geographical and environmental obstacles that potentially interfere with transmissions (e.g. mountainous terrains subject to extreme weather conditions such as cyclones).

### Technological constraints

As discussed in further in section 2.4, advances in technology have helped overcome to some extent Australia’s “tyranny of distance” between its broadcasters and the target Asia Pacific markets for those broadcasts by facilitating the development of broadcasting platforms that have provided increasingly more effective and efficient means of reaching target audiences in the Asia Pacific region, including:

- shortwave radio broadcasts, which replaced the longwave radio broadcasts that were initially used to reach distances over hundreds and thousands of kilometres<sup>16</sup>
- satellite TV and radio broadcasts, as well as satellite internet communication services direct to Asia Pacific audiences

<sup>15</sup> Approximate distances to target audiences in the Asia Pacific from Sydney (as a proxy location for video and audio content creation) estimated using <https://www.distancefromto.net/distance-from/Australia/to/Asia+Pacific+Region>

<sup>16</sup> Technical note: radio or light travels in straight lines, so except in certain circumstances reception is limited to “line of sight” of a transmitter, typically 60 to 100 km: see [Appendix 4](#) for further discussion.



- significantly improved local AM and FM radio broadcasts, through expanded repeater networks
- higher quality digital audio and TV broadcasts, and
- the exponential increase in internet communications and the proliferation of “over the top” audio and video online content services.

Despite these advances in technology, however, some target audiences are still difficult and significantly more costly to reach, particularly the proportion of the population that live in the more remote and more inaccessible areas of the Asia Pacific region.

Although shortwave radio broadcasts have the greatest potential ability to directly reach distance audiences anywhere in the world, audiences require specialised equipment to receive those transmissions that are not widely owned and used by all target audiences in the Asia Pacific. Not all radios on the market include a shortwave band. Rather, most radios, including those commonly installed in motor vehicles, only include AM and FM receivers (see discussion in section 3.1.3).

In addition, although shortwave broadcasts have the potential to reach audiences throughout the Asia Pacific their effective reach is also constrained by environmental and ionospheric conditions that limit use at certain times of day, as well as increasing interference from other radio frequency transmissions and electrical devices (see technical discussion in [Appendix 4](#)).

Like shortwave radio broadcasts, satellite transmissions are also capable of reaching distant audiences around the world, but with a much wider range of content (e.g. video, audio as well as internet communication services) and much higher quality and more reliable signals than shortwave radio broadcasts. However, since these transmissions are on “line of sight” communication frequencies:

- satellite uplink facilities and satellites are required to “repeat” those signals back to their target audiences. These are expensive to install, which tends to limit their use primarily to the provision of subscription TV, radio and internet communication services (i.e. in order to recover the high capital cost of those services), rather than “free-to-air” broadcasts, and
- the equipment and subscription services audiences require to receive those transmissions (e.g. a satellite dish and a “set top box”) are still relatively expensive in relation to the equipment required to receive other broadcasts (e.g. AM and FM radio receivers and terrestrial TV receivers).

Amplitude modulation (AM) radio transmissions on medium wave frequencies tend to have a much smaller potential reach than shortwave radio broadcasts, making them more suited to broadcasts to urban audiences. Although the reach of those radio broadcasts can be increased through the use of higher power transmitters, this can lead to interference between analog radio stations and reductions in the quality of the signal received by target audiences in those areas where there are numerous analog AM radio stations operating.

These interference problems can be significantly reduced through the use of digital radio broadcasts, which increase both the number of stations that can use the available frequency spectrum, as well as the quality of signals provided to audiences. However, this also reduces the potential reach of those broadcasts since potential audiences must have access to the specialised equipment required to receive those broadcasts, which is still not widely used by Asia Pacific audiences (e.g. “Digital Radio Mondiale” or “Digital Audio Broadcasting” receivers).



Like satellite transmissions, FM radio and TV transmissions are limited to “line of sight” transmissions that make them more suited to broadcasting to urban audiences. Although the use of repeater networks can provide an effective and efficient means of extending the range of FM radio and TV broadcasts beyond urban areas, such networks also require access to resources that are often not readily available in the more remote areas of the Asia Pacific, including:

- sufficient power (e.g. through the grid or solar power), and
- skilled and experienced technicians are required to install and maintain those networks, which often have to operate in extreme weather conditions that can cause frequent equipment failures (e.g. cyclones).

#### Infrastructure constraints in the Asia Pacific region

In order to reach their potential audiences in the Asia Pacific region, Australian broadcasters must either:

- broadcast directly to those audiences using either shortwave radio broadcasts or satellite broadcasts (i.e. satellite TV and radio broadcasts and satellite internet communication services), or
- broadcast indirectly to those audiences either through rebroadcasts by local Asia Pacific radio and TV broadcasters or the internet.

This means that in order to reach their indirect audiences in the Asia Pacific, Australia’s broadcasters need to rely on their target Asia Pacific markets having the necessary communications infrastructure required by:

- local broadcasters to receive and rebroadcast Australian content to their respective audiences via TV, radio and internet broadcasts, and
- local audiences to receive Australian content rebroadcast by local broadcasters or over the internet.

Since communications infrastructure involves large, up-front, fixed costs, the best infrastructure is typically found in major urban population centres where the population is sufficiently large to recover the significant costs of that investment (i.e. by reaping economies of scale in the provision of those infrastructure services).

As a result, some indication of the potential demand for Australia’s indirect broadcasts to the Asia Pacific region can be obtained from available information on the proportion of the population that live in urban areas.

The left hand side of Figure 4 illustrates the proportions of population that live in urban areas, ranked in order for the Asian and Pacific regions, which indicates that:

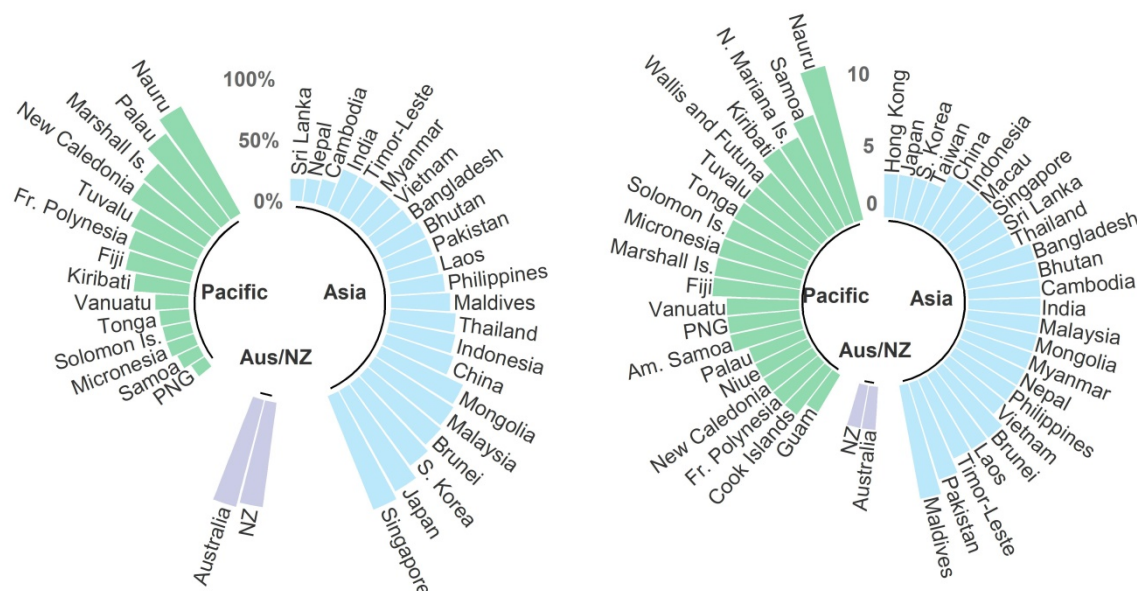
- the degree of urbanisation varies over an extreme range in both Asia and the Pacific, where Singapore and Nauru are considered fully urban through to just 18 per cent in Sri Lanka and 13 per cent in PNG, and
- between these extremes, there are significant groupings of countries in the Asia and Pacific regions that have higher or lower degrees of urbanisation.

The right hand side of Figure 4 illustrates the estimated number of persons per household. Like urbanisation, this metric varies over a large range—as a generalisation, household sizes are smaller in more developed countries.



When considering particular technologies for the consumption of audio and video broadcasts across these 40 countries, combined with varying traditions of communal consumption of radio and television (see section 3.1.4), a per-household indicator may be more appropriate than a per-person indicator for particular countries.

**Figure 4: Degree of urbanisation and household size as indicators of market density**  
Proportion of urban population      Persons per household



**Note:** Australia and New Zealand are not in scope, but have been included for reference.

**Source:** International Telecommunication Union, World Bank, GSM Association

### Information constraints regarding the demand for Australian broadcasts in the Asia Pacific

Even if Australian broadcasters and their associated Asia Pacific broadcasting partners have the technical ability to potentially reach their target Asia Pacific audiences, this does not mean that those audiences will be:

- able to receive and understand those broadcasts, and
- willing and able to pay for those broadcasts.

This means that if Australian broadcasters want to actually reach their potential audiences in the Asia Pacific, they need to have a good understanding of both the:

- potential demand for their broadcasts (i.e. the number of people in their target audiences who have access to the equipment required to receive their broadcasts), and
- actual demand for their broadcasts (i.e. the number of people in their target audiences who actually listen to or view their broadcasts).

As discussed further in section 3, however, information on the actual reach of Australia's free-to-air radio and TV broadcasts is not readily available in view of the high costs of obtaining that information.

By contrast, there is an increasing amount of information becoming available on the actual use of Australia's online content.





### Language barriers, cultural differences and content constraints

Significant language barriers and cultural differences exist between audiences in Australia and target audiences in the Asia Pacific (see Table 7 in section 3.1.2).

As a result, most broadcasting content that has been produced for broadcast to Australian audiences is not necessarily appropriate for Asia Pacific audiences, other than Australians temporarily living in that region, or the proportion of the target population that is English speaking.

It is important to note, however, that Australia does have:

- a large and constantly increasing multicultural population, as illustrated in Table 2 below, that frequently represents a small but significant proportion of their “homeland” population, particularly in the Pacific (e.g. Fiji, Samoa, Tonga, Cook Islands, Niue and Tokelau)
- numerous diaspora groups of individuals who have close links with both Australia’s multicultural community and communities in the Asia Pacific region, and
- the publicly funded SBS that is responsible for developing and broadcasting content to help immigrants settle into the Australian community.

This raises the issue as to whether there are any factors that constrain Australia’s ability to develop and distribute foreign language content programs to audiences in Asia Pacific (e.g. foreign language independent news services presented in culturally sensitive manner, while preserving independence and objectivity of those broadcasting services).

These opportunities for the Australia Government to work in partnership with Australian broadcasters, content suppliers and Australia’s diaspora communities to develop content more appropriate to Asia Pacific audiences is discussed further in section 5.2.2 of this report.

### Legislative and regulatory constraints on the supply of Australian broadcasting services

The potential size of the audiences for Australia’s Asia Pacific broadcasts is also constrained to some extent by:

- broadcasting technical standards (e.g. digital radio and TV technical standards that are outlined in [Appendix 4](#) of this report), which limit the actual reach of Australia’s Asia Pacific broadcasts by requiring audiences to use region specific equipment in order to receive those broadcasts
- the restrictions that Australian broadcasters and the suppliers of their content impose on the geographic distribution and redistribution of the content of their Australian and Asia Pacific broadcasts. Such restrictions are applied in order to:
  - protect the revenue raised by Australian broadcasters from the sale of their content to the Asia Pacific, and
  - restrict the distribution of certain content to the Asia Pacific in order to comply with their contractual obligations regarding their geographic distribution of content (e.g. the geoblocking that the ABC, SBS and Australia’s commercial broadcasters apply to some of their online content)
- the restrictions that Asia Pacific governments impose on the ability of their residents to access international broadcasts (e.g. by intentionally jamming those broadcasts, geoblocking of internet addresses, and denial of service attacks).





Table 2: Size of Australia's Asia/Pacific multicultural community

Country	Australian population	Proportion homeland population	Country	Australian population	Proportion homeland population
China	704,657	0.1%	Fiji	90,332	10%
India	616,939	0.0%	Samoa	63,443	32%
Vietnam	335,058	0.4%	Papua New Guinea	34,129	0.4%
Philippines	325,050	0.3%	Tonga	27,545	25%
Malaysia	167,470	0.5%	Cook Islands	16,101	77%
Sri Lanka	151,935	0.7%	Niue	2,540	157%
South Korea	120,878	0.2%	Solomon Islands	2,385	0.4%
Indonesia	103,021	0.0%	New Caledonia	1,602	0.6%
Thailand	76,920	0.1%	Tokelau	1,533	118%
Pakistan	75,805	0.0%	Vanuatu	1,360	0.5%
Nepal	60,684	0.2%	Kiribati	1,014	0.9%
Japan	60,011	0.0%	French Polynesia	880	0.3%
Cambodia	56,037	0.4%	Nauru	640	4.7%
Bangladesh	55,703	0.0%	Tuvalu	445	4.0%
Singapore	54,934	1.0%	Marshall Islands	33	0.1%
Taiwan	54,536	0.2%	Micronesia	23	0.0%
Myanmar	51,097	0.1%	Palau	22	0.1%
Laos	17,935	0.3%			
Timor-Leste	15,385	1.2%			
Bhutan	8,444	1.0%			
Brunei	2,748	0.6%			
Darussalam					
Mongolia	2,559	0.1%			
Maldives	703	0.2%			

**Note:** "Proportion homeland population" compares the size of the Australian population identifying with a particular national heritage with the current estimated population of that nation of origin to understand the potential significance of the diaspora community in Australia to that homeland population.

**Source:** ABS 2016 Census, International Telecommunication Union, World Bank

### Funding and cost constraints

The willingness and ability of Australia's Asia Pacific broadcasters to supply audiences in the Asia Pacific is also limited by the:

- levels of funding they receive to provide those Asia Pacific broadcasts, and
- costs of supplying those Asia Pacific broadcasts, which vary across the broadcasting platforms that can be used to reach audiences in the Asia Pacific region. These costs are relatively high for certain broadcast platforms (e.g. shortwave radio broadcasts, due to the specialised nature of the equipment required) and lower for other platforms (e.g. online distribution of audio and video content via the internet, which is low due to the wide range of content that this



equipment can provide and the large audiences it can reach in both the Asia Pacific and the rest of the world).

## 2.4 How are advances in technology changing Australia's supplies of broadcasts?

### Key findings

- Advances in technology have had, and are continuing to have, a profound effect on the supply of broadcasting services to target audiences both in Australia and the Asia Pacific region. In particular, advances in technology have:
  - reduced the cost of broadcasting to Asia Pacific audiences, particularly the cost of producing and distributing content
  - increased the quantities, types and signal quality of Australian broadcasts to the Asia Pacific region. In particular, advances in technology have:
    - reduced the regulatory barriers to broadcasting to Asia Pacific audiences. The internet now provides all broadcasters with a licence-free alternative way of reaching their potential audiences in the Asia Pacific region
    - significantly improved both the effectiveness and efficiency with which Australian broadcasters can now potentially reach those audiences
  - increased the range of different broadcasting platforms Australian broadcasters can use in order to reach their Asia Pacific audiences, making them more sensitive to the different prices they have to pay in order to use those broadcasting platforms
  - given broadcasters greater flexibility to determine:
    - what types of broadcasting services they provide to the Asia Pacific region
    - how they provide those broadcasting services. In particular, there has been a shift from the provision of direct broadcasts from Australia using shortwave radio broadcasts to the increased use of satellite broadcasts, rebroadcasting through local Asia Pacific broadcasters and internet streaming
    - how they collect information on audience demand for their broadcasts (e.g. through use of information on the number of individuals visiting the different categories of online material Asia Pacific audiences access on their websites)
  - increased the competition that Australian broadcasters are facing in their Asia Pacific markets from both local domestic broadcasters and other international broadcasters.

### 2.4.1 A century of rapid advances in broadcasting technology

As illustrated in Figure 5, rapid advances in technology over the last century have revolutionised Australia's broadcasts to audiences in Australia, the Asia Pacific, and the rest of the world.

At the turn of the 20<sup>th</sup> century:

- there were no Australian broadcasters. Rather, the only options there were to distribute audio and video content both within Australia and internationally were the:
  - production of live performances that would have to travel from city to city in order to reach their potential audiences (e.g. theatre productions and concerts), and



- use of the limited range of audio and visual recording media available at that time (i.e. films and records), which had to be shipped to their audiences using the limited modes of transport services available at that time (i.e. mainly postal and sea freight services)
- Australia had only just produced its earliest surviving motion picture film shot in Australia in 1896<sup>17</sup>
- the first films had only just been produced by an Australian State government in 1899.<sup>18</sup>

Since then, however, rapid advances in the development and application of electronic components to the recording, storage, processing and distribution of audio and video content have transformed the supply of communication and broadcasting services, both in Australia and the rest of the Asia Pacific.

After a century of technological change, Australia now has a large number of public, commercial, community and individual broadcasters that:

- Supply much larger quantities and types of audio and video content to their audiences in the Asia Pacific.
- Have the ability to choose between a range of alternative broadcasting platforms to reach their target audiences in the Asia Pacific. Australia's broadcasters no longer have to rely on the use of shortwave radio broadcasts to reach their audiences in the Asia Pacific. Rather, they have a range of broadcasting platforms to use, which include the continued use of shortwave radio broadcasts as well as alternative platforms such as satellite broadcasts, rebroadcasts through local Asia Pacific radio and TV stations, cable TV and streaming of audio and video content over the internet. Some of Australia's community broadcasters continue to use shortwave broadcasts to reach their audiences in the Asia Pacific either directly from Australia<sup>19</sup>, or indirectly to the Asia Pacific from transmitters located in other countries.<sup>20</sup>
- Have the potential to reach most of the population of the Asia Pacific region with their broadcasts (e.g. Australian broadcasters that stream content on the internet are able to reach 50 per cent of the world's population who now have access to the internet).

<sup>17</sup> <https://aso.gov.au/chronology/1890s/>

<sup>18</sup> <https://aso.gov.au/chronology/1890s/>

<sup>19</sup> For example, Reach Beyond Australia is a Christian radio broadcaster that has been providing shortwave radio broadcasts from the far north Western Australia to the Asia Pacific region since 2003 and currently broadcasts programs in 30 languages. <https://www.reachbeyond.org.au/>

<sup>20</sup> For example, Hobart Radio International, the Voice of Tasmania, is an Australian community broadcasting service that is relayed around the world by shortwave and FM transmissions from New Zealand <http://www.hriradio.org/>



Figure 5: A century of technological change in telecommunications and broadcasting

	Mechanical, electrical and electronic components used	Content Capture	Content Storage/Processing	Content Distribution/Transmission
Pre - 1900	Mechanical components	Supply of live content	No storage or post production processing - performance needs to be repeated	Travelling performances
		Production of live performances		
		Early supplies of printed content		Distribution of books, newspapers and magazines by post and retail outlets
		Typesetting of text and images	Printing of books, newspapers (1825) and magazines (1880)	
		Early supplies of pre-recorded audio and video content		Distribution by post and sale in retail outlets
		Early microphones	Recording of Edison disc records	
	Early still and movie cameras used to capture images	Images stored on film processed in commercial labs	Still photos printed in books, newspapers and magazines for distribution by post and sale in retail outlets. Movies distributed by post for display in picture theatres	
	Electromechanical components (e.g. solenoids and relays)	Australia's telegraphy service (1854 to 1993)		
		Content for transmission keyed in using Morse code by operator of commercial wired telegraphy station	Hand written record	Transmission of telegrams to post offices over telegraph lines and then by post to recipient. First commercial telegraphy line laid in Australia by 1854 and all major capitals were linked by 1877. Australia connected to rest of world in 1871 through a submarine cable link to Java. First trans-Pacific telegraph cable laid linking Canada, Australia, New Zealand and Fiji (1902) and Japan (1906).
		Australia's telephone service (since 1878)		
		Carbon microphone/earpiece handset	Initial telephone exchanges were manually operated. International calls had to be booked in advance. Eventually replaced by automatic exchanges using electromechanical devices (e.g. relays).	Telephone wire
1900-1959	Thermionic valves (e.g. diodes, triodes and pentode valves)	Australia's AM radio broadcasts (since 1923)		
		Capture of live audio	Initially no audio recording facilities other than Edison phonograph	First radio station 2FC broadcast on long wave (273 kHz).. Then moved to medium wave (680 kHz).
		Australia's black and white television broadcasts (1956 to 1975)		
		Initially analog black and white video cameras	Bespoke analog audio and video recording and processing equipment	Analog signals broadcast on VHF
		Supplies of pre-recorded analog audio and video content (since 1960)		
1960-1979	Analog components (e.g. diodes and transistors)	Analog audio capture	Magnetic tape recorders used to record audio initially on reel to reel tapes and then on compact audio cassette tapes (1964)	Distribution of tapes by post and retail outlets
		Australia's colour television broadcasts (since 1975)		
		Analog audio and video capture	Bespoke analogue colour recording, processing and production equipment	Analog transmissions on VHF using Phase Alternating Line (PAL) encoding (5MHz bandwidth signal)
		Australia's FM radio broadcasts (since 1975)		
		Initially analog audio capture, now predominantly digital	Initially analog recording and processing, now predominantly digital	Analog transmissions on VHF using frequency modulation The FM radio band is from 88 to 108 MHz between VHF television Channels 6 and 7.
		Australia's satellite TV broadcasts (since 1966) and cable TV broadcasts (since 1995)		
1980 - present	Digital components (e.g. discrete integrated circuits and large integrated circuits which include microprocessors, analog to digital converters, digital to analog converters, digital signal processors, application specific integrated circuits, field programmable gate arrays, etc.).	Digital audio and video capture	Digital audio and video storage, processing and production equipment	Digital transmissions using Digital Video Broadcasting - Cable (DVB-C) and Digital Video Broadcasting - Satellite (DVB-S) standards
		Supply of pre-recorded digital audio content (since 1982) and video content		
		Digital audio and video capture	Audio recorded digitally on compact discs, video initially recorded on Digital Video Discs and then higher definition vide recorded on Blue-Ray discs	Distribution by post and sale in retail outlets
		Australia's cell phone service (since 1981)		
		Initially analog signal reception, then converted to digital	Initially analog mobile phone network first generation (1G) analog Advanced Mobile Phone System (AMPS). Then replaced with several generations of digital phones (2G, 2G and 4G).	Initially analog signal transmission, then converted to digital
		Australia's internet service (since 1989)		
		Includes free to air content broadcast on Australian radio and TV stations, as well as Over-The-Top (OTT) content provided by subscription services (e.g. Netflix)	Digital storage and processing. Audience access facilitated by provision of apps (e.g. the ABC's Listen and view apps, as well as Commercial Radio Australia's RadioApp, which provides access to all Australian commercial radio stations)	Digital audio and video content distributed via the internet
		Australia's digital radio broadcasts (since 2009)		
Digital audio capture	Digital audio storage, processing and production equipment	Terrestrial Digital Audio Broadcast (T-DAB+)		
Australia's digital TV broadcasts (since 2001 all digital since 2013)				
Digital audio and video capture	Digital audio and video storage, processing and production equipment	Digital transmissions on VHF and UHF using Digital Video Broadcasting - Terrestrial (DVB-T) standard		



In particular, the rapid advances in electronic components, communications and broadcasting equipment have revolutionised the capture, storage and processing of audio and video content. At the commencement of the 20<sup>th</sup> century, the storage of audio and video content was on early wax records and acetate film stock. Subsequent advances in technology have seen the development and use of:

- higher fidelity studio microphones, as well as much smaller, lower cost, higher resolution commercial film and video cameras (initially analog and now digital), to capture much higher quality audio and video content to distribute to audiences
- increasingly higher performance commercial audio and video recording equipment, which commenced with relatively large, low performance, studio equipment and has progressed to much smaller, portable, digital audio and video storage equipment as well as online storage (e.g. in the “cloud”), and
- increasingly higher performance commercial audio and video processing equipment. Initially, this started off with bespoke, bulky low performance valve and solid state analog equipment and then progressed to much smaller, higher performance digital audio and video processing equipment. Today a smart phone is a video capture, storage, processing and broadcasting device in the hand.

In addition, advances in technology have also transformed the distribution of domestically produced, and imported, content to audiences in Australia and the Asia Pacific. Australia’s international broadcasters no longer have to rely on shortwave radio broadcasts to reach their audiences in the Asia Pacific. Rather, advances in technology have enabled them to “broadcast” (i.e. distribute audio and video content) to a much larger audience than was possible in the past through either the:

- sale and distribution of audio and video content on progressively smaller, higher capacity, lower cost, media on which to store audio and video content for distribution to audiences:
  - audio distribution media have progressed from the early Edison audio disks, to shellac 78 rpm records, vinyl 33 $\frac{1}{3}$  rpm and 45 rpm records, compact audio cassette tapes, and compact disks (CDs), and
  - video distribution media have progressed from early films through to video cassette tapes, digital video disks (DVDs) and higher capacity Blu-ray discs
- broadcasting of that audio and video content to audiences using both more traditional and newly emerging broadcasting platforms, including:
  - radio broadcasts, which commenced in Australia in 1923 using high power amplitude modulated (AM) broadcasts on long wave frequencies which were originally thought to be the best broadcasting platform to use in order to reach Australia’s geographically dispersed population. However, Australia’s local radio stations soon shifted to using AM medium wave broadcasts to reach their local audiences and shortwave broadcasts were used from 1939 to reach more distant Asia Pacific audiences. Higher fidelity FM radio broadcasts commenced in Australia in 1975 and Australian broadcasters continue to use shortwave radio stations to broadcast, as well as local Asia Pacific AM and FM radio stations to rebroadcast, their content throughout that region
  - TV broadcasts, which commenced using analog black and white transmissions in Australia in 1956, analog colour transmissions in 1975, and had fully converted to digital transmissions by 2013. Once again, Australian broadcasters continue to use local Asia Pacific TV stations to broadcast their content throughout the Asia Pacific region





- satellite broadcasts, which commenced in 1966 with the first live satellite transmission between Australia and the United Kingdom and the first direct telecast across the Pacific from North America to Australia in 1967, have significantly extended the potential reach of Australia's TV and broadcasts, as well as online content services, to the Asia Pacific region, and
- streaming of audio and video content over the internet which commenced in Australia around 1989 and has significantly extended the potential reach of Australia's broadcasts and has reduced, and in many cases eliminated, the need to use physical storage media to distribute audio and video content.

### 2.4.2 More efficient supply of broadcasting services

The rapid advances in technology outlined above have significantly increased the efficiency with which Australia produces the broadcasting services it supplies domestically and internationally by:

- increasing the quantities, types and qualities of broadcasts that Australian broadcasters are able to supply to their audiences
- reducing the cost of supplying those broadcasting services, and
- improving the ability of Australia's broadcasters to meet the different and constantly changing needs of their audiences.

#### Increases in the quantities, types and qualities of broadcasting services supplied

Advances in technology have significantly increased the quantities, qualities and types of broadcasting services that can be produced for any given quantity of inputs (i.e. it has increased the "technical efficiency" with which broadcasting services can be supplied).

Specifically, advances in technology have significantly increased the sizes of the audiences that can be reached by a particular broadcast of content through the use of:

- shortwave broadcasts, which significantly extended the reach of the first early long wave broadcasts which were thought at that time to be the most efficient broadcasting platform to use to reach distant audiences
- rebroadcasts through networks of local Asia Pacific AM and FM radio stations, which provided higher quality and more reliable signals to audiences in the Asia Pacific region, and
- satellite broadcasts, which significantly increased the potential reach of Australia's broadcasts to audiences in the Asia Pacific region.

In addition, advances in technology have also significantly increased the quantity of content (e.g. text, audio and video) that can be carried over all broadcasting platforms, including both wireline platforms (e.g. telephone cables and coaxial cables) as well as wireless platforms (e.g. radio and TV broadcasts, as well as mobile phones and Wifi connections).

Table 17 in [Appendix 4](#) identifies the main source of these improvements in the efficiency of communications and broadcasting equipment. This is the shift from analog to digital methods of superimposing audio and video content (i.e. "modulating") on the transmission frequency used to carry that content to audiences (i.e. the "carrier frequency", which can range in frequency from the direct current used by the original telegraph machines, to the audio frequencies used by the initial telephone lines, the radio frequencies used for radio, TV and satellite transmissions through the air and communications cables, through to the light used for transmissions over optical cables).



This shift from the use of analog to digital communication modes has increased both the quantity and quality of content that can be distributed to audiences over both existing and new broadcasting platforms, including:

- Existing and new copper cable networks, as well as more recent coaxial cable and optical fibre networks that are capable of providing even greater volumes of data (e.g. through the use of digital subscriber line technologies that enable faster data transmission over copper telephone lines than a conventional analog communications).
- Mobile phone networks. For example, these commenced with the first generation (1G) analog Advanced Mobile Phone System (AMPS), which was then replaced with the second generation digital (2G) Global System for Mobile Communications (GSM). Successive third generation (3G Universal Mobile Telecommunications System and Code Division Multiple Access) and fourth generation (4G, which includes the Long Term Evolution to the new 4G standard) upgrades of this system have expanded its capabilities even further to include mobile internet access, Internet Protocol telephony, gaming services, high-definition mobile TV, video conferencing, and 3D television.
- Radio broadcasts. For example, Australian broadcasters have been able to extend their networks in Australia to the Asia Pacific through partnerships with local AM and FM radio stations that rebroadcast their content to their respective audiences. In addition, the introduction of digital radio broadcasting is significantly more spectrum efficient than analog FM radio. A single DAB+ multiplex channel occupies 1.536 MHz of radio spectrum and can provide at least 18 good quality music radio services. In comparison, analog FM radio requires 1.6 MHz to provide eight services. Digital radio is also less sensitive to adjacent channel interference and can employ Single Frequency Networks, which contributes to more efficient use of the radio spectrum. The use of repeaters has also extended the range of FM radio broadcasts.
- Television broadcasts. For example, advances in technology have led to significant increases in the size of the audience that can be reached with a TV broadcast through the use of TV repeater networks as well as satellite broadcasting, which has significantly increased the geographic reach of those broadcasts. In addition, the switch from analog to digital television in jurisdictions internationally freed up additional spectrum in the frequency range 694 to 820 MHz that was reallocated for other communications use (i.e. in Australia it created a “digital dividend” of spectrum that was auctioned off for mobile communications use).<sup>21</sup>
- The internet, which provides all Australian broadcasters with the ability to stream audio and video content to the 50 per cent of the world’s population who have internet access.

Similarly, advances in technology have significantly increased the ability of Australian broadcasters to provide a much wider range of content to their audiences in Australia and the Asia Pacific.

As illustrated in Figure 5, over the last century, there has been a merging of information and communications technologies (i.e. the “ICT revolution”), including the technologies used for information capture, processing and distribution through traditional broadcasting and communications networks. All forms of information content—written, audio and video—can now be:

- captured or received and converted into digital data using analog to digital converters
- processed using digital central processing units and digital signal processing devices and other application specific integrated circuits
- stored using a wide range of digital storage media (e.g. magnetic tape, magnetic disk and solid state storage), and
- distributed to audiences over both traditional and new broadcasting and communications networks.

<sup>21</sup> See <https://www.communications.gov.au/what-we-do/spectrum/digital-dividend-spectrum>





This has increased the efficiency with which both broadcasting and communications services can be supplied by enabling them to share common integrated equipment systems that can be used to provide a wide range of services (i.e. by reaping “economies of scope”).

#### Reductions in the cost of supplying broadcasting services

Advances in technology have also significantly reduced the costs that broadcasters have to incur in order to supply a given value of broadcasting services (i.e. advances in technology have also increased the “cost efficiency” or “allocative efficiency” of broadcasting).

Like the production of electronic components, the production and distribution of audio and video content to provide to audiences involves high up front fixed costs that need to be spread over as large an audience as possible. These large fixed costs include the:

- cost of capturing or purchasing that content (e.g. the cost of hiring the performers that produce that content)
- cost of producing the final content that is to be distributed to audiences (e.g. the cost of recording, storing and processing that audio and video for live broadcast for later distribution to audiences), and
- cost of distributing that content to audiences (e.g. transmission and other distribution costs).

Prior to the advent of broadcasting in Australia, all of these costs were high and the audiences ultimately reached by that content were very small. As a result, the cost per member of the audience reached by that content was high. As noted above:

- live performances were the sole “broadcasting platform” available to provide audiences with high quality audio and video content, and the costs of distributing that content to relatively small audiences were high, and
- films and low quality audio recordings (i.e. on records) were the only means available for storing and distributing content to audiences for their use at a later date.

By contrast, as illustrated in Table 3, the results of the limited research that is available on the prices of communications and broadcasting equipment suggest that rapid advances in technology since 1985 have significantly reduced the prices of most that equipment. Although this research relates to trends in producer price indexes in the United States, it is reasonable to expect that data will also reflect the relative price trends for communications and broadcasting equipment in both Australia and the Asia Pacific region, since the USA is both a major producer and user of that equipment, which is traded internationally in large volumes.<sup>22</sup>

<sup>22</sup> D.M Byrne and C.A. Corrado (Byrne, David M., and Carol A. Corrado, *Prices for Communications Equipment: Rewriting the Record*, Finance and Economics Discussion Series 2015-069. Washington: Board of Governors of the Federal Reserve System, 2015 <http://dx.doi.org/10.17016/FEDS.2015.069>



Table 3: Communication equipment price changes (average annual percentage change in price)

Type of Communication Equipment	1963 – 2009	1963 – 1985	1985 – 2009	1985 – 1995	1995 – 2000	2000 – 2005	2005 – 2009
<b>Total production of communications equipment</b>	<b>-4.8</b>	<b>1.0</b>	<b>-9.8</b>	<b>-7.8</b>	<b>-12.5</b>	<b>-11.2</b>	<b>-9.4</b>
<b>Total spending on communications equipment</b>			<b>-9.3</b>	<b>-7.6</b>	<b>-11.3</b>	<b>-11.1</b>	<b>-9.3</b>
<b>Telecom equipment (production)</b>	<b>-5.7</b>	<b>0.6</b>	<b>-11.1</b>	<b>-9.0</b>	<b>-13.7</b>	<b>-12.7</b>	<b>-11.1</b>
<b>Telecom equipment (spending)</b>			<b>-11.3</b>	<b>-10.0</b>	<b>-13.4</b>	<b>-13.4</b>	<b>-11.0</b>
• Wireline communications equipment (production)	-5.6	0.4	-9.8	-7.4	-12.2	-13.3	-8.4
• Wireline communications equipment (spending)			-10.2	-8.6	-12.3	-13.4	-8.5
• Switching (production)	-6.2	-1.2	-9.7	-6.8	-13.4	-12.7	-8.4
• Switching (spending)			-9.4	-7.7	-11.2	-12.2	-8.8
• Central Office	-5.5	-1.2	-8.7	-6.2	-7.4	-14.5	-8.7
• Enterprise voice	-3.3	-1.2	-4.8	-4.5	-6.0	-5.7	-2.8
• Data networking			-12.9	-11.9	-16.7	-12.7	-10.3
• Transmission (production)	-4.6	0.7	-7.6	-4.0	-6.9	-13.8	-9.0
• Transmission (spending)			-8.2	-4.3	-7.7	-14.1	-9.9
• Fiber			-10.3	-4.8	-9.6	-19.7	-12.3
• Local Loop			-12.7	-6.2	-13.9	-22.6	-13.7
• Other Line			-4.7	-2.8	-4.3	-8.9	-4.6
• Terminals (production)	-6.3	3.2	-14.3	-14.1	-17.0	-18.4	-6.0
• Terminals (spending)			-12.6	-12.6	-16.8	-15.3	-6.5
• Telephones	-6.0	4.3	-14.0	-10.6	-20.2	-16.1	-11.7
• Fax	-4.5	4.3	-11.6	-12.9	-14.6	-6.4	-11.0
• Modem	-14.6	-11.9	-17.8	-17.0	-19.3	-25.1	-8.1
• Messaging	-3.5	4.3	-10.2	-9.2	-14.6	-14.2	-1.7
• Wireless communications equipment (production)	-6.4	1.3	-12.6	-11.1	-15.9	-12.4	-12.1
• Wireless communications equipment (spending)			-12.9	-12.3	-15.6	-13.4	-12.7
• Mobile Systems (production)			-17.8	-17.7	-18.8	-16.2	-18.5
• Mobile Systems (spending)			-16.2	-17.0	-18.9	-16.7	-14.4
• Mobile Phone			-17.6	-17.8	-19.3	-18.9	-13.4
• Mobile Networking			-16.1	-15.3	-18.2	-13.0	-19.5
• Satellites	-14.4	-14.8	-14.7	-19.0	-14.6	-8.8	-10.4
• Other wireless communications equipment	-3.8	1.9	-8.1	-7.1	-9.8	-6.7	-9.9
<b>Broadcast/other equipment (production/spending)</b>	<b>2.0</b>	<b>3.7</b>	<b>0.6</b>	<b>0.9</b>	<b>0.0</b>	<b>0.3</b>	<b>0.9</b>

Source: Table 3, Byrne and Corrado, 2015

Specifically, Table 3 indicates that the:

- overall prices of domestically produced communications equipment fell on average by 4.8 per cent per year over the period 1963 to 2009 and by 9.8 per cent per year on average since 1985, which is nearly 10 percentage points faster than the official U.S. producer price index introduced in that year



- greatest price reductions have been experienced by wireless communications equipment, particularly:
  - mobile phones, which declined in price by 18.5 per cent per year from 1983 to 2009, and
  - mobile networking equipment, which experienced 16.8 per cent average annual rate from 1993 to 2009
- prices for wireline products posted small increases prior to 1985 (0.4 per cent per year), with the net result that overall telecom equipment price change from 1963 to 1985 increased just 0.6 percentage points per year
- prices of broadcasting and communications equipment increased at an average annual rate of 3.7 per cent per year over the period 1963 to 1985, and continued to increase at a reduced rate of 0.2 per cent per annum over the period 1985 to 2009. The largest component of this group is FM and AM radio and television broadcast transmission equipment (including cable TV) and related equipment for both audio (microphones, amplifiers, control consoles) and video (television cameras, tape recorders, character generators) production.

The results of the research are broken down into the pre- and post-1985 period because the mid-1980s are a marker for several major events in communications, namely the:

- breakup of AT&T
- invention and use of routing technology
- emergence of fibre optics, and
- introduction of commercial mobile phone services.

As a result, by comparing 1963-1985 (column 3) with 1985-1995 (column 5) of Table 3 for each type of communications equipment, it is possible to see that these events had significant and immediate effects on the prices of terminals, switching, transmission and wireless equipment. By the mid-1990s, prices for overall telecommunication equipment were declining very rapidly, falling more than 13 per cent annually through 2005 and more than 11 per cent annually thereafter.

Overall, the results of this analysis of relative price trends explains, to some extent, the significant shift by broadcasters in Australia and the Asia Pacific region to the use of wireless platforms, particularly smartphones, to reach their target audiences. The relative prices of this wireless equipment has continued to decline significantly each year over the period of analysis in relation to the prices of more traditional broadcasting equipment.

#### Improvements in the ability of Australian broadcasters to meet the needs of their audiences

The advent of the internet, and its increasing use by Australian broadcasters to supply audio and video content to their audiences in the Asia Pacific and the rest of the world, has also significantly improved the ability of Australian broadcasters to:

- develop a much better understanding of the types of content preferred by their audiences (i.e. the level and pattern of audience demand for their content), and
- tailor the content of their broadcasts, and the broadcasting platforms they use to supply that content, to suit both the:
  - differing needs of their target audiences (i.e. by increasing “efficiency in exchange”), and
  - changes in those needs over time (i.e. by increasing “dynamic efficiency”).

For example, although traditional radio and TV broadcasting was able to distribute audio and video to much larger audiences that could ever have been reached through live performances and the



distribution of recorded media, that traditional broadcasting model still had its limitations for both broadcasters and their audiences.

In particular, it meant that at any point in time, each broadcaster was constrained to providing the same content to all of the members of their audience, which was difficult in view of their differences in age and preferences.

In the past, traditional broadcasters sought to overcome that constraint by:

- selecting content with broad appeal to all members of the family, since in the early years of broadcasting the first receivers were so bulky, and their costs so high, that most families only had one receiver that had to be shared (e.g. in Australia, this typically involved the broadcasting of English language programs that had proven popular in both the UK and the US, or Australian made copies of those programs)
- altering the timing of the supply, and content, of those broadcasts to suit the likely listening and viewing times of the different audience age groups (e.g. children's programs in the afternoon, news broadcasts and family entertainment at dinner time, and more broadcasts for adult audiences after the children had gone to bed), and
- setting up additional radio and TV stations to cater to the needs of different regional audiences and age groups (e.g. FM radio stations classical, jazz and popular music), although in the early years of broadcasting in Australia, the ability of broadcasters to do this was limited by the high capital cost of setting up a radio or TV station, as well as the limited number of broadcasting licences that were issued.

Since the advent of cable TV, satellite broadcasting and the internet, however, Australian broadcasters have had an increasing ability to:

- obtain more detailed information about the preferences of their audiences (e.g. as a result of the information that subscription cable and satellite TV broadcasters, as well as the detailed information that suppliers of online content are able to collect from individuals accessing that online content)
- tailor the type of content they supply to meet those differing audience preferences and needs (e.g. through the "narrowcasting" of that content to specific audiences), and
- provide audiences with much greater flexibility to:
  - determine what content they use, when they use that content, and the type of platform they use to access that content (e.g. through the provision of "on demand" across a number of range of broadcasting platforms), and
  - influence, or participate in, broadcasts (e.g. broadcasts now range from more traditional radio and TV broadcasts that provide no scope for audience participation, talkback radio, TV broadcasts that provide multi-platform audience participation through Twitter and Skype such as the ABC's Q&A program, reality TV broadcasts and cooking competitions where the audience actually participates in the production of the content broadcast, blogs and social media broadcasts where the audience contributes to the content, through to internet online gaming broadcasts where each member of the gaming audience participates in, and influences the ultimate outcome of, the content broadcast).



### 2.4.3 Increasing competition from local Asia Pacific and international broadcasters

Although advances in technology have significantly increased the potential reach of Australia's broadcasts in the Asia Pacific, they also have the potential to reduce the actual reach of those broadcasts by increasing the competition that Australian broadcasters face in those markets from both:

- local radio and TV broadcasters, which have grown in number as a result of significant reductions in the capital costs associated with setting up broadcasting stations. Although large established broadcasting networks still have a competitive edge in Asia Pacific markets, their market power has been steadily eroded by the emergence of new local broadcasters, and
- international broadcasters seeking to maintain, and extend, their actual reach in the Asia Pacific.

### 2.4.4 Expected future trends

The best indication of potential future trends in broadcasting technology is provided by past trends, particularly in the more technologically advanced countries in Asia.

In particular, it is likely that there will further:

- Shifts away from traditional “broadcasting” to “narrowcasting” of content tailored to suit the different and continually changing needs of audiences.
- Integration of communications and broadcasting services to offer audiences seamless services that make the best use of further advances in both communications and broadcasting technologies. For example, the proposed next generation mobile phone standards illustrate the types of services to expect in the future. The new 5G standard, which was approved in 2017, will provide “network slicing” which allows multiple virtual networks to be created on top of a common shared physical infrastructure. These virtual networks can then be customised to meet the specific needs of applications, services, devices, customers or operators.
- Increases in the speed and reach of communications and broadcasting networks.
- Increases in the use of artificial intelligence to provide:
  - broadcasters with much more detailed information on the changing preferences of their audiences
  - audiences with real time audio translation services (e.g. through the extension of the AI services that are currently used by Google to translate written text).
- Increases in the ability of audiences to participate in the production and distribution of content if they so desire.



## 2.5 What is the content of Australia's Asia Pacific broadcasts?

### Key findings

- Australia's direct broadcasts to the Asia Pacific region are primarily in English, although:
  - ABC's Radio Australia includes 5 hours Tok Pisin Pidgin in its broadcasts in Papua New Guinea, Solomon Islands and Vanuatu, together with online content in Mandarin and Bahasa Indonesia, and
  - SBS, which does not broadcast to the Asia Pacific, does provide multilingual media content to Australians through online broadcasts.
- Virtually all of the content that is available to Australians through local radio, TV and internet broadcasts is now available to audiences in the Asia Pacific either as a result of:
  - direct shortwave radio<sup>1</sup> and satellite broadcasts to the Asia Pacific, and
  - indirect broadcasts to the Asia Pacific via:
    - local Asia Pacific radio and TV stations
    - local satellite broadcasts
    - internet streaming of audio and video content.
- The ABC's full channel content services, available 24 hours a day, 7 days per week, are predominantly news and current affairs content, complemented by a range of genres including factual/lifestyle, education, children's, drama, sport and science and health:
  - "ABC Australia" television is available on cable and satellite in all Pacific and all but four Asian countries, and
  - "Radio Australia" is available locally in Timor-Leste and six Pacific countries and across Asia and Pacific by satellite
- Syndicated content rights for free-to-air, pay TV and video-on-demand are sold across the Asia and Pacific regions through varying arrangements. Data made available to the Review indicates a wide range of content is syndicated, principally in scripted and unscripted genres including reality TV, children's TV and drama.
- Online content services delivered over the internet are accessed from are used in every country in the Review scope except the small island nation of Wallis and Futuna, based on the set of services for which data was provided to the Review.

### 2.5.1 Languages used by Australia's Asia Pacific broadcasts

Most Australian content developed for domestic, English language audiences is predominantly in English.

Radio Australia includes 30 minutes of news and current affairs broadcast on Radio Australia twice a day Monday to Friday in Papua New Guinea Tok Pisin, Solomon Islands Pijin and Vanuatu Bislama pidgin languages.



In addition, although the SBS does not broadcast by traditional means to the Asia Pacific, it does provide its broadcasts to Australians online, which provides Asia Pacific audiences with the opportunity to view and listen to those broadcasts (including using readily available software to defeat the geoblocking that is applied to those broadcasts):

*Of SBS's 68 language radio programs, 31 are in languages from across the Asia Pacific region. In addition to these, SBS offers two music channels with content from the region.*

*However, SBS's digital services, including social media, provide an opportunity for all audiences to engage with SBS services, programs and discussions on contemporary issues. For example, each SBS Radio program page (language and music) has a dedicated SBS in language website, as well as social media profiles across most popular platforms, including Facebook, WeChat, and Twitter. These services provide a rich source of balanced and high quality news and information about Australia available in a range of languages. For the Asia-Pacific region, these services may be beneficial to those considering migration to Australia, for those who have family here, or for those who may be visiting. In particular, the settlement guides (published in 35 languages including 24 languages from the Asia-Pacific region) provide valuable insight and critical information about life in Australia for new migrants.<sup>23</sup>*

Dedicated digital producers employed for SBS Radio's Vietnamese, Mandarin, Cantonese, Hindi, Punjabi, Arabic, Korean and Tamil services, plus additional resource for specific content initiatives, have enabled SBS's language services to tailor audio and language content for digital platforms including web, social and mobile.

Christian radio station Reach Beyond Australia produces content in 30 Asian languages, generally in 15 minutes blocks.

## 2.5.2 Content of Australia's Asia Pacific broadcasts

Virtually all of the content that is available to Australians through local radio and TV broadcasts is now available to audiences in the Asia Pacific either as a result of:

- direct shortwave radio and satellite broadcasts to the Asia Pacific, and
- indirect broadcasts to the Asia Pacific via:
  - local Asia Pacific radio and TV stations
  - local satellite broadcasts
  - internet streaming of audio and video content that is:
    - intended to be supplied to those Asia Pacific audiences via the websites and apps to those Asia Pacific audiences, and
    - unintentionally provided to those audiences (e.g. as a result of its online distribution to Australian audiences, which is then can be accessed by Asia Pacific audiences, including software methods to bypass the geoblocking that Australia's public and commercial broadcasters have to impose in order to comply with their contractual obligations regarding their geographic distribution of content).

As indicated in Table 4, the full channel services of both ABC Australia and Radio Australia provide predominantly news and current affairs content, complemented by a range of mixed genres.

Table 5 provides examples of programs that are available, both through the ABC's full channel service and the syndication of content from commercial networks and production houses. SBS, whose programs are internationally distributed by agents, was not able to provide detailed data on

<sup>23</sup> Special Broadcasting Service Corporation, [Submission to the Review](#)





syndicated content but was able to report that half of the 53 titles licensed in Asia Pacific regions were cooking/food programs.

Table 4: ABC Australia/Radio Australia content

Radio Australia	%	ABC Australia	%
news and current affairs	57%	news and current affairs	80%
factual	13%	factual	7%
lifestyle	7%	lifestyle	1%
education	3%	education	1%
children's	0%	children's	3%
music/discussion	10%	drama	3%
sport	2%	sport	5%
science and health	8%	science and health	0%

Source: ABC guides

Table 5: Examples of television available in Asia Pacific region

Genre	Programs
news and current affairs	ABC News, ABC National News, 7.30, The Drum, The World, Landline, Weekend Breakfast, Matter Of Fact With Stan Grant, The Business, Four Corners, Insiders, 60 Minutes, Today Show, Weekend Today Show
factual	Forensic Investigators, Outback Truckers,
lifestyle	Grand Designs Australia , Unreal Estate, Gardening Australia
reality TV	Masterchef Australia, Australia's Best Homes, Married at First Sight, The Block, The Voice, My Kitchen Rules, Zumbo's Just Desserts
education	Study English, English Bites, Living English
children's	Play School, Good Game, Behind The News, Lockie Leonard, Ready, Steady, Wiggle!, Blue Water High, A gURLs wURLd, Don't Blame The Koalas, Great Australian Spelling Bee, Classic Tales, Hairy Legs, The Adventures of Bottle Top Bill, Tracey McBean
drama	Glitch, Pine Gap, Offspring, Winners and Losers Howzat, Paper Giants, INXS: Never Tear Us Apart, RUSH, Water Rats, Wild Boys, Home and Away, Winter, Wanted
sport	100% Footy, AFL Premiership Season, Offsiders
science and health	Catalyst

Source: ABC guides, Seven Studios, Network Nine, Endemol Shine Australia

### 2.5.3 The availability of broadcasting services supplied by Australia's Asia Pacific broadcasters

The availability of these services in the 23 Asian and 17 Pacific countries in the Review scope are summarised in the charts below for three of the types of broadcasting services introduced in section 2.1.1 where data was available to the Review:

- full channel content services delivered 24/7 by free-to-air or subscriber TV and radio broadcasts, in Figure 6
- syndicated content services, in Figure 7, and
- online media services delivered by the internet in Figure 8.

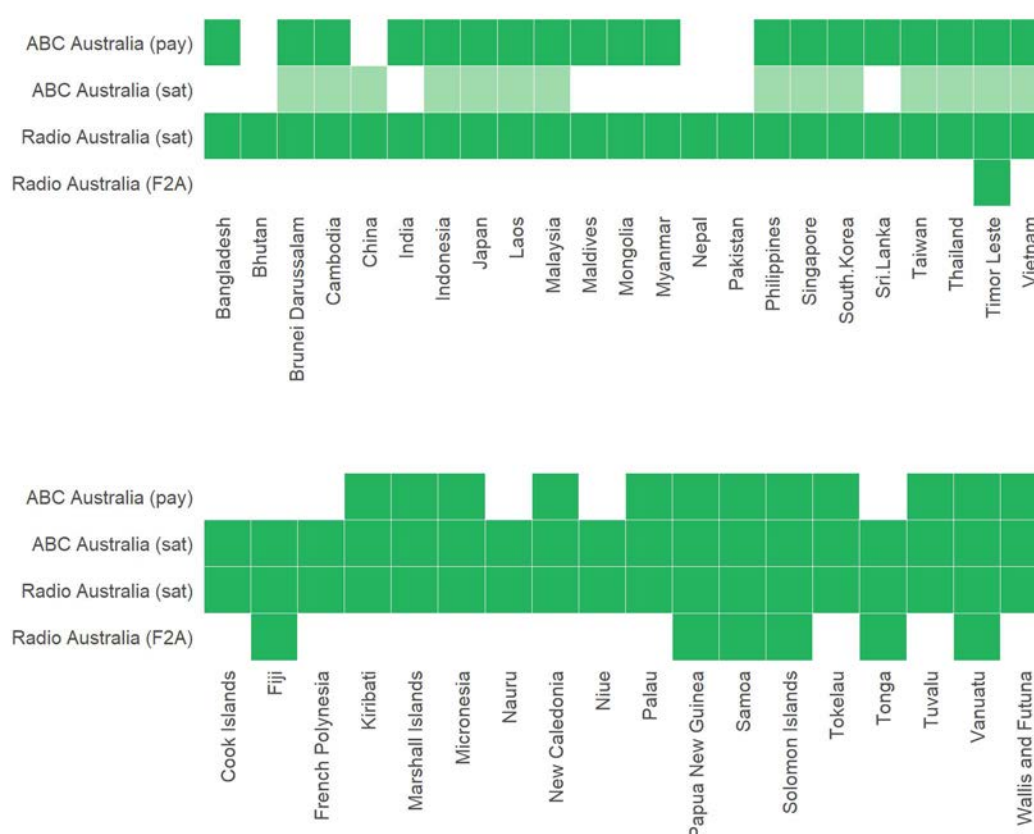


For each media service, a block of colour indicates that service is available in that country. The intensity of the colour reflects the relative availability/use of each service across both Asia and Pacific. This is intended to provide an indication of the minimum level of service available in each category as available data only provides a sample of total services.

### Full channel content services

Figure 6 describes the availability in the region of full 24 hour, 7 day channels of Australian produced content.

Figure 6: Full channel content services provided to Asia Pacific markets



Source: ABC

The ABC's international TV and radio services, currently branded ABC Australia and Radio Australia, are the only widespread full content channels available internationally:

- ABC Australia is available on pay TV in all but four Asian countries and 6 Pacific countries, and is available by satellite across the Pacific and East and South East Asia, and
- Radio Australia is available locally in Timor-Leste and six Pacific countries (PNG, Fiji, Solomon Islands, Vanuatu, Samoa and Tonga) and across Asia and Pacific by satellite).

In Papua New Guinea, HitronPNG multichannel TV provides subscription TV that repackages Australian pay and free-to-air television with a wide range of international and PNG channels.



### Syndicated content services

Individual Australian content creators, including the domestic networks in-house producers and independent production studios, seek to maximise the value for investing in content creation by selling that content into media markets around the world. Assessing the volume of this content is difficult as the broadcast rights for each item of content created by each individual production company may be sold for each country and each platform (e.g. free-to-air, pay TV, video-on-demand) directly or through a third party distributor. Where facilitated through a third party distributor, the rights vendor may not know specific countries within a region for which rights are sold. The rights may cover eight hours of a drama session or 5 news items per day. The rights seller will not necessarily know whether the purchase of those rights will broadcast that content once, more than once, or not at all.

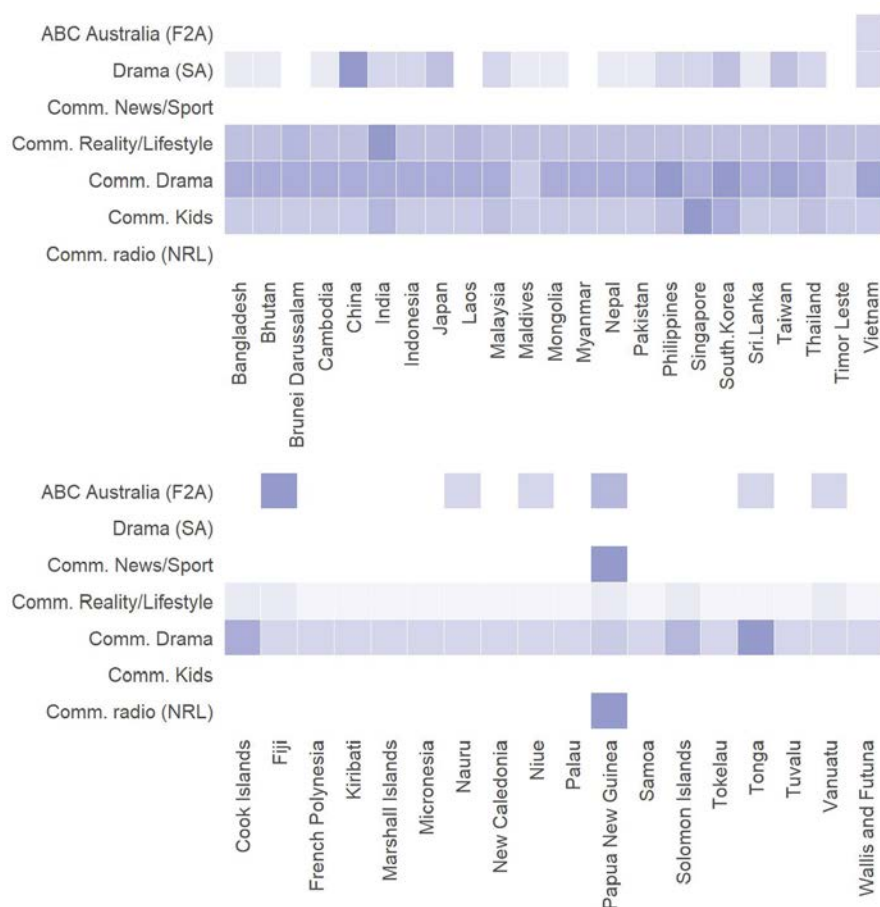
No single entity collects data about all such syndicated content rights. Data were obtained for this review from content funders like Screen Australia, some free TV networks, Australia News Channel and Fox SPORTS, Macquarie radio, and independent producer Endemol Shine Australia.

Hence the availability of Australian syndicated content indicated in Figure 7 may be regarded as an estimate of a minimum of broadcast hours of each service assuming broadcast at least once (with the exception of ABC TV). As above, a block of colour in Figure 7 indicates availability in each country, where the intensity of colour reflects availability relative to the maximum for each service across both Asia and Pacific countries (see program examples in Table 5 above):

- ABC cultivates relationships with local rebroadcasters—in this case colour intensity is relative to the count of free-to-air broadcasters employing ABC television content
- Screen Australia publicly co-funds the production of Australian drama
- Commercially produced news and sport television includes both full programs and individual stories/clips for television in PNG
- Commercially produced reality/lifestyle
- Commercially produced drama
- Commercially produced children's television, and
- Macquarie radio provides NRL broadcasts in PNG.



Figure 7: Syndicated content services supplied to Asia Pacific markets



Source: **ABC, Screen Australia, commercial networks**

### Online content services

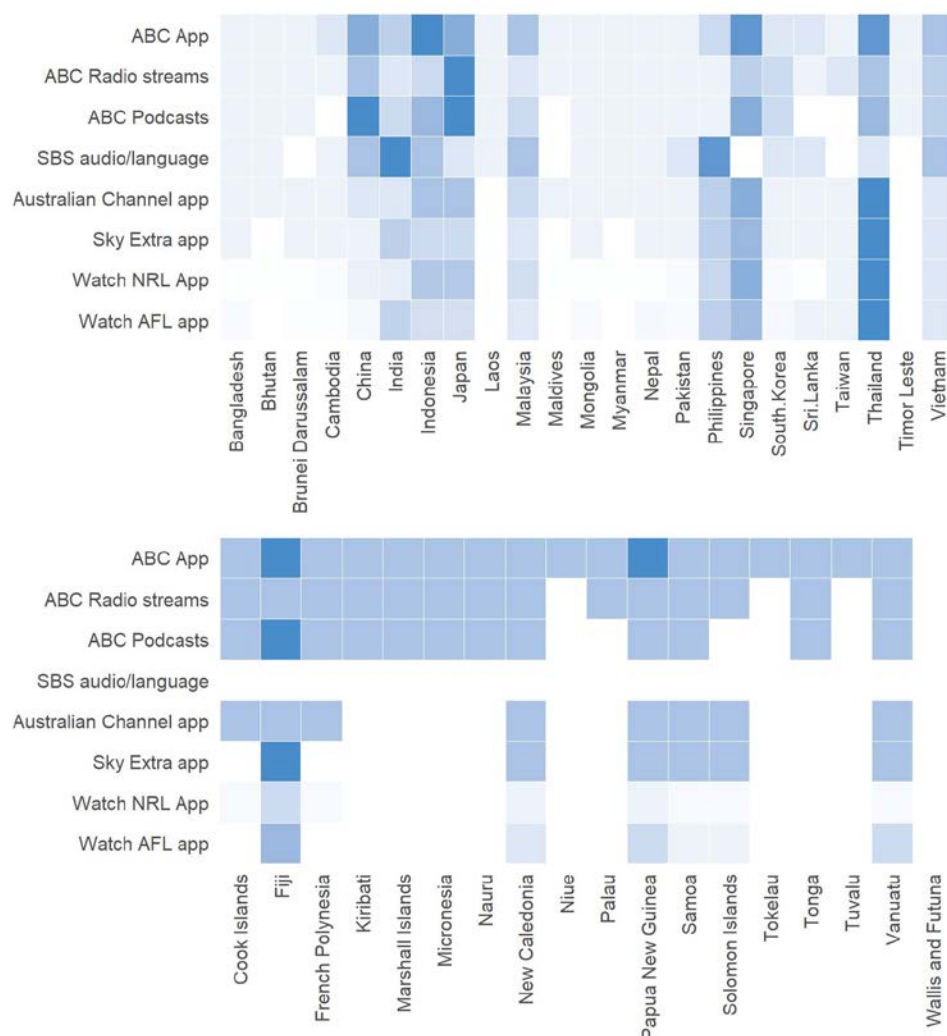
The transition of radio and television to digital broadcasting underpins the readiness of all domestic broadcasters to support internet delivery of their content, whether by streaming or downloaded pod/vodcast services. While some content is geoblocked to protect international origin copyrights, this means most content from Australian public, commercial free-to-air and community broadcasters available online is universally available. In this sense, every domestic broadcaster is an international broadcaster, from the ABC network with dozens of online media services through to community radio station Samoa FM streaming audio from Sydney.<sup>24</sup>

Online media services are also distinct from broadcast services in that, as transactional, broadcasters directly obtain information about content users, including the demand from international territories. However, like syndicated content, no single entity collects all data about such use.

Figure 8 provides an overview of a select number of services for which broadcasters provided data to the Review, where the intensity of colour reflects the demand for the service relative to relative to the maximum for each service across both Asia and Pacific countries.

<sup>24</sup> See <http://samoafmsydney.com.au/>

Figure 8: Online content services supplied to Asia Pacific markets



Source: **ABC, SBS, Fox Sports, Australian News Channel**

The online media services in Figure 8 include:

- for the ABC: individual sessions using the ABC App; streaming of three ABC radio channels (ABC News, Radio Australia and Radio National) and downloads of podcasts from all of the network
- for the SBS: unique visits to SBS audio and language websites
- for the Australia News Channel: streaming Australia News Channel or Sky Extra content from the website/ international app, and
- for Fox SPORTS: streaming NRL and AFL content from the website/ international app.

In contrast to the figures above, the intensity of colour in Figure 8 reflects the relative demand for the service within an assumption of universal availability. This indicates that:

- at least one of these online media services is utilised in every country except Wallis and Futuna
- more services are in demand from countries in Asia than in the Pacific, and
- the country or countries with the greatest utilisation of specific services may vary, but clear groups of countries have high demand for Australian online media services. These include:
  - in Asia, the most populous countries, China, India and Indonesia, but also Japan, Thailand, Philippines, and Singapore, and
  - in Pacific, Fiji and PNG as well as New Caledonia, Samoa Vanuatu and Solomon Islands.

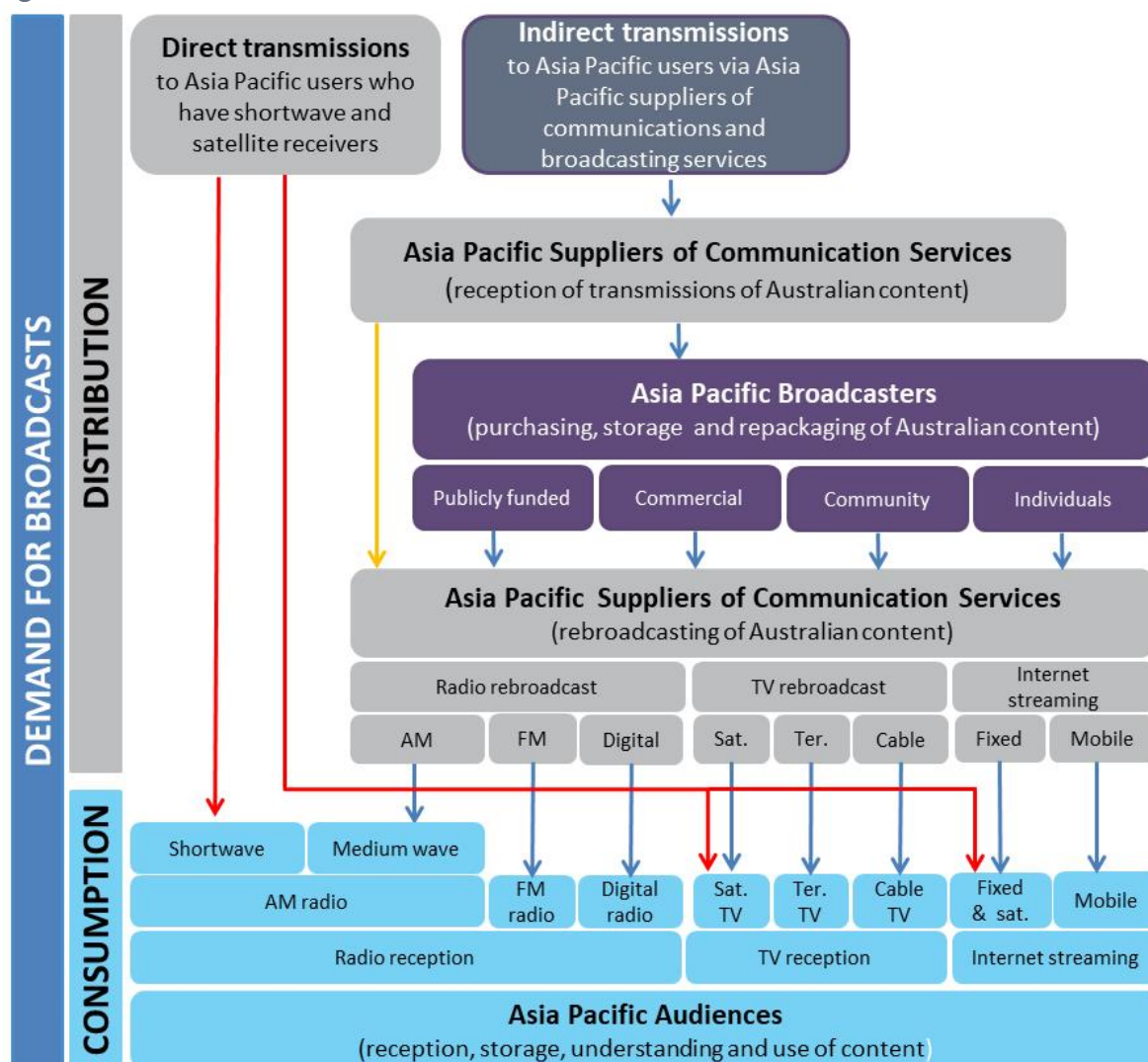


### 3. Demand for Australia's Asia Pacific Broadcasting Services

Although the potential reach of Australia's broadcasting services to the Asia Pacific region is determined by the supply of those services, as illustrated in Figure 9 and discussed further below, the actual reach of those broadcasts is ultimately determined by the demand for those services—that is, the extent to which Asia Pacific audiences are:

- able to receive and understand those broadcasts, which determines the “potential demand” for Australia's Asia Pacific broadcasts. This depends on the:
  - access of Asia Pacific audiences to the equipment required to receive Australian broadcasts directly (e.g. their access to shortwave or satellite receivers), and
  - access of Asia Pacific audiences to the equipment required to receive indirect rebroadcasts of Australian content by Asia Pacific broadcasters (e.g. AM and FM radio and TV receivers, as well as computers, laptops, tablets, and smartphones capable of audio and video streaming via the internet), and
- willing and able to pay for those broadcasts, which determines the “actual demand” for Australia's Asia Pacific broadcasts.

Figure 9: Demand for Australia's Asia Pacific broadcasts





As illustrated in Figure 9, the demand for Australia's broadcasting services in the Asia Pacific is determined by the combined activities of the:

- Asia Pacific suppliers of communication services who:
  - receive Australia's Asia Pacific broadcasts on behalf of Asia Pacific broadcasters and their audiences
  - rebroadcast repackaged Australian broadcasts on behalf of Asia Pacific broadcasters to their audiences, and
- Asia Pacific broadcasters that are involved in the purchase, storage and repackaging of the content contained in Australia's Asia Pacific broadcasts, on behalf of their local audiences.

Once again, it is important to note that the flows illustrated in Figure 9 symbolise the:

- broadcasting platform that is used to reach Asia Pacific audiences
- content of those broadcasts, and
- legal right to receive and rebroadcast that content to audiences in the Asia Pacific region.

The actual audiences for Australia's Asia Pacific broadcasts include not only the target audiences for those broadcasts, but also the other "fortuitous" audiences who receive those broadcasts, including audiences in the Asia Pacific and the rest of the world who were not the intended audiences.

### 3.1 What is the potential demand for Australia's Asia Pacific broadcasts?

#### Key findings

- The potential demand for Australia's Asia Pacific broadcasts comes from both: the "target audiences" for those broadcasts (both direct and indirect); and the "fortuitous audiences" who are not part of the target population, but who receive those broadcasts anyway.
- Some indication of the actual reach of Australia's Asia Pacific broadcasts can be obtained from available information on the extent to which Asia Pacific audiences have access to the types of equipment and communication services required to receive Australia's Asia Pacific broadcasts (i.e. using information on the "potential demand" for Australia's Asia Pacific broadcasts).
- The greatest potential demand for Australia's broadcasts comes from those Asia Pacific audiences who have access to a TV, where over 50 per cent of the world's TVs are owned, which reflects the preference that audiences in the Asia Pacific region have for watching video content rather than listening to audio content:
  - There are only 4 countries in the Asia Pacific where radio ownership exceeds TV ownership—Brunei, Laos, Timor-Leste and Nepal, and
  - Unlike audiences in Australia and New Zealand, across Asia radio is the third medium consumers spend time with after television and using the internet at home.
- The potential demand for Australia's broadcasts through local radio stations also remains strong given the widespread ownership and use of AM and FM receivers in the region. Although shortwave radio broadcasts have the potential to reach more remote audiences in the Asia Pacific, evidence received by the Review suggests that there is only limited ownership and use of the shortwave radios required to receive those broadcasts.





- Significant increases in the potential demand for Australia's Asia Pacific broadcasts are also arising as a result of increases in the access that Asia Pacific audiences have to online content services:
  - the markets for mobile broadband access in most countries across both Asia and the Pacific have grown by between two and five times over five year period, with the few exceptions where levels of penetration were already high
  - mobile broadband access rates now exceed 50 subscriptions per 100 person in most countries, compared with the maximum rate of 19 radio sets per 100 persons for countries for which there is data
  - while Pacific nations may be starting from lower initial rates of mobile broadband market penetration (and correspondingly higher costs) some of the largest changes have occurred in these markets, and
  - East, South and South East Asia represent the three largest online services markets, comprising approximately half the internet users worldwide.
- Since there are significant differences in the access that audiences in the Asia Pacific region have to the equipment and services required to receive Australia's broadcasts, there is no one broadcasting platform that is suited to reaching all of the audiences in each those diverse markets. Rather, Australia's Asia Pacific broadcasters need to use those broadcasting platforms that provide the most effective and efficient way of reaching the target audiences in each one of those diverse markets.
- The potential demand for Australia's Asia Pacific broadcasts continues to be significantly constrained by the predominantly English language content those broadcasts and the proportion of Asia Pacific audiences who can understand English.

### 3.1.1 Potential audiences for Australia's Asia Pacific broadcasts

The potential audiences for Australia's Asia Pacific broadcasts include both the:

- "target audiences" for those broadcasts. As illustrated in Figure 9, these target audiences include both the:
  - "direct users", who receive their broadcasts directly from Australia via either shortwave radio, or satellite receivers, and
  - "indirect users", who rely on Asia Pacific suppliers of communication services and Asia Pacific broadcasters to receive, repackage, reprogram and rebroadcast the content of Australian broadcasts on their behalf on local radio and TV stations, as well as the internet, and
- "fortuitous audiences", who also receive Australia's Asia Pacific broadcasts, who include audiences in the Asia Pacific and the rest of the world who were not the intended audiences for those broadcasts, but still received those broadcasts (e.g. Asia Pacific audiences who use software to defeat geoblocking of broadcasts by local Asia Pacific government agencies or Australian broadcasters to respect rights licences).

### 3.1.2 Constraints that limit the potential demand for Australia's Asia Pacific broadcasts

As noted in section 2.3, in theory, the potential size of the audience for Australia's Asia Pacific broadcasts is equal to the entire population of that region.

In practice, however, the potential size of that audience is limited by a number of factors that constrain the potential reach of Australia's broadcasts to the Asia Pacific region, which were outlined in section 2.3.2 of this report.



In addition, even if Australia's broadcasts successfully reach their target markets in the Asia Pacific region, the potential size of the audience for those broadcasts is limited even further by the potential demand for those broadcasts by Asia Pacific audiences, which is determined by the:

- ability of the target population to receive Australia's Asia Pacific broadcasts, which depend on the:
  - ability of "direct users" to access the equipment they need to receive Australia's Asia Pacific broadcasts directly from Australia, which is discussed further in section 3.1.3 below
  - ability of "indirect users" to receive Australian broadcasts indirectly via local broadcasters or the internet, which depends on the:
    - access that local Asia Pacific broadcasters and their audiences have to the communications services they need to receive and rebroadcast Australian content, and
    - access that Asia Pacific audiences have to the equipment required to receive Australian broadcasts indirectly via local broadcasters or the internet, which is discussed in section 3.1.4 below
    - extent to which Asia Pacific governments and commercial operators seek to restrict access to domestic audiences, and
- ability of the population to understand Australia's Asia Pacific broadcasts, which are predominantly in English, which is discussed in section 3.1.5 below.

### 3.1.3 Access to the equipment required to directly receive Australia's broadcasts

In order to receive Australia's direct broadcasts to the Asia Pacific region, potential audiences need access to the equipment required to receive those broadcasts, which includes:

- shortwave radio receivers, and
- satellite set top boxes capable of receiving satellite TV and radio broadcasts, and/or providing satellite internet access.

As a result, some indication of the potential demand for Australia's direct broadcasts to the Asia Pacific region can be obtained from available information on the access that the population in those regions have to that equipment.

#### Access to shortwave radios

There is relatively little information available on the ownership and use of shortwave radios in the Asia Pacific region. Since available data on the rates of penetration of radios in countries of the Asia Pacific does not specify whether or not the radios are capable of shortwave reception, it is necessary to rely on other available sources of information to determine the access that Asia Pacific audiences have to shortwave radio receivers.

Domestic shortwave radio transmissions appear to be available in five countries in Asia (Bangladesh, Bhutan, Japan, Laos, Myanmar) and four countries in the Pacific (PNG, Solomon Islands, Vanuatu, Wallis and Futuna).<sup>25</sup>

<sup>25</sup> World Radio Map, <http://worldradiomap.com>



The four publicly available surveys of media access in the Pacific indicate there are small and declining audiences for shortwave wavebands. In particular, those surveys indicate that:

- in PNG, 3 per cent of radio listeners tuned into shortwave bands in 2011 falling to 2 per cent in 2014, compared with 95 per cent listening to FM bands<sup>26</sup>
- in Vanuatu, 7 per cent tuned into shortwave bands in 2012, compared to 65 per cent listening to FM bands,<sup>27</sup> and
- in Bougainville, 81 per cent listen to FM bands while 53 per cent *also* have access to shortwave radio.<sup>28</sup>

Some submissions to the Review have been critical that these surveys do not include shortwave users in remote locations where shortwave may be preferred. However, in the PNG surveys, the sample was designed to be equally distributed between regions, provinces and zones (urban, peri-urban, rural—accessible and rural—remote). Similarly in the Vanuatu study, sample stratification included all six provinces of Vanuatu and urban-rural split. Hence it is reasonable to interpret these surveys as reflecting the preferences of the national audience, rather than those of particular target audiences.

- It is important to note that each of these surveys reported higher accessibility and use of mobile phones than radio. The PNG studies also observed the overall growth in television access and decline in radio.

The Australian High Commission in Sri Lanka was informed by Lanka Market Research Bureau (part of the Kantar group) that shortwave listenership in Sri Lanka was very limited. Approximately four to five from a sample of 10,000 people listened to international broadcasters like Radio Veritas, BBC and Deutsche Welle. The Sri Lanka Telecommunication Regulatory Commission and Kantar LMRB confirmed that very few radios available in the country have the capacity to access shortwave broadcasts.

The CEO of Vanuatu Broadcasting and Television Corporation, Mr Francis Herman, reported consulting with local port authorities to understand the stock of radio and television receivers, including satellite receivers, imported for sale in Vanuatu and signalling the potential audience size for VBTC television and radio broadcasts.<sup>29</sup> Mr Herman contrasted the consumer preference for FM for audio quality, with the AM broadcast being more robust during cyclones, and readily available \$2 AM/FM receivers, with the general lack of supply of shortwave radio receivers making listening to shortwave a costly option.

Currently Radio Vanuatu shortwave broadcasts are off-air due to technical issues. VBTC has sought external technical assistance to temporarily restore these shortwave transmissions to be available for emergency broadcasts during the current cyclone season, while the VBTC implements planned upgrades of its medium wave band transmission capabilities. Once the MW upgrade is complete, anticipated to be February 2019, the shortwave service will be discontinued.

<sup>26</sup> InterMedia Europe, *Citizen Access to Information in Papua New Guinea*, ABC International Development, 2012, and M&C Saatchi World Services Research & Insight, *Citizen Access to Information in Papua New Guinea*, ABC International Development, 2014

<sup>27</sup> InterMedia Research and Consulting Europe, *Citizen Access to Information in Vanuatu*, ABC International Development, 2013

<sup>28</sup> Centre for Social and Creative Media, University of Goroka, *Bougainville Audience Study*, Autonomous Bougainville Government, June 2017

<sup>29</sup> Mr Francis Herman is currently CEO of Vanuatu Broadcasting and Television Corporation, prior to which he was a Program Manager in the PACMAS media aid program after being CEO of Fiji National Broadcasting Corporation.



This view that the lack of availability of shortwave radio receivers to purchase means that there is no listening audience was echoed by Mr Ian Mannix regarding Papua New Guinea.<sup>30</sup>

Several submissions, including Lowy Institute, make reference to a Radio New Zealand report in August 2018 regarding the Papua New Guinea government's consideration of options for restoring radio services including shortwave in Bougainville by the National Broadcasting Corporation PNG, ahead of the province's referendum on possible independence in June 2019.<sup>31</sup> This report is one of a sequence of announcements regarding an ambition by the Minister for Communications to grow radio across PNG including (November 2017) for 22 provincial governments to assist in the purchase of low power, digital ready transmitters to revive local shortwave radio stations previously transferred to the provinces and (February 2018) for new medium and shortwave services provided by the state broadcaster.<sup>32</sup>

The PNG Minister for Communications highlighted in PNG Parliament on 26 July 2018 that the difficulty with introducing new shortwave transmission is that shops in PNG do not sell SW radios, only FM/MW radios, and the government would need to consider approaching manufacturers to ensure a supply of receivers for distribution by the government.<sup>33</sup>

Australian High Commissions confirmed shortwave receivers are not readily available in retail outlets in PNG, Vanuatu and Solomon Islands, and were not aware how consumers would inform themselves how to purchase such receivers.<sup>34</sup>

Many of the submissions to the Review advocating the use of shortwave international broadcasting promoted its technical characteristics that particularly benefit remote audiences for whom FM/AM broadcasts are inaccessible due either to distance or terrain.

For example, the submission received from Tecsun Radios Australia refers to their supply of shortwave receivers to the Solomon Islands, more fully described in Tecsun's Senate Inquiry submission:

*Recently we shipped 500 solar powered shortwave receivers to the Solomon Islands for distribution to villages on outlying islands. These radios are intended to be used communally in villages where there is no power or outside world connection. The project was arranged by the Solomon Islands Broadcasting Corporation (SIBC) who distributed the receivers free of charge.*

*In my discussions with the CEO of the organisation, he mentioned that there are potentially 200,000 to 300,000 listeners in the Solomon Islands who had access to Radio Australia.*

<sup>30</sup> Mr Ian Mannix is a former manager of ABC Emergency Broadcasting and Community Development who since 2015 has been leading media development projects in Papua New Guinea, Bougainville and Timor-Leste with ABC International Development and United Nations.

<sup>31</sup> See referenced Radio NZ article at <https://www.radionz.co.nz/international/pacific-news/363125/bougainville-in-line-for-shortwave-radio-restoration>

<sup>32</sup> See <https://postcourier.com.pg/basil-revive-radio-station/> (6 November 201) and <https://www.radionz.co.nz/international/pacific-news/350460/png-govt-to-extend-public-radio-services> (February 2018)

<sup>33</sup> Extract of parliament TV, <https://emtv.com.pg/communications-concerns-for-bougainville>

<sup>34</sup> For clarity, receivers for the reception of shortwave broadcasts are distinguished from High Frequency (HF) two-way communications, which are extensively used in all countries by governments, businesses and amateur radio enthusiasts.



*Significantly he told me that RA was a great source of weather information and that it was far more accurate and timely than his own existing radio network.*<sup>35</sup>

However, the submission received from Ashley Wickham, who was CEO of Solomon Islands Broadcasting Corporation (SIBC) from 2015 to June 2018, notes that local broadcasters are upgrading to digital transmissions and are also installing FM transmitters to reach localised population centres (including using local dialects). Regarding the local market for receiver technology SIBC comments:

*If ABC is to resume transmissions on MW and SW to the PICs [Pacific Island countries], it should do so using digital technology. This will help create the market which enables its islanders to buy digital receivers.*<sup>36</sup>

In combination, these submissions:

- highlight the utility of shortwave radio in particular communities for particular purposes
- confirm that the market for shortwave receivers is limited in relation to the market for alternative technologies (e.g. FM radios and mobile phones), and
- indicate that subsidies are necessary to encourage the ownership and use of shortwave radio receivers.

#### Access to satellite TV, satellite radio and satellite internet communication services

Communication satellites have a very large broadcast area, such that a single satellite may service the entire north and south Pacific region.<sup>37</sup> Within a given country, therefore, satellite broadcasts have a potential reach into remote regions that may be out of reach of terrestrial broadcasts.

*Television viewers in Bougainville accessed Broadcast TV mostly via antenna and satellite (antenna 47%; satellite 50%).*<sup>38</sup>

Satellite TV and satellite radio services tend to be transmitted by the same communications satellite and packaged in one subscription service. Satellite internet communication services may be delivered by the same or other communication satellites, and may deliver both wholesale services to local internet service providers that make terrestrial connections to end users or direct satellite connections using a very small aperture terminal (VSAT).<sup>39</sup>

Although there is a large number of communications satellites that provide services across the Asia Pacific region, there are limited data that disaggregates separate end user subscriptions to media services delivered by satellite. Figure 10 illustrates the ranked market penetration rate of direct-to-home (DTH) satellite antenna subscriptions on a per-person and per-household basis. The per-household indicator may be more significant as watching television is frequently a communal activity, as discussed further below with regard to television in general.

<sup>35</sup> Tecsun Radios Australia, Submission to the Senate Standing Committees on Environment and Communications, Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017 [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Shortwaveradio/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Shortwaveradio/Submissions)

<sup>36</sup> Ashley Wickham, [Submission to the Review](#)

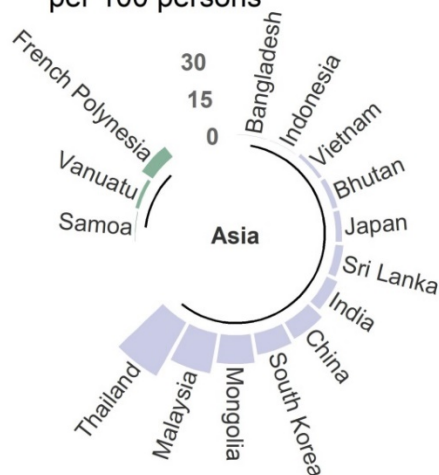
<sup>37</sup> For example, see the footprint of Intelsat 18 (IS-18) that carries ABC Australia to the Pacific <https://www.satbeams.com/satellites?norad=37834>

<sup>38</sup> Centre for Social and Creative Media, University of Goroka, *Bougainville Audience Study*, Autonomous Bougainville Government, June 2017

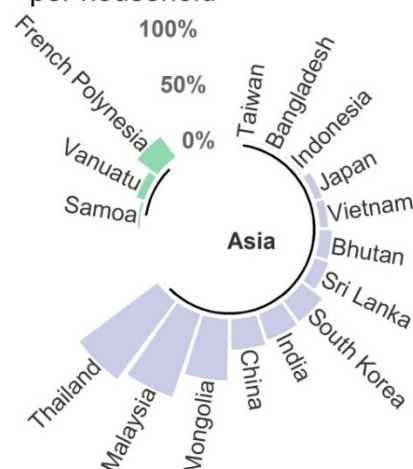
<sup>39</sup> For example, see list of VSAT Satellite Providers at <http://www.satproviders.com/>



Figure 10: Media penetration—satellite television subscriptions per 100 persons



per household



Source: International Telecommunication Union database

In general, like other subscription television services discussed in section 3.1.4, subscription cost is a barrier to entry for consumers and the penetration rate is low in general (i.e. 10 per cent or less where known and the overall reach is perhaps about 6 per cent of the Asia Pacific population).

However the full meaning of Figure 10, particularly the high satellite TV penetration in Thailand, Malaysia and Mongolia, cannot be understood without the context of the domestic market for television. As also discussed in section 3.1.4, local regulatory and economic factors have shaped unique histories of broadcast sectors in domestic markets, in some cases favouring pay TV in general and satellite TV in particular.

Table 6 estimates the proportion of TV households with satellite TV subscriptions as well as with pay TV subscriptions, demonstrating some of the market variations that required different strategic approaches to individual markets. In some markets a very large proportion of households purchase one or more multichannel television service, expressing a preference over available free-to-air services. In some cases, such as Thailand, Malaysia, Vanuatu and Indonesia, these are largely or entirely satellite TV services. In many other markets, satellite television is just one service in a competitive market—at the most extreme in Bangladesh satellite television is less than one per cent of the pay TV market.





Table 6: Proportion of TV households with satellite TV subscriptions and pay TV subscriptions

Countries	Proportion with Satellite TV	Proportion with Pay TV
Thailand	88%	98%
Malaysia	78%	97%
Mongolia	57%	124%
India	50%	131%
Bhutan	28%	82%
South Korea	23%	169%
Vanuatu	19%	19%
Sri Lanka	16%	20%
Vietnam	8.2%	84%
Japan	6.6%	71%
Indonesia	0.8%	1.4%
Bangladesh	0.6%	82%

Source: International Telecommunication Union database

In conclusion, direct transmission of television and radio by satellite has a high potential reach in some markets and limited reach in others, while in particular providing universal access to remote areas. It is a component of an international broadcasting strategy, however, over the whole Asia Pacific region and the potential demand for satellite media services is perhaps 4 to 6 per cent of the potential reach.

Consequently an international broadcasting strategy must consider indirect transmission of Australian broadcasts via Asia Pacific domestic media sectors. In its submission to this Review, the ABC has described such an international strategy:

*To reach audiences, international television services must be broadcast in domestic markets. This generally takes the form of carriage of a complete channel on a local pay-TV platform or the syndication of specific programs or blocks of programming by domestic broadcasters. The ABC employs both of these approaches.*<sup>40</sup>

### 3.1.4 Access to the equipment required to indirectly receive Australia's broadcasts

Figure 9 illustrates the large number of broadcast platforms that Australia's broadcasters can use to indirectly reach their audiences in the Asia Pacific via Asia Pacific suppliers of broadcasting and communication services. In addition to the necessary communications infrastructure to rebroadcast Australian content in domestic markets, consumers that are "indirect users" also need to have access to the equipment required to receive those broadcasts, which includes:

- television sets for displaying video content, sourced from terrestrial transmissions, cable and satellite transmissions and internet TV
- radio receivers, which are probably the most readily available and inexpensive devices, whether AM/FM analogue or digital receivers in free-standing radio sets, car radio sets or radio on a mobile phone, and
- mobile and fixed internet subscriptions for the consumption of content on smartphones, tablets, laptops, personal computers and internet enabled televisions.

<sup>40</sup> Australian Broadcasting Corporation, [Submission to the Review](#)





As a result, some indication of the potential number of “indirect users” of Australia’s broadcasts can be obtained from an analysis of available data on the market penetration of these alternative broadcast reception platforms in the Asia Pacific region.

#### Access to televisions

Asia Pacific audiences generally have a preference for video media over radio where both are available, and this is reflected from many sources including the International Telecommunication Union data on market penetration rates examined below, national media summaries such as those by the British Broadcasting Corporation (BBC) and Australian diplomatic mission reports.<sup>41</sup>

*The Asia-Pacific (APAC) region is home to more than half (50.2%) of the world’s TV households. The vast number of TV homes in China (430 million), India (169 million), Indonesia (64 million) and Japan (52 million) means developments within the APAC TV markets are likely to affect the global TV sector.*<sup>42</sup>

*Home to 573 million pay TV households in 2016, the Asia Pacific region is poised to strengthen its leadership as the largest multichannel video market globally in terms of subscribers.*<sup>43</sup>

For example, this preference can be seen in the data on the average amount of time that Asia Pacific audiences spend listening to and watching media each week across the Asia Pacific, which is set out in Figure 11.

As indicated in Figure 11, unlike audiences in Australia and New Zealand (that here symbolise the Pacific), across Asia generally consumers spend time with radio third after television and using the internet at home. This preference is reflected in a large variety of sources, including industry reports, the International Telecommunication Union data on market penetration rates examined below, national media summaries such as those by the BBC<sup>44</sup> and advice received from Australian High Commissions for the Review.

<sup>41</sup> For example, Indonesia <https://www.bbc.com/news/world-asia-pacific-15105923>

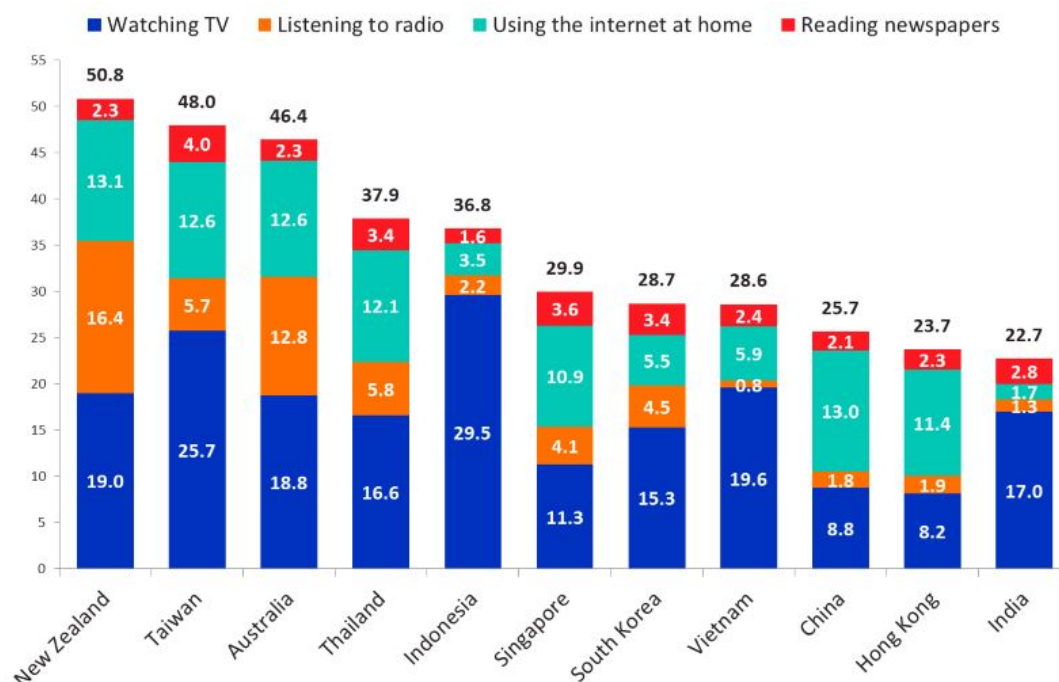
<sup>42</sup> Standing Committee on Copyright and Related Rights, *Current Market and Technology Trends in the Broadcasting Sector*, World Intellectual Property Organisation, June 2015

<sup>43</sup> CASBAA, *Asia Pacific Multichannel TV—A “What & Where Roadmap” to Asia Pacific pay TV data, 2017*: Notes: this definition of Asia Pacific includes Australia and New Zealand; from August 2018 CASBAA has become the Asia Video Industry Association

<sup>44</sup> For example, Indonesia <https://www.bbc.com/news/world-asia-pacific-15105923>



Figure 11: Average time spent with media across the Asia Pacific (average hours per week)



Source: Roy Morgan Research 2015, <http://www.roymorgan.com/findings/6277-time-spent-with-television-radio-internet-newspapers-across-asia-december-2014-201506090624>

Figure 12 below illustrates the ranked market penetration rate of television receivers on a per-person and per-household basis. On a per-person basis the rate is—predictably—higher in more affluent nations. Television watching is recognised, generally, as a communal activity either in a family unit or a wider social group of friends or in communal spaces in lower income communities.

*The majority of the households have televisions. Small shops and roadside tea stalls are popular places for gatherings for lower-income and middle income people to watch TV communally.*<sup>45</sup>

*While communal TV viewing has seen a decline over the past three years, it remains common particularly in the Highlands region. When compared with other provinces, a considerably greater share of regular viewers in the Highlands watch TV with others, either at their friend's or relative's house, in a communal village or town space, or at a trade store.*<sup>46</sup>

*This high level of interest in television across the country coupled with a largely limited home access to TV means that communal viewing plays a crucial role, particularly in rural areas. For example, rural citizens are more than three times as likely to watch TV in a village hall/other communal space or at a trade store than those living in Luganville or Port Villa. As illustrated in Figure 24, the scale of communal viewing at a friend's or family member's house—even on the national level—rivals that of private viewing at home. Other forms of communal viewing, such as at a trade store or community spaces, are also common.*<sup>47</sup>

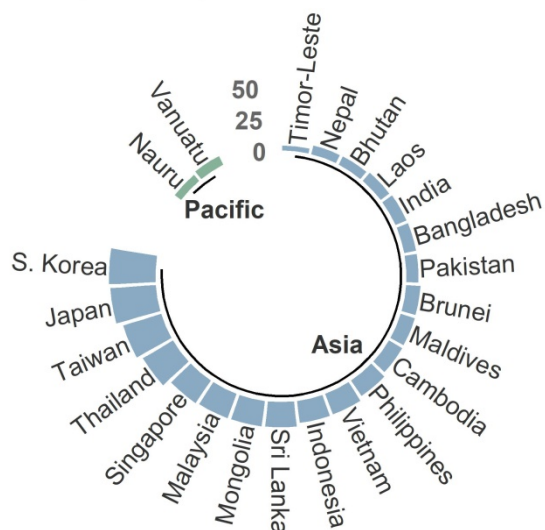
<sup>45</sup> Advice from Australian High Commission in Bangladesh

<sup>46</sup> M&C Saatchi World Services Research & Insight, *Citizen Access to Information in Papua New Guinea*, ABC International Development, 2014

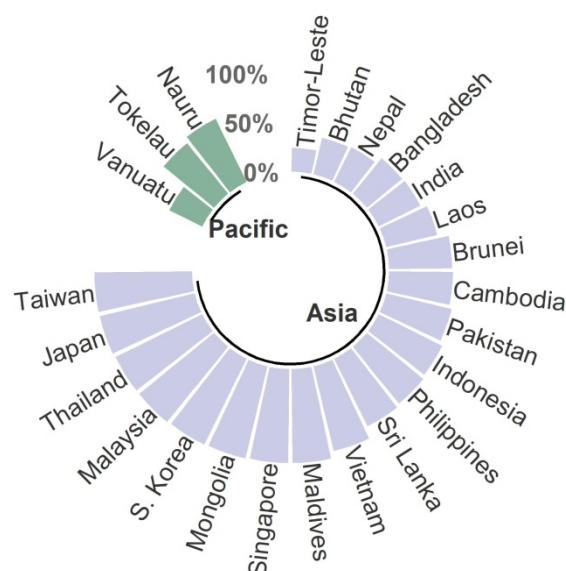
<sup>47</sup> InterMedia Research and Consulting Europe, *Citizen Access to Information in Vanuatu*, ABC International Development, 2013

As communal activity, the per-household metric is generally a better indicator, and shows a relatively high penetration of television across most markets. Those affluent Asian nations with high rates per 100 persons have household rates approaching 100 per cent, and for lower income Asian nations there are televisions in no less than one in four households. In the Pacific, the rate of ownership varies from 37 per cent of households in Vanuatu to 71 per cent in Nauru.

Figure 12: Media penetration—television receivers per 100 persons



per household



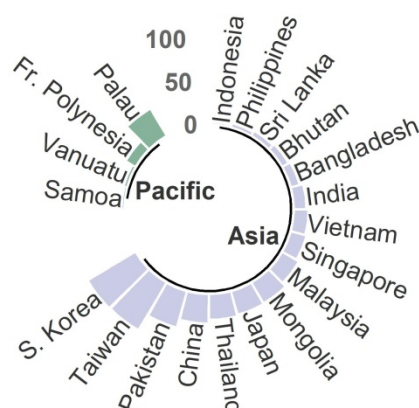
Source: International Telecommunication Union database

Figure 13 below illustrates the ranked market penetration rate of pay television subscriptions—like television ownership the per-household indicator may be a preferred indicator—demonstrating a very large range of penetration rates, varying from 1 per cent in Indonesia to 152 per cent in Pakistan. This wide variation is a combination of factors including:

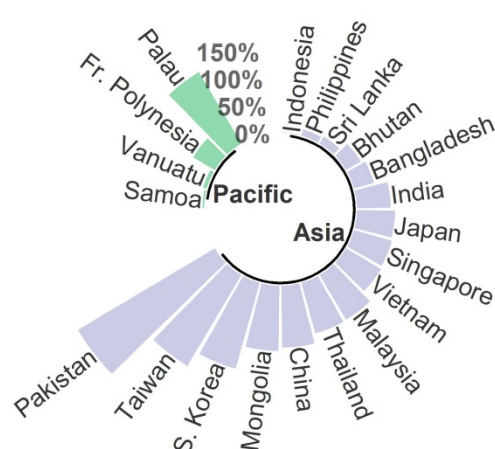
- The cost of subscription TV services is a barrier to entry for less affluent communities.
- Regulatory, geographic, economic and social factors. Each country has a unique history in the supply of television via terrestrial transmission, terrestrial cable and satellite transmission, such that pay TV may have predominated even before the emergence of over-the-top (OTT) internet delivered video services. For example, in Pakistan the State-run Pakistan Television Corporation (PTV) is the sole national terrestrial broadcaster, while dozens of private channels are available via cable, while there are no terrestrial TV stations in Palau.
- The willingness and ability of households to pay for more than one type of subscription service (e.g. accessing both cable and internet TV), which results in market penetration rates exceeding 100 per cent.



Figure 13: Media penetration—pay television subscriptions per 100 persons



per household



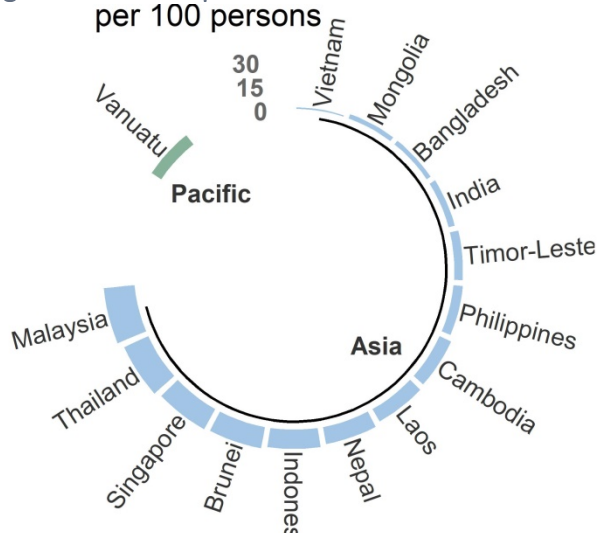
Source: International Telecommunication Union database

### Access to radio receivers

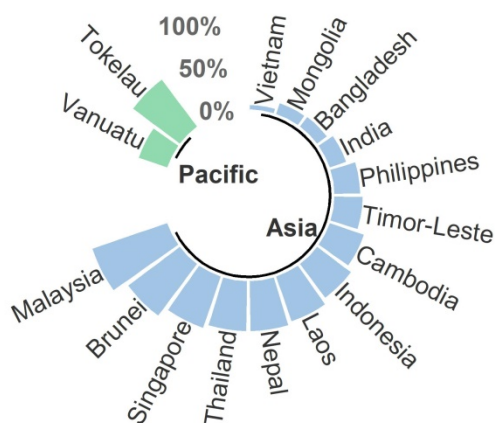
Figure 14 illustrates the ranked rates of market penetration for radio receivers, where the per-person rate complements the per-household rate given the portable size of radio receivers. As with televisions, higher rates are prevalent amongst higher income nations.

Reflecting the preference of consumers for video content, less data is reported on the market penetration of radios compared with television and, as noted above, for each country the rate of radio penetration is less than the rate for television in Figure 12, with only four exceptions (Brunei, Timor-Leste, Laos and Nepal). The maximum rate in Asia is 92 per cent of households and 19.3 per 100 persons compared with 99 per cent of households with televisions or 37 per 100 persons.

Figure 14: Media penetration—radio receivers per 100 persons



per household



Source: International Telecommunication Union database

It is possible that this data understates the actual availability of radios, particularly in wealthier countries, as it is not clear how radio sets are counted, particularly those embedded in other devices such as cars and mobile phones. As examined below, the penetration rate of mobiles generally exceeds that of radios.

### Digital radio

Like television, radio is in the transition to digital transmission, which delivers benefits in terms of improved signal quality and expanded content capabilities for the same radio spectrum. Also like television, this transition is at different stages of completion. The available data does not distinguish the type of radio, either AM, FM or digital standards DAB, DAB+ and DRM. According to WorldDAB, Australia and South Korea are the only Asia Pacific countries with regular DAB broadcasts and only reports receiver sales for Australia.<sup>48</sup> DRM has been rolled out by All India Radio as simulcast for AM broadcasts, with an estimated one million in car DRM receivers across India, and some international shortwave broadcasters.<sup>49</sup>

### Access to the internet

The digital transformation means that video and audio content can now be accessed using a plethora of devices ranging from a 3 inch smartphone to intelligent 100 inch 4K televisions, all of which have in common a subscription to a mobile or fixed internet service provider.

The major trend over the past decade, compared to the preceding decade, has been the exponential shift of the internet from fixed to mobile broadband. Figure 15 illustrates the ranked market penetration rate of active mobile broadband subscriptions, including the growth over the most recent five year period for which there is data (Australia and New Zealand are included for reference). The per-person indicator is considered as a connected portable device is most likely to be utilised by a single person at a time.

Figure 15 indicates that this transformational change is currently happening rapidly across both Asia, which is now well recognised as a digital heartland globally, as well as the Pacific region. In particular, between 2012 and 2017:

- the mobile broadband markets in most countries across both Asia and the Pacific have grown by between two and five times
- the few exceptions with lower growth are highly developed countries like Singapore, Japan and South Korea that already had high levels of penetration
- rates now exceed 50 subscriptions per 100 person in most countries (compared with the maximum rate of 19 radio sets per 100 persons for countries for which there is data)
- similar to pay TV households, the cost of access in many countries mean that individuals own more than one mobile connected device, with rates now exceeding 100 subscriptions in 100 persons in six of the countries in the Asia Pacific region (as well as both Australia and New Zealand), and
- while Pacific nations may be starting from lower initial rates of market penetration (and correspondingly higher costs) some of the largest changes have occurred in these markets.

<sup>48</sup> See <https://www.worldddab.org>

<sup>49</sup> See <http://www.drm.org> and Digital Radio Mondiale, [Submission to the Review](#)





Figure 15: Market penetration—mobile broadband subscriptions  
Per 100 persons



**Note:** Australia and New Zealand are not in scope, but have been included for reference.

Source: International Telecommunication Union database

These objective data suggest that individual observations by stakeholders in the Review that Pacific markets are lagging (e.g. in relation to infrastructure, price, speed and usage) are very likely to be specific to the circumstances of a given country at a given time.

These changes are socially transforming, as indicated in advice from Australian diplomatic missions (see box below).

Figure 16 illustrates the ranked market penetration rate of fixed broadband subscriptions. The per-household indicator is considered, since generally the service is delivered to a single connection point at a fixed address, which may then be shared by people within the household. Like Figure 15, Figure 16 portrays the growth over the most recent 5 year period for which data is available, and Australia and New Zealand are included for reference.

Overall, the digital transformation is changing most of these markets rapidly, if not at the rates of change recently seen for mobile broadband. More affluent countries in Asia have continued to see market growth on top of high use, and substantial growth is evident in a wide range of developing countries, including those in the Pacific.

Furthermore, considered in conjunction with the market penetration of mobile broadband subscriptions in Figure 15, a significant feature of the digital transformation is that many developing countries are bypassing fixed broadband infrastructure with mobile broadband infrastructure, including but not limited to India and Indonesia, Bhutan and Myanmar, while in the Pacific this switch in preferred technology includes decreases in fixed broadband subscriptions in Fiji, Solomon Islands and Kiribati.



Advice to the Review from Australian diplomatic missions

*This has resulted in a large increase in the number of ni-Vanuatu sourcing news and entertainment through social media. Facebook is the primary source of online news as telecommunication companies often sell packages which include free data for Facebook.<sup>1</sup>*

*An estimated 43% of the Tongan population is online, and the vast majority of them use Facebook.*

*Hong Kong citizens are voracious consumers of mobile information. With a population of 7.4 million, the Hong Kong Communications regulator reported in March 2018 that there are 17.2 million mobile broadband customers.*

*According to the 2018 Reuters Institute Digital News Report for the Asia-Pacific, most Malaysians (89%) get their news online (including 72% on social media).*

*Media consumption trends in Sri Lanka have changed over the last decade with the growing influence of social and online media, as well as improvement of socio-economic conditions. Following Sri Lanka's improvement in democratic space after the regime change in 2015, many in urban areas increasingly use online platforms for their media needs.*

*Within the last five years, Myanmar's media landscape has undergone significant changes. Prior to 2013, prepublication censorship and the existence of very few independent media made access to reliable information difficult and for the main part people had to rely on state propaganda. Although the internet and mobile technologies had reached the country, few had access. The price of a sim card was up to 300 USD and Myanmar had one of the world's lowest mobile penetrations, just above of North Korea. In 2018 the picture has changed dramatically. With the abolition of prepublication censorship, new and better media reforms making it easier for independent media to operate and heavy investments in infrastructure, Myanmar's media landscape is far more diverse, and the population has access to an ever-growing number of media on a variety of platforms.*

Overall, access to the internet means that:<sup>50</sup>

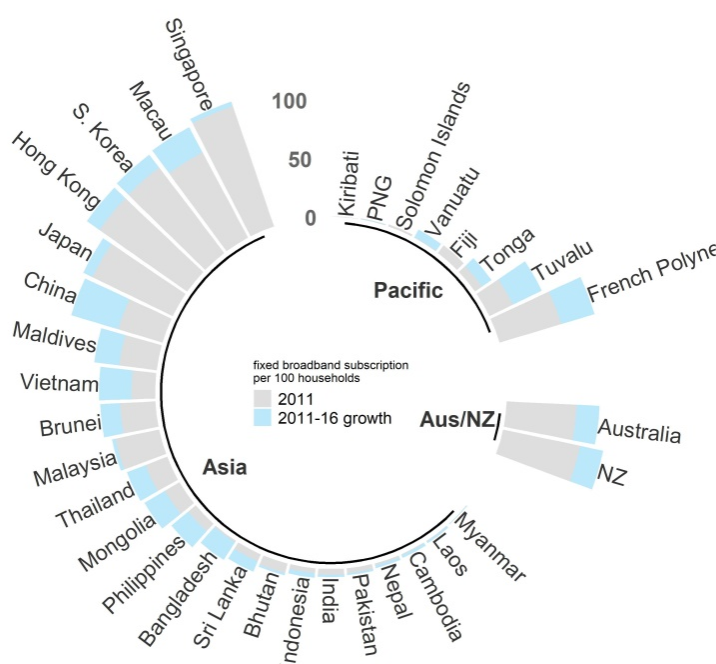
- East, South and South East Asia represent the three largest internet markets, combined approximately half the internet users worldwide
- Singapore, Hong Kong and South Korea have the highest fixed internet speeds worldwide
- Singapore, South Korea, Hong Kong and Japan have the highest mobile internet speeds in Asia
- Thailand, Philippines and Indonesia are three of the top four nations worldwide for hours spend using the internet per day
- South Korea, Singapore, Taiwan, Hong Kong, Malaysia and Thailand are all in the top ten nations for active social media accounts per capita
- Thailand, Japan, Philippines, Malaysia, Taiwan and Hong Kong are all in the top ten nations engaging with Facebook, and
- South Korea, Thailand, Taiwan, Malaysia, Hong Kong and Singapore are all in the top ten nations purchasing a product online via a phone.

<sup>50</sup> we are social/Hootsuite, Digital in 2018, <http://wearesocial.com>





Figure 16: Market penetration—fixed broadband subscriptions  
Per 100 households



**Note:** Australia and New Zealand are not in scope, but have been included for reference.

Source: International Telecommunication Union database

### 3.1.5 Ability to understand Australia's Asia Pacific broadcasts

In addition to being able to receive Australia's broadcasts, the potential audiences for Australia's Asia Pacific broadcasts also need to be able to understand the content of those broadcasts.

Since Australia's international broadcasts are predominantly in English, the English proficiency of Asia Pacific audiences is significant determinant of the demand for Australian content. The World Economic Forum has reported that English is the world's most widely spoken language with 1.5 billion speakers, including over 1 billion who speak English as a second language, and the English language is important as a language of international exchange for goods, services and ideas.<sup>51</sup>

Some indication of potential target market audiences that speaks English is given in Table 7 which provides the leading spoken languages in each country as well as the Education First English Proficiency Index and rating (only for Asian countries).

Some of the international audience is actively learning English and Australia's international broadcasts encourage English Language learning—ABC has a community of over 4 million users for its Learn English service.<sup>52</sup>

<sup>51</sup> <https://www.weforum.org/agenda/2016/11/which-countries-are-best-at-english-as-a-second-language-4d24c8c8-6cf6-4067-a753-4c82b4bc865b/> and EF English Proficiency Index, 2018 [www.ef.com/epi](http://www.ef.com/epi)

<sup>52</sup> ABC data provided to the Review.

Table 7: Leading spoken languages and English language proficiency

Asian Country	Leading languages	English language proficiency	Pacific Country	Leading languages
Bangladesh	Bengali	Low Proficiency	Cook Islands	English
Bhutan	Dzongkha		Fiji	English, Fijian, Hindustani
Brunei Darussalam	Malay, English		French Polynesia	French, Polynesian
Cambodia	Khmer	Very Low Proficiency	Kiribati	I-Kiribati, English (official)
China	Mandarin	Low Proficiency	Marshall Islands	Marshallese, English (official)
India	Hindi, English (official)	Moderate Proficiency	Micronesia	Yes
Indonesia	Bahasa Indonesia	Low Proficiency	Nauru	Nauruan, English
Japan	Japanese	Low Proficiency	New Caledonia	French
Laos	Lao, French, English		Niue	Niuean, English
Malaysia	Bahasa Malaysia (official), English, Chinese		Palau	Palauan, English
Maldives	Dhivehi		Papua New Guinea	Tok Pisin, English, Hiri Motu
Mongolia	Mongolian		Samoa	Samoa, English (official)
Myanmar	Burmese	Very Low Proficiency	Solomon Islands	Melanesian pidgin, English (official)
Nepal	Nepali		Tokelau	Tokelauan, English, Samoan, Tuvaluan
Pakistan	Punjabi, English	Low Proficiency	Tonga	Tongan, English
Philippines	Chamorro, English (official)	High Proficiency	Tuvalu	Tuvaluan), Samoan, English (official)
Singapore	English (official), Chinese, Malay	Very High Proficiency	Vanuatu	Bislama, English (official), French
South Korea	Korean, English	Moderate Proficiency	Wallis and Futuna	Wallisian, Futunian, French (official)
Sri Lanka	Sinhala, Tamil, English	Low Proficiency		
Taiwan	Mandarin Chinese, Taiwanese	Low Proficiency		
Thailand	Thai	Low Proficiency		
Timor-Leste	Tetun, Portuguese, Indonesian, English			
Vietnam	Vietnamese, English, French, Chinese, Khmer	Moderate Proficiency		

**Note:** EF English Proficiency Index (2018) provides an English language proficiency score (not shown) and rating for Asian countries where the survey tests were completed; none were completed in the Pacific.

Source: CIA Factbook and [www.ef.com/epi](http://www.ef.com/epi)



Conversely, the Asia Pacific is home to some of the world's other most spoken languages, including Mandarin Chinese, Hindustani, Malay and Bengali as well as wide variety of other language including one of the world most language diverse nations in Papua New Guinea, so that linguistic constraints can significantly reduce the size of the potential audience for Australia's predominantly English language broadcasts.<sup>53</sup> Observations from PNG and Vanuatu surveys include:

*Regular Kundu TV viewers are divided on the issue of the language in which Kundu TV should broadcast, with 52% preferring Tok Pisin and 46% expressing a preference for English.*<sup>54</sup>

*The large majority of listeners prefer radio programs in Tok Pisin (92%) and just over half are comfortable listening to programs in English (58%). Only a small percentage would like to listen to radio programs in local language (6%). Listeners enjoy the clarity and portability of the radio as medium.*<sup>55</sup>

*Provision of content in only one language, whether it is French, English or Bislama, for many remains a barrier to access to information.*<sup>56</sup>

In its submission to the Review, the ABC noted:

*In-language services always have an advantage in providing immediate access to—and increasing relevance of—content to the target audiences. The ABC has, at various times over the decades, produced content in Hindi, Bahasa Indonesia, Japanese, Thai, Khmer, Vietnamese, Khmer, Burmese, Mandarin, Cantonese, Fukinese, French, Dutch, German, French and Tok Pisin.*

*As valuable as they are for effectively reaching audiences, in-language services are relatively expensive to maintain at an appropriate level of editorial quality, and the Corporation currently produces content only in Mandarin, Bahasa Indonesia, Tok Pisin and English.*<sup>57</sup>

<sup>53</sup> <https://www.weforum.org/agenda/2018/02/chart-of-the-day-these-are-the-world-s-most-spoken-languages/>

<sup>54</sup> M&C Saatchi World Services Research & Insight, *Citizen Access to Information in Papua New Guinea*, ABC International Development, 2014

<sup>55</sup> Centre for Social and Creative Media, University of Goroka, *Bougainville Audience Study*, Autonomous Bougainville Government, June 2017

<sup>56</sup> InterMedia Research and Consulting Europe, *Citizen Access to Information in Vanuatu*, ABC International Development, 2013

<sup>57</sup> Australian Broadcasting Corporation, [Submission to the Review](#)



### 3.2 What is the actual demand for Australia's Asia Pacific broadcasts?

#### Key findings

- The actual demand of those potential audiences for Australia's broadcasts depends on both their willingness and ability to pay for those broadcasts. In general:
  - Pacific audiences with similar cultural backgrounds as Australian audiences and fewer competing local broadcasters may have a higher willingness to pay for Australia's Asia Pacific broadcasts, but lower average incomes restricting their ability to meet the costs of accessing Australian broadcasts
  - conversely Asian audiences with more cultural differences as well as large and dynamic local broadcasting markets have a lower willingness to pay while having higher ability to pay, and
  - average incomes are rising across the Asia Pacific region, signalling the potential for significant growth in the potential demand for Australia's broadcasts to the Asia Pacific region.
- There is little information available on the actual use of Australia's traditional broadcasts to the Asia Pacific region. That information available indicates the actual reach is significantly smaller than the potential reach. For example:
  - actual demand for Radio Australia may be between 46,000 and 172,000, compared to a potential reach of 1.3 million people based on the population within geographical broadcast reach in the seven nations where locally broadcast, and
  - one of the two Malaysian carriers (with 5 million subscribers) reported the average viewership of ABC Australia as 219,000 per month.
- There is more information being gathered on the actual use of broadcasts over the internet, although it is usually commercially sensitive and infrequently published. In general, across the range of online media able to be examined in detail, the top 10 to 12 countries represent more than 90 per cent of demand from the Asia Pacific region. In particular:
  - the demand for Australia's broadcasts in India and China is significant, as is expected due to their population, internet access and use. In addition, the demand from the set of countries comprising Japan, South Korea, Philippines, Thailand, Vietnam, Cambodia and Malaysia is also significant across all services, which is consistent with the general finding regarding the prominence of Asian internet users worldwide, and
  - Considered as a whole, the demand from audiences in the Pacific region is also significant across the services. As a result, the demand for Australia's broadcasting services is disproportionately higher in the Pacific than would be suggested by the size of its population alone.
- On the one hand, English language proficiency across these countries varies, so it is likely the accessibility of predominantly English language Australian content restricts demand to particular audiences in these countries who are either more proficient than average or engaged in learning English.
- On the other hand, there are sizeable Australian populations with heritage ties to these Asian and Pacific countries, so that it is likely that diaspora and expatriate communities are a driver of this demand, including from Australians while travelling in these countries and from Asian and Pacific residents interested in the lives of their Australian relations



### 3.2.1 Willingness of audiences to pay for Australia's Asia Pacific broadcasts

The actual demand for Australia's Asia Pacific broadcasts depends not only on their ability to receive and understand those broadcasts, but also on their willingness to pay for those broadcasts.

This willingness of potential audiences to pay for Australia's Asia Pacific broadcasts depends on the:

- extent to which they find the content of those broadcasts to be:
  - interesting given their personal preferences, which are influenced by numerous demographic factors including their age, sex, incomes and country of residence, and
  - appropriate in the light of their cultural background and religious beliefs
- availability of other, potentially substitutable, broadcasts from other:
  - local broadcasters, and
  - international broadcasters.

#### Individual preferences and cultural background

In addition to linguistic constraints, the size of the potential audiences for Australia's Asia Pacific broadcasts is determined by their individual preferences and cultural backgrounds, which is the reason why they tend to favour local broadcasters who provide more appropriate content that is tailored to suit their particular interests.

In his submission to the Review, Mr Jean-Gabriel Manguy, Head of Radio Australia for ten years (1997-2007), cited consistent surveys showing "that audiences in the Asia Pacific privilege their own local media outlets, rather than foreign media, even if these are available on their own local standalone service (FM radio, Cable or Free to Air TV)."<sup>58</sup> This is the basis for the ABC's decision to use a model of international broadcasting based on partnerships with local rebroadcasters—"Australian content, if it can be part of general programming on local stations, gains added credibility."

It is important to note that in order to know whether or not a particular broadcast suits their preferences, audiences typically have to listen to, or view, that broadcast first (i.e. broadcasts are examples of what economists call "experience goods". In order to assess the benefits they are likely to derive from those broadcasts, audiences usually have to experience those broadcasts first).

In those cases where audiences have not yet had the opportunity to experience a particular broadcast themselves, they have to rely on other potential sources of information, which includes the views expressed by:

- their family members, friends and acquaintances, which are now much more readily obtained via social media sites (e.g. Facebook), and
- other commentators they trust (e.g. reviews on blog sites, etc.).

Cultural views regarding the appropriate roles of men and women in society continue to have an impact on the actual reach of Australia's broadcasts to the Asia Pacific.

<sup>58</sup> Jean-Gabriel Manguy, [Submission to the Review](#)



For example, in PNG males continue to control the media devices used:

*The household balance of power that dictates control over the media devices remains largely unchanged. Men continue to have significantly more say in how and when these devices are used. The internet is the only medium where the gender dynamics have improved, with the gap between men and women's control over internet use narrowing considerably. This trend may be, in part, associated with a growing use of internet on mobile phones, which due to their personalised nature allow their users greater control over how and when they access the internet. Conversely, those who access internet at home via computer typically share such access with other household members and are less likely to have full control over its use.*<sup>59</sup>

Similarly, in Asia, women have less access to mobile phones:

*While mobile connectivity is spreading quickly, it is not spreading equally—and women are being left behind. In low- and middle-income countries, women have less access than men to technology, and especially to mobile telephony. For example, women in Southern Asia are 26% less likely to own a mobile phone than men and 70% less likely to use the mobile internet. This is by far the largest gender gap of any region in the world. The gap is especially large in Pakistan, Bangladesh and India.*

*Recent research by the GSMA's Connected Women programme has found that, on average, women are 14% less likely to own a mobile phone than men. 54% of women in low and middle income countries in East Asia & Pacific do not own a phone, or 531 million women. As well as the ownership gap, there is also a usage gap between men and women. Even when women own a phone, they use it less frequently and intensively than men, especially the mobile internet.*<sup>60</sup>

In the Pacific in general, the access of women to mobile phones has also been constrained by social pressures and the affordability of handsets:

*The main barriers to mobile ownership and usage identified by women are affordability (handset cost, SIM cost, credit cost and battery charging cost), network quality and coverage, security and harassment, operator/agent trust and technical literacy. Cost remains the greatest barrier overall to owning and using a mobile phone, particularly for women in developing regions, who often have less financial independence than men.*<sup>61</sup>

### Benefits audiences expect to derive from Australia's Asia Pacific broadcasts

As illustrated in Figure 17, the willingness of audiences to pay for Australia's Asia Pacific broadcasts depends on the benefits they expect to derive from their use of those broadcasts (i.e. the "value in use" of those broadcasts).

This willingness to pay for those broadcasts, or "value in use" of those broadcasts (i.e. area DAQ<sub>1</sub>O in Figure 17), is equal to the sum of:

- what they actually had to pay in order to listen to, or view, those broadcasts (i.e. area P<sub>1</sub>AQ<sub>1</sub>O, which could be close to zero for "free-to-air" radio and TV broadcasts, but potentially higher for satellite TV subscription broadcasts), and

<sup>59</sup> M&C Saatchi World Services Research & Insight, *Citizen Access to Information in Papua New Guinea*, ABC International Development, 2014

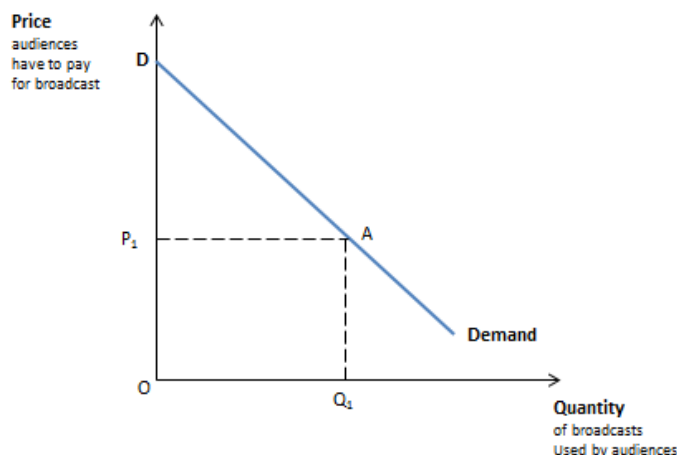
<sup>60</sup> GSMA Intelligence, *The Mobile Economy Asia Pacific 2018*

<sup>61</sup> GSMA Intelligence, *The Mobile Economy Pacific Islands 2015*



- the additional amount that they would have been willing to pay for those broadcasts (i.e. area  $DAP_1$ , with is equal to the net benefit, or “consumer surplus” they expect to derive from using those broadcasts).

Figure 17: Willingness of audiences to pay for Australia’s Asia Pacific broadcasts



#### Availability of other substitutable local and international broadcasts

As illustrated in Figure 18, the willingness of audiences to pay for Australia’s Asia Pacific broadcasts depends on the availability of closely substitutable broadcasts (i.e. the number of alternative broadcasts available and the extent to which audiences consider those broadcasts to be substitutable).

In general, the greater the number of closely substitutable broadcasts that are available (e.g. because those audiences live in highly populated urban areas with good communications infrastructure), the:

- greater the sensitivity of their demand for those broadcasts will be to the relative price they have to pay for those broadcasts in relation to those other substitutable broadcasts (i.e. as indicated by the flatter demand curve D in the left hand figure)
- smaller the gross benefits they expect to derive from the use of those broadcasts (i.e. area  $DAQ_1O$  in the left hand figure), and
- smaller the net benefit audiences expect to derive from those broadcasts (i.e. area  $DAP_1$  in the left hand figure).

Conversely, the fewer the number of closely substitutable broadcasts available (e.g. because those audiences live in more remote areas), the:

- smaller the sensitivity of their demand for those broadcasts will be to the relative price they have to pay for those broadcasts in relation to those other substitutable broadcasts (i.e. as indicated by the steeper demand curve D in the right hand figure)
- greater the gross benefits they expect to derive from the use of those broadcasts (i.e. area  $DAQ_1O$  in the right hand figure), and
- greater the net benefit audiences expect to derive from those broadcasts (i.e. area  $DAP_1$  in the right hand figure).

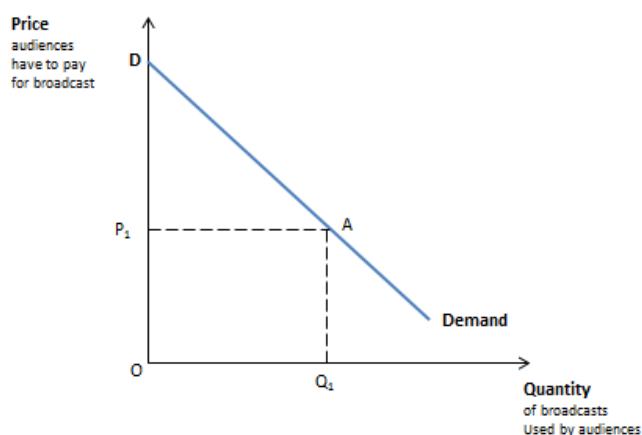
As outlined further below, this adverse effect that competition from other broadcasters can have on the actual reach of Australia’s broadcasts in the Asia Pacific is reflected in not only the findings of previous inquiries and reviews, but also in the submissions received by this Review and the results of research conducted by the BBC into the actual reach of its international broadcasts.



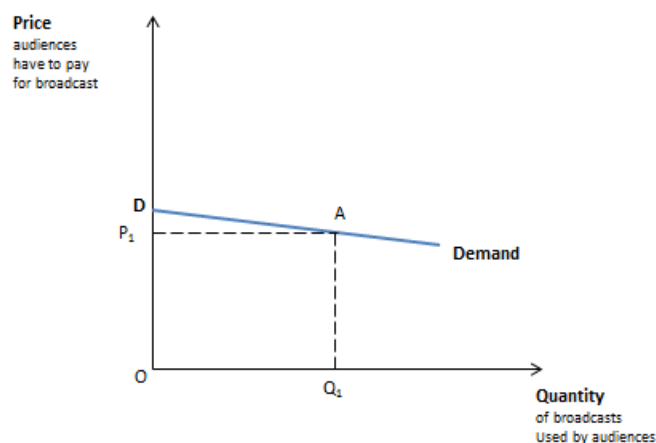


Figure 18: Effects of the availability of substitutable broadcasts on the willingness to pay for those broadcasts

Many close substitutes available



Fewer close substitutes available



For example, under the heading “Gaining attention in a crowded space”, the 2007 Senate Inquiry into *Australian public diplomacy* examined the challenge of Australia as a medium power among the many countries endeavouring to secure a space in a fiercely contested international environment.

*It is very difficult when you are representing Australia overseas to put Australia across in ways that differentiate it from, say, the United States or the UK. Our competitor countries like, say, France, Sweden, Japan or Korea put a lot more energy, effort and commitment—Canada, too, hugely—into their public diplomacy or their cultural relations programs.*<sup>62</sup>

<sup>62</sup> Senate Standing Committee on Foreign Affairs, Defence and Trade, *Australia’s public diplomacy: building our image*, August 2007



This was noted by some of Australia's diplomatic missions:

*Australian content is less competitive to content from the UK or the US due to the breadth and quality of content from these markets as well as their higher profiles and general levels of awareness among the Taiwanese public. Those with an Australian connection (Australian alumni, returned working holiday makers, Australian expats and dual nationals) may be more inclined to view Australian content, but this has not translated into significant Australian programming on cable or free-to-air TV.<sup>63</sup>*

*As in most of South Asia, much of the Bangladeshi television landscape is dominated by Indian-based media. Bangladeshi audiences prefer Indian channels for subscription TV and with that comes ESPN and Star Sports.<sup>64</sup>*

Similarly, in its submission to this Review, the ABC stated:

*The ability of international media brands to capture the attention of audiences within a country is directly affected by the size and sophistication of the local media market. In general, greater domestic competition drives up the breadth and quality of the services available to audiences. This, in turn, places international services, particularly those that do not operate in the local language or that do not focus on local issues and concerns, at a distinct disadvantage.*

*In many countries in the Region, particularly in Asia, the market for media services is already saturated with local providers. For example, following the liberalisation of India's economy in 1991, the number of television channels available to audiences in the country grew over two decades from two in 1990, through 112 in 2000, to around 500 in June 2010; today, there are more than 800.<sup>65</sup>*

In addition, the ABC noted the technical and financial constraints that in more competitive, saturated markets mean that broadcasting frequencies and channel positions are less likely to be available and that multichannel service operators have been increasingly able to charge carriage fees to ensure placement of channels on their platforms.

As illustrated in Figure 19, the results BBC International Broadcasting Audience Research in the 1990s also confirms the adverse effects that competition from other broadcasters can have on the actual reach of those broadcasts.

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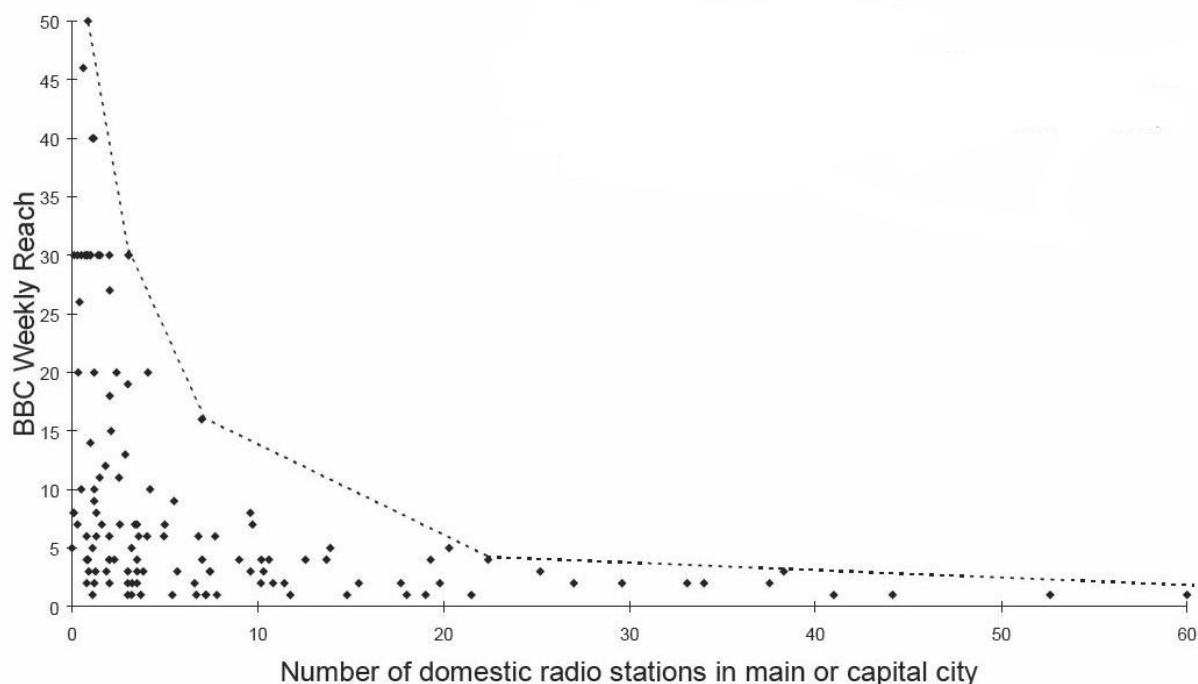
<sup>63</sup> Advice from Australian High Commission in Taiwan

<sup>64</sup> Advice from Australian High Commission in Bangladesh

<sup>65</sup> Australian Broadcasting Corporation, [Submission to the Review](#)



Figure 19: Impact of availability of substitutable broadcasts on actual reach of broadcasts



Source: Mytton G., *Audience research at the BBC World Service 1932-2010*, Participations Journal of Audience and Reception Studies, vol 8, May 2011

The BBC sought to understand what drove international audiences to listen to the BBC World Service. They found several positive correlations with weekly audience figures, including larger audiences in former British territories and negative correlations with levels of political freedom:

*But the strongest correlation was found to be with the degree to which there was local choice in radio broadcasting. The less choice there was of radio services locally, the more likely it was that the BBC would attract a significant audience.*<sup>66</sup>

However, as illustrated in Figure 19, the BBC also found that audience reach in a market diminishes with competition from suppliers of substitutable broadcasts.

While lack of choice was no guarantee of an audience for the BBC, only in markets where there were fewer than seven local radio stations from which to choose did the BBC audience exceed ten per cent despite the international recognition, longevity and value of the BBC brand.

### Numbers of radio and TV stations in the Asia Pacific region

Since the actual reach of Australia's Asia Pacific broadcasts is expected to be less in those markets where it faces greater competition with local broadcasters, some indication of that actual reach can be obtained by examining both the:

- number of radio broadcasting stations in the Asia Pacific, which is set out in Figure 20 below, and
- number of TV broadcasting stations in the Asia Pacific, which is set out in Figure 21.

<sup>66</sup> Mytton G., *Audience research at the BBC World Service 1932-2010*, Participations Journal of Audience and Reception Studies, vol 8, May 2011



These figures provide an indication of the extent of competition that Australia's broadcasts face in the Asia Pacific from other local and international radio and TV broadcasters. The data sources for this compilation are disparate and there are numerous comparability issues reflecting the complexity and dynamism of the broadcasting sector. For example, a single national network such as All India Radio may represent many local stations with a mixture of local and national content. This means that these figures should be interpreted as providing an estimate of the minimum number of available domestic television and radio stations available nationally. These figures may exaggerate national estimates of the availability of radio and television in localised markets of some of the most populous nations. As a result, counts of the available stations have also been provided for select Asian cities.

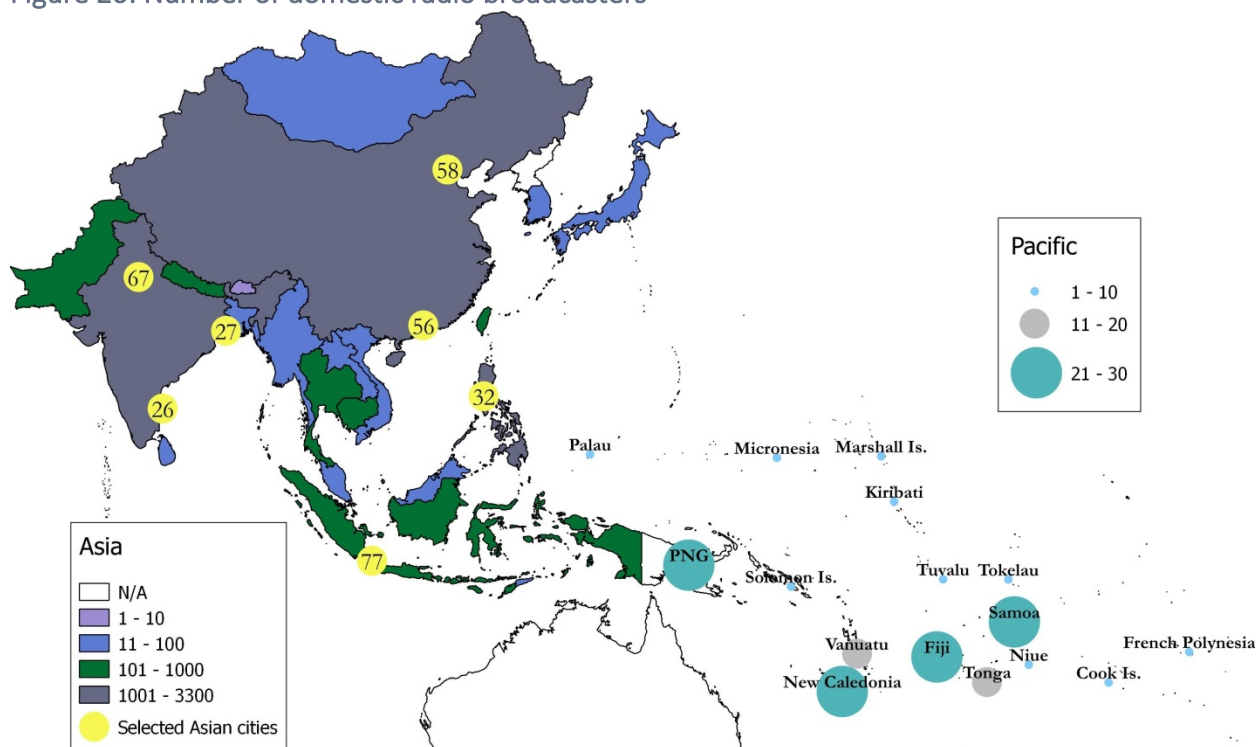
In particular, it is useful to identify those markets in the Asia Pacific region where there are seven or fewer other broadcasters, since the results of the BBC's research outlined above suggest that it is in those markets that Australia's broadcasts are expected to face the least competition from other broadcasters and hence have the greatest potential reach and influence.

As illustrated in Figure 20 and Figure 21, there are significant differences in the numbers of radio and TV broadcasters across the Asia Pacific markets for Australia's broadcasts.

Most markets in Asia, which comprises 99.7 per cent of the potential Asia Pacific audience for Australia's broadcasts, have large numbers of local radio and TV broadcasters. Only Bhutan had fewer than five domestic free-to-air television stations and eleven radio stations, although even there, cable television provides access to dozens of Indian and other international channels.

By contrast, in the Pacific, which only comprises 0.3 per cent of Australia's Asia Pacific audience, there are fewer local radio and TV stations competing with Australia's broadcasts. Consistent with their smaller populations and economies, and more dispersed populations, radio is relatively widespread but only a selection of nations have a significant number of local television broadcasters.

Figure 20: Number of domestic radio broadcasters



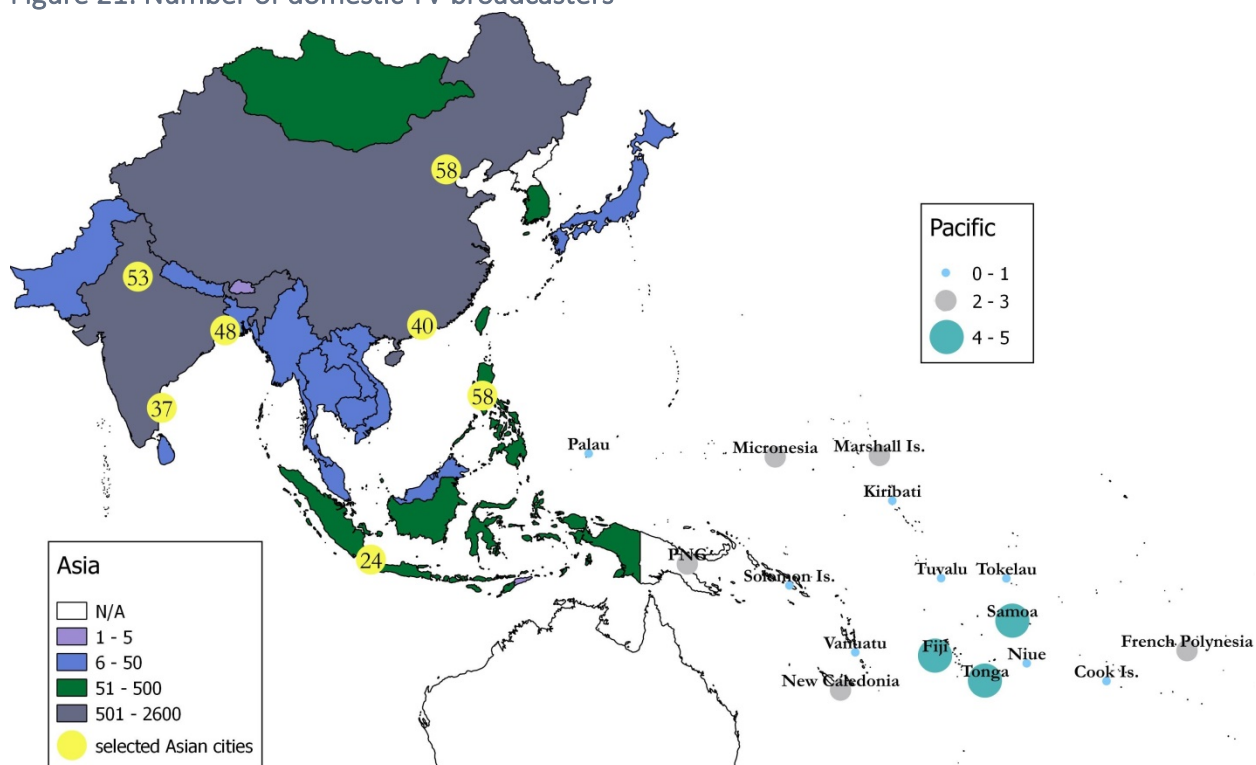
Sources: World Bank, CIA Factbook, BBC national media profiles and Australian High Commissions

For example:

- Papua New Guinea, 3 TV stations, population 8.2 million
- Fiji, 4 TV stations, population 890,000
- Solomon Is Islands, 1 TV station, population 611,000
- Micronesia, 3 TV stations, population 517,000
- Vanuatu, 1 TV station, population 261,000
- Samoa, 5 TV stations, population 193,000
- Tonga, 4 TV stations, population 104,000
- Kiribati, 4 TV stations, population 105,000
- Marshall Islands, 4 radio and 2 TV stations, population 53,000.

It is important to note, however, that even in those Asia Pacific markets where there are only a few competitors, Australian international broadcasts must compete with other nations' international broadcasters.

Figure 21: Number of domestic TV broadcasters



Sources: World Bank, CIA Factbook, BBC national media profiles and Australian High Commissions

### 3.2.2 Ability of audiences to pay for Australia's Asia Pacific broadcasts

As illustrated in Figure 22, the actual demand for Australia's Asia Pacific broadcasts (i.e. the actual reach of those broadcasts) is also influenced by the ability of Asia Pacific audiences to pay for those broadcasts, which depends on both the:

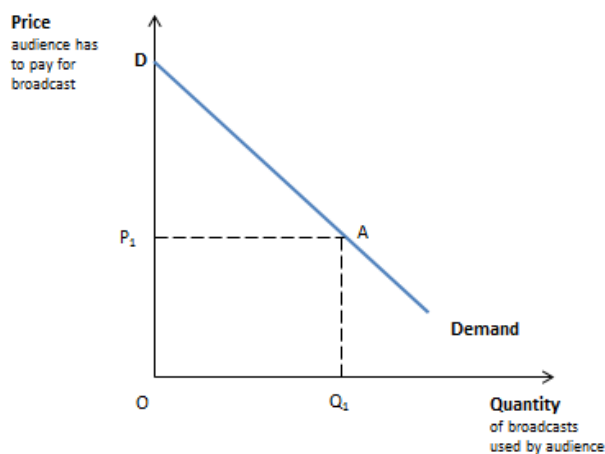
- incomes of those audiences, and
- cost of those broadcasts (i.e. the proportion of their income they have to spend on those broadcasts). These costs of using Australia's Asia Pacific broadcasts include the:
  - incremental capital costs that audiences have to incur in order to receive Australia's Asia Pacific broadcasts, which are likely to be low since most audiences in the Asia Pacific are unlikely to purchase new equipment solely to receive Australia's broadcasts. Rather, they are more likely to use equipment that they have already purchased to receive other broadcasts
  - incremental operating costs audiences have to incur in order to listen to, or view, Australia's Asia Pacific broadcasts, which include the:
    - additional cost they have to incur in order to listen to and view Australia's broadcasts (e.g. additional subscription costs, or data costs incurred in order to stream those broadcasts online)
    - opportunity cost of the time audiences spend searching for, and watching, Australia's Asia Pacific broadcasts, which tend to be higher for audiences with higher incomes. This is the reason why higher income, time poor, audiences have a greater willingness to pay for time saving technologies (e.g. video on demand and subscription services), and
    - any other costs audiences incur in order to listen to and view Australia's Asia Pacific broadcasts (e.g. any penalties audiences might incur as a result of using virtual private networks to access geoblocked internet communications services, such as the loss of their subscription services, or even more severe penalties in those countries that block access to the internet broadcasts of some countries).

In general, as illustrated in Figure 22, as the greater the incomes of audiences, or the lower the cost of the broadcasting services they use, the:

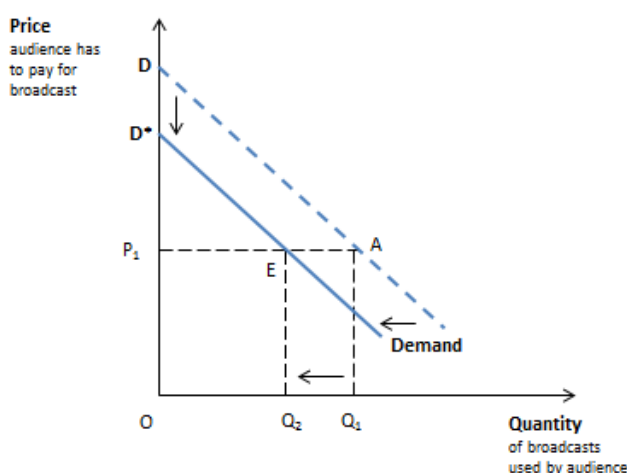
- greater the gross benefits they expect to derive from consuming greater quantities of those broadcasts, and higher quality broadcasts, and hence the greater their willingness to pay for those broadcasts (i.e. area  $DAQ_1O$ , which is greater than area  $D^*EQ_2O$ ), and
- greater is the net benefits they derive from consuming those higher quantities and qualities of broadcasts (i.e. area  $DAP_1$ , which is greater than area  $D^*EP_1$ ).



Figure 22: Effects of differences in income on the ability of audiences to pay  
Higher income audiences



Lower income audiences



This means that some indication of the willingness of Asia Pacific audiences to pay for Australia's broadcasts can be gained from looking at the incomes of those audiences, which are set out in:

- Table 8 that indicate the Gross National Income (GNI) of countries in the Asia Pacific for 2014 and the latest available year, and
- Table 9, which indicate GNI per capita in the Asia Pacific for 2014 and the latest available year.

These tables indicate the significant increases in both GNI and GNI per capita that have occurred in these countries over the last four years, which indicates the potential for a significant growth in the potential demand for Australia's broadcasts to the Asia Pacific region.





Table 8: Gross national income in the Asia Pacific

Country	2014	Latest available	Country	2014	Latest available
Bangladesh	\$171,250	\$242,754	Cook Islands	NA	NA
Bhutan	\$1,809	\$2,200	Fiji	\$4,208	\$4,501
Brunei Darussalam	\$17,675	\$12,688	French Polynesia	NA	NA
Cambodia	\$15,573	\$19,729	Kiribati	\$357	\$324
China	\$10,264,903	\$12,042,906	Marshall Islands	\$238	\$255
India	\$2,020,999	\$2,430,837	Micronesia	\$337	\$378
Indonesia	\$922,996	\$934,365	Nauru	\$175	\$140
Japan	\$5,593,496	\$4,888,124	New Caledonia	NA	NA
Laos	\$12,105	\$15,595	Niue	NA	NA
Malaysia	\$332,695	\$305,051	Palau	\$225	\$272
Maldives	\$3,184	\$4,175	Papua New Guinea	\$23,382	\$19,848
Mongolia	\$12,389	\$10,120	Samoa	\$777	\$806
Myanmar	\$63,771	\$63,476	Solomon Islands	\$1,081	\$1,172
Nepal	\$20,800	\$23,274	Tokelau	NA	NA
Pakistan	\$258,375	\$311,667	Tonga	\$461	\$433
Philippines	\$347,242	\$383,509	Tuvalu	\$51	\$56
Singapore	\$308,340	\$306,048	Vanuatu	\$819	\$807
South Korea	\$1,360,134	\$1,460,492			
Sri Lanka	\$75,595	\$82,425			
Taiwan	NA	NA			
Thailand	\$1,081	\$1,172			
Timor-Leste	\$1,081	\$1,172			
Vietnam	\$819	\$807			

Note: all dollars in \$US

Source: <https://data.worldbank.org/indicator/NY.GNP.ATLS.CD>



Table 9: Gross national income per capital in the Asia Pacific

Country	2014	Latest available	Country	2014	Latest available
Bangladesh	\$1,074	\$1,474	Cook Islands	NA	NA
Bhutan	\$2,330	\$2,724	Fiji	\$4,751	\$4,971
Brunei Darussalam	\$42,932	\$29,596	French Polynesia	LA	NA
Cambodia	\$1,020	\$1,233	Kiribati	\$3,234	\$2,784
China	\$7,524	\$8,686	Marshall Islands	\$4,501	\$4,796
India	\$1,562	\$1,815	Micronesia	\$3,240	\$3,586
Indonesia	\$3,618	\$3,539	Nauru	\$14,730	\$10,224
Japan	\$43,948	\$38,554	New Caledonia	NA	NA
Laos	\$1,841	\$2,274	Niue	NA	NA
Malaysia	\$11,006	\$9,646	Palau	\$10,666	\$12,529
Maldives	\$7,799	\$9,569	Papua New Guinea	\$3,015	\$2,405
Mongolia	\$4,237	\$3,290	Samoa	\$4,038	\$4,104
Myanmar	\$1,228	\$1,189	Solomon Islands	\$1,878	\$1,917
Nepal	\$734	\$794	Tokelau	NA	NA
Pakistan	\$1,393	\$1,582	Tonga	\$4,360	\$4,005
Philippines	\$3,469	\$3,655	Tuvalu	\$4,701	\$4,973
Singapore	\$56,372	\$54,532	Vanuatu	\$3,166	\$2,920
South Korea	\$26,802	\$28,378			
Sri Lanka	\$3,639	\$3,844			
Taiwan	NA	NA			
Thailand	\$1,878	\$1,917			
Timor-Leste	\$1,878	\$1,917			
Vietnam	\$3,166	\$2,920			

Note: all dollars in \$US

Source: <https://data.worldbank.org/indicator/NY.GNP.ATLS.CD>

### 3.2.3 Availability of information on the actual use of Australia's broadcasts

#### Availability of information on the actual use of Australia's radio and TV broadcasts

There is little information available on the actual use of Australia's analogue broadcast communication platforms, including radio, terrestrial, cable and satellite television in view of the high cost of collecting that information.

For such one-way communications, the only option is to conduct surveys of samples of a target population, involving surveying teams collecting respondents' answers to standard questionnaires, typically in their homes. Such surveys are expensive to conduct—the BBC World Service has reported the survey cost for its Global Audience Measure as £60,000 (approximately AU\$106,000) or more.<sup>67</sup> Survey costs will be higher when attempting to reach more remote populations.

<sup>67</sup> BBC Global Audience Measure, A Quick Guide (2017); C Wilding, *Numbers that count: Measuring the BBC World Service global audience*, Participations Journal of Audience and Reception Studies, vol 8, May 2011



Audience measurement surveys are primarily conducted for domestic commercial broadcasters to market their reach to the audiences of the most interest to advertisers to compete for domestic advertising spending—currently a multi-billion dollar industry in most countries in Asia.<sup>68</sup> These survey services are both highly specialised and inherently valuable, consequently:

- they are rarely publicly available, or where available only in consolidated market share formats<sup>69</sup>
- focused on domestic audiences and broadcasters, they do not in general consider international broadcasters
- driven by media market economics, they are rarely conducted in less affluent nations, and
- while survey firms like Nielsen and GfK are international networks of national offices, there is no inherent demand to consolidate data sets across a region like Asia—omnibus products like the Ipsos Connect “Affluent Asia” provide a regional overview of a specific demographic.

The BBC World Service is the most experienced organisation for measuring audience usage of international services, commencing in 1930s for Empire broadcasting, and maintaining a dedicated International Broadcasting Audience Research over much of its history.<sup>70</sup> Currently, as a global broadcaster, the BBC expends considerable effort measuring its global audience, including audience surveys in 10 to 15 markets each year including annual surveys in key markets in India, Nigeria and USA.<sup>71</sup> No survey is considered valid after 10 years, and the survey results are combined with general media rating reports and digital platform metrics. While the BBC’s experience identifies the challenges of measuring audiences for international broadcasts, its different global focus (Europe, India, Africa and USA) provides only indirect guidance for Asia and the Pacific.

Consequently, the Review was able to identify only limited information on potential or actual audience reach in countries either in Asia or the Pacific.

Table 10 illustrates the difference between potential reach and actual demand for Radio Australia. Estimates of potential reach provided by the ABC are based on the estimated population in the geographical range of the FM transmitters. The range of estimates of actual demand have been calculated by applying the results of the two publicly available surveys in the Pacific that directly measured the audience for Radio Australia, observing 3.5 per cent audience share in Bougainville and 13 per cent audience share in Vanuatu.<sup>72</sup> As indicated in Table 10, in aggregate the actual reach may be in the range of 46,300—172,000 from a potential reach of 1.3 million.

<sup>68</sup> See for example <https://www.emarketer.com/content/ad-spending-in-asia-pacific> and <https://iabseaindia.com/wp-content/uploads/2017/04/AdSpend-Report.pdf>

<sup>69</sup> Compare Australian Oztam TV ratings available at <https://oztam.com.au/LatestAvailableReports.aspx>

<sup>70</sup> The BBC literally wrote the book on international audience measurement: Graham Mytton (Editor), *Global Audiences: Research for Worldwide Broadcasting: 1994/95*, BBC International Broadcasting Audience Research, 1995

<sup>71</sup> BBC Global Audience Measure, A Quick Guide (2017); C Wilding, *Numbers that count: Measuring the BBC World Service global audience*, Participations Journal of Audience and Reception Studies, vol 8, May 2011

<sup>72</sup> InterMedia Research and Consulting Europe, *Citizen Access to Information in Vanuatu*, ABC International Development, 2013, and Centre for Social and Creative Media, University of Goroka, *Bougainville Audience Study*, Autonomous Bougainville Government, June 2017



These 2012 and 2015 survey results are themselves indicative of dynamic broadcast markets in these Pacific countries when compared with the ABC's 2009 audience survey that found rates of listenership over 20 per cent in PNG, Fiji and Samoa and over 55 per cent in Solomon Islands and Vanuatu.<sup>73</sup>

**Table 10: Radio Australia—estimates of potential reach and actual demand**

Country	Estimates of potential reach	Estimates of actual demand
Papua New Guinea	764,900	26,800 to 99,400
East Timor	222,300	7,800 to 28,900
Fiji	130,700	4,600 to 17,000
Solomon Islands	84,500	3,000 to 11,000
Vanuatu	60,300	2,100 to 7,800
Samoa	36,700	1,300 to 4,800
Tonga	23,700	830 to 3,100
Total	1,323,000	46,300 to 172,000

Source: ABC and audience surveys

Table 11 provides the data available to the ABC regarding the subscriber base of pay TV rebroadcasters (potential reach). One rebroadcaster in Malaysia reported viewership of ABC Australia at a monthly average of 219,000.

**Table 11: ABC Australia—estimates of pay TV reach**

Country	ABC Subscriptions (000s)	ITU Subscriptions (000s)	Country	ABC Subscriptions (000s)	ITU Subscriptions (000s)
India	369,535	163,150	Hong Kong	1,551	4,670
Japan	13,335	32,863	Singapore	959	934
Malaysia	5,067	6,286	Vietnam	818	14,025
South Korea	4,310	32,773	Sri Lanka	430	1,329
Indonesia	3,062	4,605	Macau	27	59
Philippines	2,125	3,839			

Source: ABC, International Telecommunication Union

#### Information on the actual use of Australia online media broadcasts

Online services, being transactional, significantly reduce the costs broadcasters have to incur in order to collect information about audience usage of online media services. However, like broadcast audience measurements, this information is commercially sensitive in highly competitive markets.

In addition, the “narrowcasting” nature of online services means there is an extensive and changing array of online platforms for any broadcaster. For example, in total, the online platform data provided to the Review by the ABC encompassed 17 website categories, 41 unique apps, 77 radio station streams and 13 podcast categories. In general, these online services are created for domestic audience, but are fortuitously available to global audiences. Some select online services are designed explicitly for international users, such as the ABC Expat app, Australia News Channel website and app, WatchNRL (excluding Pacific Island countries) and Watch AFL apps.

<sup>73</sup> See ABC media release <http://about.abc.net.au/press-releases/radio-australia-connects-with-pacific-audiences/>, accessed 1 Nov 2018. Note that direct comparability between these surveys is limited by the specific audience metric in each.



Therefore the actual use of online media broadcasts by audiences in the Asia Pacific region is reported in two parts:

- Published aggregate volumes of international demand for ABC and SBS online services, noting that the broadcaster's inclusion of nations in the Asia Pacific region may vary both from the scope of the Review and within an organisation's own data sets given their complexity and the collection of data by different service providers that may be either internal or external.
- Relative analysis of the priority of demand from the top twelve Asia Pacific countries within the scope of the Review for select online services for which the ABC, SBS, Australia News Channel and Fox Sports supplied the Review with data. Overall, for each of these services, the top 10-12 countries represent more than 90 per cent and in some cases 95 per cent of use within the total group of 40 Asia Pacific countries.

#### Australian Broadcasting Corporation

Table 12 provides the six month aggregates of use by Asia Pacific audiences of five main groups of ABC online media services, including total international audience for comparison where available. Most of these are domestic services. It is notable that demand for Radio Australia as a specific international service is substantially less than demand from the Asia Pacific for all radio streams and podcasts.

**Table 12: The ABC's International, including Asia Pacific, Audience Footprint (six month aggregates)**

Platform	Metric	Asia Pacific	International
ABC Websites	Visits	18,058,634	
ABC Websites	Page views	34,506,776	
ABC NEWS Live stream	Visits	79,000	186,500
ABC NEWS Live stream	Page views	106,000	247,500
ABC Apps (all apps)	Sessions	4,514,054	
ABC App	Sessions	2,411,113	7,673,982
Podcasts (all networks)	Downloads	2,649,475	
Podcasts—Radio Australia	Downloads	111,293	142,597
Radio (all networks)	Streams	1,218,693	
Radio Australia	Streams	70,438	161,237
YouTube	Views	23,918,460	
YouTube—ABC NEWS	Views	1.06 million	3.0 million

**Note:** The ABC's definition of Asia Pacific excludes Australia and New Zealand but includes some Asian countries outside the 40 countries that are the focus of this review.

Source: ABC [Submission to the Review](#) and data supplied by the ABC

In addition, the ABC's submission to the Review reported:

*The ABC has 2.75 million fans from outside Australia for its News account, and a community of over 4 million users for its Learn English service.*<sup>74</sup>

<sup>74</sup> Australian Broadcasting Corporation, [Submission to the Review](#)



*Special Broadcasting Service Corporation (SBS)*

As noted in section 2.5.1, SBS broadcasts radio programs in 31 Asia Pacific languages and offers two music channels with content from the region. However, SBS does not specifically target international audiences and has not publicly focused on the international usage of its audio and language content (i.e. the “fortuitous” use of its content by international audiences). According to SBS’ 2018 Annual Report, in combination with specific advice provided to the Review:

- a total of 28 million unique visitors engaged with SBS Radio’s suite of language and music radio websites over 12 months. Of these about 67 per cent or 18.6 million were from overseas and 28 per cent or 7.8 million were from Asian countries
- language sites contributed an average of 1.8 million unique visitors each month, of which an average 1 million were from overseas, and
- audio plays including streaming and podcasts averaged 2.9 million per month, of which an average 1.1 million were from overseas.

*Popularity of Australian content demonstrated by online media services*

The relative importance of Asia Pacific nations to the demand for Australian broadcasts is gauged by the ranked demand for nine online media services displayed in Figure 23 to Figure 26. These services include:

- the ABC App
- streaming of ABC News, Radio Australia and Radio National audio
- downloads of all of ABC network podcasts
- all of ABC website visits
- unique visits to SBS Radio and Language websites
- streaming from Fox Sports website
- downloads of Skynews.com.au podcasts
- streaming from WatchNRL and Watch AFL apps (international only), and
- streaming on Australia News Channel website and app (international only).

The demand for each has been expressed as a proportion to overcome difficulties of commensurability of different metrics and comparability of different scales of demand, and to focus attention on the key groupings of countries utilising this content. In addition to comparing different services, there may be differences between the metrics to measure similar services, and there may be differences in the duration and timing of the data collection period—all factors that may alter individual countries’ proportions and change the rankings, even for a single service from time to time.

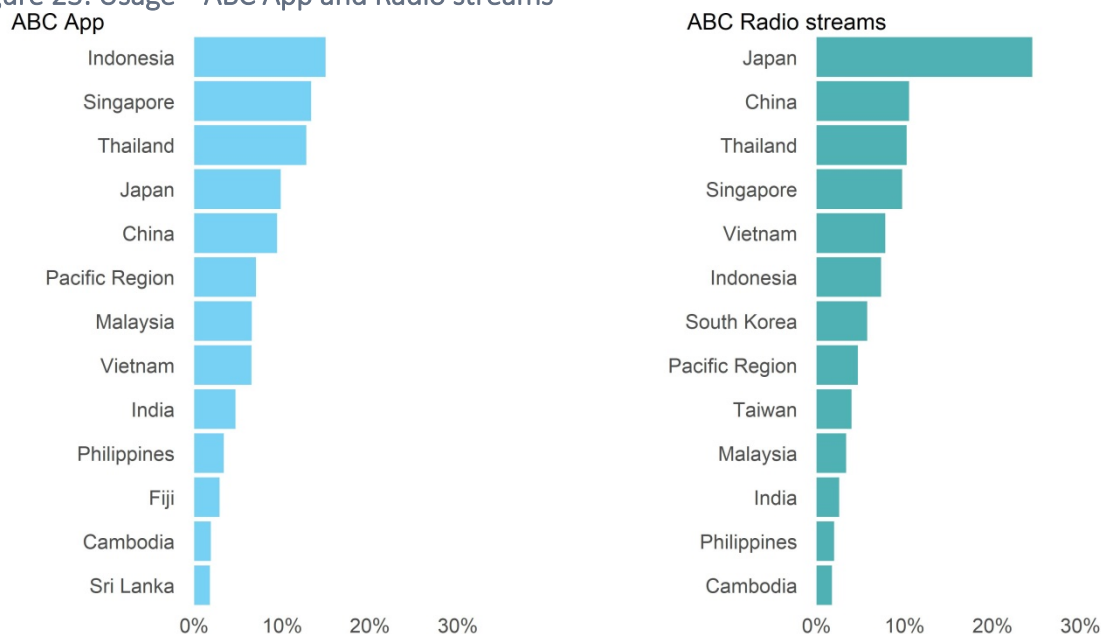
Each plot presents the ranked top dozen countries in the Asia Pacific—as noted above these countries combined account for over 90 per cent of demand from the 40 countries in the scope of the Review. In most cases the larger population of Asia dominates Pacific nations, so the Pacific region as a whole has been included to demonstrate the significance of Australia’s closest neighbours.<sup>75</sup> For example, Figure 23 shows the ranked demand for the ABC App and audio ABC radio streams, expressed as a proportion of the demand from the 40 countries considered in the Asia Pacific region.

<sup>75</sup> The countries have been ranked based on the actual metric; alternatively they could be ranked on a per-capita metric. Given the million-fold difference between the largest nations in Asia and the nations in the Pacific, the actual metric promotes India and China into the top dozen, whereas the per-capita metric promotes the island states of the Pacific—for example placing Cook Islands at the top of the list. The presence of the middle set of nations is largely unaffected.





Figure 23: Usage—ABC App and Radio streams



Source: Data supplied by the ABC

The precise features of specific online media services are beyond the scope of this Review (e.g. Japanese demand for ABC radio streams was nearly two and a half times the second ranked Chinese demand in this data set). The ranked orders in these figures, for example, are expected to change with the period of use examined. A study of specific features would require a longitudinal study with consistent data collection, and even then current perceptions of preferences may be overtaken by rapid changes in this dynamic sector.

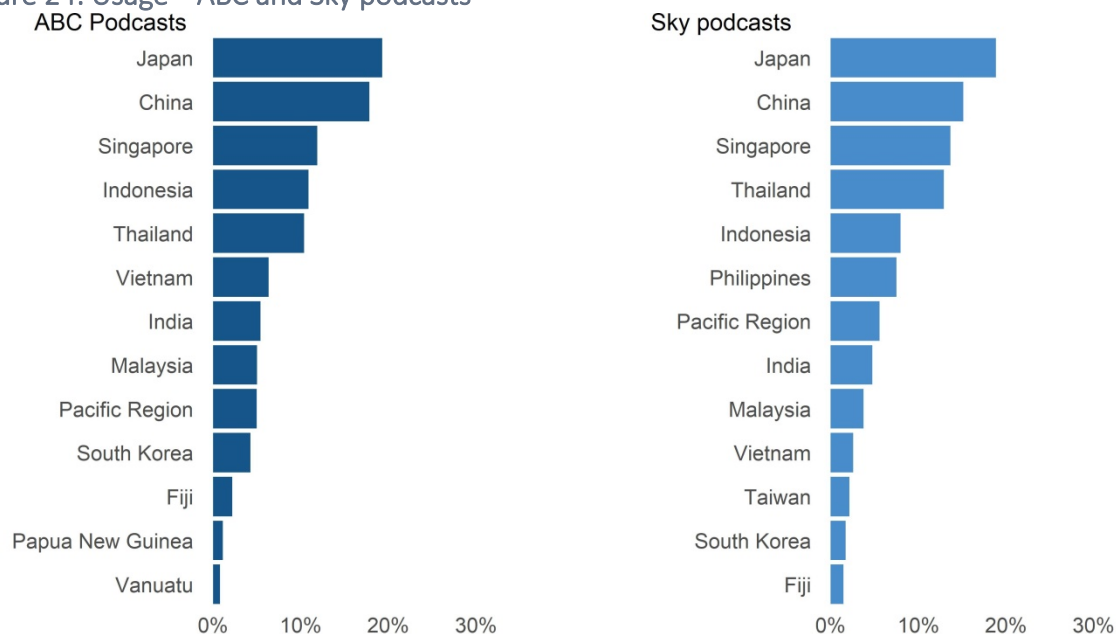
Instead, the primary significance of this sample of online media services for the current Review is the similarities revealed across a range of different online products produced by a range of Australian broadcasters. More generally it can be observed of Figure 23 that in aggregate:

- the top dozen countries represent 88 per cent of demand for ABC App and 90 per cent for ABC radio streams, dominating the demand of the other 28 nations
- the top five nations represent 60 and 63 per cent of demand respectively, and
- 11 million people of Pacific region rank sixth (7 per cent) of ABC App sessions and eighth (4.7 per cent) of radio streams ahead of the billions and hundreds of millions of people in, for example, India, Malaysia, Philippines and Cambodia. This includes, in the case of the ABC App, Fiji placing in the top twelve.

Similar observations can be made for each of the groups of online media services illustrated in the rest of Figure 24 to Figure 26.

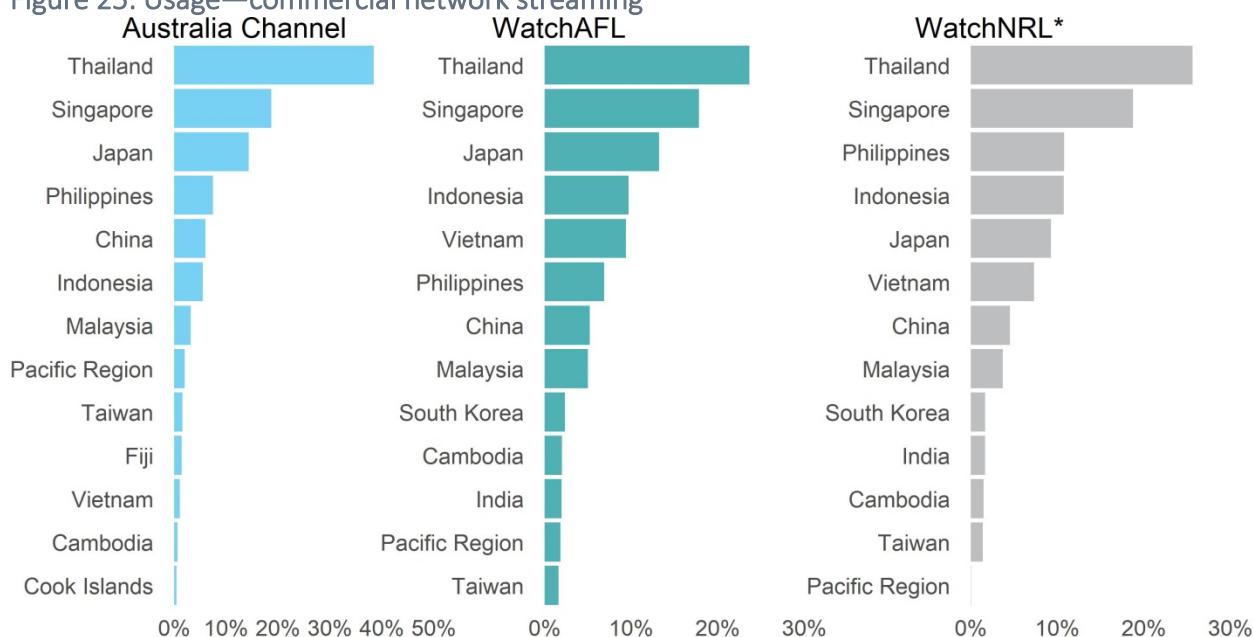


Figure 24: Usage—ABC and Sky podcasts



Source: Data supplied by the ABC, Australian News Channel

Figure 25: Usage—commercial network streaming



Note WatchNRL is not available in the Pacific Island countries.

Source: Data supplied by the Australian News Channel, Fox Sports

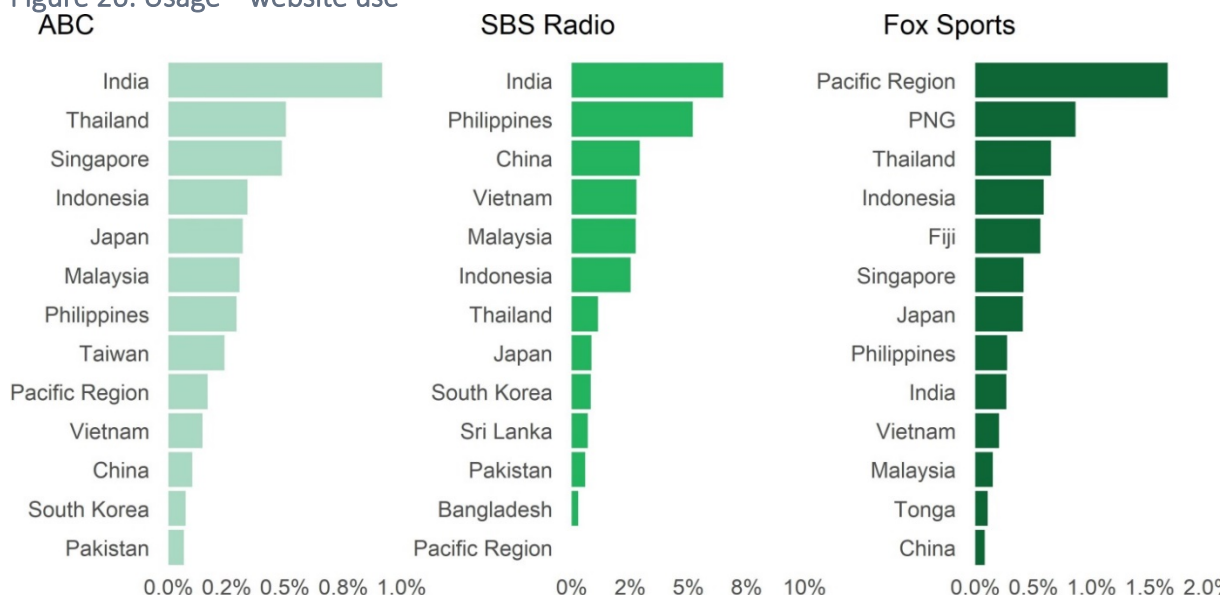
In particular, there is a similar set of countries that are the primary sources of demand for Australian content across the sample of charts:

- India and China always feature in the top twelve nations, as may be expected due to their population representing a potential reach over 2.5 billion people, their internet access and use. However they are not consistently dominating the top ranks.



- There is a constant presence from a set of countries from East and South East Asia representing another 0.5 billion people including (in alphabetical order) Cambodia, Indonesia, Japan, Malaysia, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam.
- Considered as a whole, the Pacific region features prominently across the services (with some exclusions and highlights) contributing to international demand for Australian online media services well above levels suggested by population alone.

Figure 26: Usage—website use  
ABC



**Note 1)** Australian demand for these services is 34 per cent for SBS, 78 per cent for ABC and 95 per cent for Fox Sports.**2)** SBS data was not available for Pacific nations.

Source: Data supplied by the ABC, SBS, Fox Sports

Again, confirming the exact drivers of these possible trends in demand would require a dedicated study. However three features of interest are highlighted by the general characteristics of media access and use across the Asia Pacific region surveyed in this Review:

- The prominence of Asian audiences utilising Australian online content is consistent with the general finding above regarding the prominence of Asian internet users worldwide.
- Australia's multicultural communities are likely to drive conversations in diaspora communities of these countries in Asia and the Pacific generally. There are sizeable parts of the Australian population that identify heritage with these nations, particularly with Pacific nations, as identified in Table 2. Although the Review was not able to quantify the Australian expatriate populations in these countries, it is to be expected that the same regional relationships are the basis for significant expatriate populations in these countries. Both population groups are likely to generate significant demand for Australian online content, including from Australians while travelling in these countries and from Asian and Pacific residents interested in the lives of their Australian communities.
- The English language of most Australian online content is likely to both attract and deter audiences in these countries. While the level of English language proficiency is very high in some of these countries (see Table 7), in others it is low, so that Australian English language content will be attractive to particular audiences in these countries who are either more proficient than average or engaged in learning English.



Two specific consumer preferences emerge from the above figures that are consistent with two themes raised by submissions and stakeholders.

First, there is relatively significant demand for non-English language content, demonstrated by the comparison in Figure 26 between the websites for ABC, SBS and Fox Sports. These sites are primarily intended for domestic audiences and demand may reasonably be expected to be dominated by Australian users who, for example, constitute 95 per cent of users of the Fox Sports. The domestic utilisation of the ABC website is lower, at 78 per cent. But while the total use of ABC and SBS online media is significantly different, proportionately utilisation of the SBS radio and language online media services by those consumers located in Australia is just 34 per cent. The dozen Asian countries identified in Figure 26 constitute nearly as large a proportion of SBS's audience with an aggregate 27 per cent.

Second, there is significant demand for sport content from Pacific nations, demonstrated by the top ranked position for PNG together with Fiji and Tonga in the top dozen streaming content from the Fox Sports website, which includes NRL content, (noting that the international app WatchNRL specifically excludes Pacific Island nations, see Figure 26).

### 3.3 How are advances in technology changing the demand for Australia's broadcasts?

#### Key findings

- In addition to changing the supply of Australia's broadcasts to the Asia Pacific region, advances in technology are also having a profound effect on the demand for those broadcasts in the Asia Pacific region. In particular, advances in technology have:
  - reduced the cost of purchasing the equipment required to receive those broadcasts
  - increased the potential range of different broadcasts audiences can receive, making them more sensitive to the different prices they have to pay in order to access those broadcasts
  - given audiences greater flexibility to determine:
    - what content they listen to and watch. Over the last two decades, there has been a generational shift away from the use of the more traditional radio and TV broadcasts that bundle together news, entertainment and advertising content to the use of on demand services provided via cable, satellite and internet communication service providers. Advances in technology have enabled audiences to "unbundle" and repack the content that interests them, while excluding the content that does not
    - where they receive those broadcasts and that content. Advances in technology have significantly reduced the size, increased the capabilities and portability of the devices available to receive broadcasts (e.g. smartphones that are capable of receiving both high quality video and audio streams over the internet)
    - when they receive those broadcasts and use that content. Advances in audio and video recording technologies, as well as the provision of "on demand" video and audio streaming services over the internet, have given audiences the flexibility to determine when they view or listen to content



- how audiences search for broadcasts that contain the content they want to use. As the incomes of individuals have increased, so too has the opportunity cost of their time and hence the cost of the time that they have to spend searching for broadcasts that contain the content they seek. While audiences can still derive enjoyment searching for new and interesting content, the need to manually tune the radio, channel surf with the TV remote, or consult radio and TV printed guides that rapidly become out of date, has been replaced by digital radio and television receivers that provide up to date online guides and online search engines (e.g. Google), and
- how audiences form their views in relation to Australian broadcasts and other alternatives. Social media platforms (e.g. Facebook) and blogs are now playing a much greater role in advertising, marketing and forming audience opinions (i.e. expected benefits) regarding Australia's broadcasts.

### 3.3.1 A century of rapid advances in consumer electronic equipment

As illustrated in Figure 27, in addition to revolutionising the supply of broadcasting services in both Australia and the Asia Pacific, rapid advances in technology over the last century have also transformed the use of those services.



Figure 27: A century of technological change in consumer electronic equipment

	Mechanical, electrical and electronic components used	Content Capture/Reception	Content Storage/Processing	Content Distribution/Transmission
Pre - 1900	Mechanical components	Use of live content	No ability to store content	No ability to distribute content further
		Attendance of live performances		
		Early use of printed content	Physical storage of books, newspapers and magazines	Ability to further redistribute by post
		Reading of books, newspapers (since 1825), and magazines (since 1880)		
		Early use of audio recordings and video content	Physical storage of records and movies processed either at home or commercially	Ability to further redistribute by post
		Early record players (Edison's Phonograph 1877) and early still and film cameras and projectors		
1900-1920	Electromechanical components	Use of publicly screened movies (since 1896) Attendance of live movie screening	No ability to store video content watched	No ability to redistribute video content watched
		Reception of Australia's telegraphs (1854 to 1993)	Physical storage of printed telegram	Ability to further redistribute by post
1920 - 1939	Thermionic valves (e.g. diodes, triodes and pentode valves)	No direct reception. Reception received indirectly through post		
		Reception of Australia's AM radio broadcasts (since 1923)	No ability to store audio content. Only option was written transcripts	No ability to redistribute audio content. Written transcripts distributed by post
		AM wireless radio receivers able to receive long wave, medium wave broadcasts and some able to receive shortwave broadcasts Portable "transistor" radio receivers used since 1954		
1940 - 1959	Thermionic valves (e.g. diodes, triodes and pentode valves)	Use of pre-recorded phonograph records (since 1938)	Physical storage of records	Ability to further redistribute by post
		Pre-recorded 12" 33 1/2 rpm long play, and 45 rpm vinyl records on record player		
		Reception of Australia's black and white television broadcasts (1956 to 1975)	No ability to store video content. Difficult for user to record using still or movie camera due to frame rate synchronisation problems	No ability to redistribute video content
1960 - 1979	Analog components (e.g. diodes and transistors)	Analog black and white television receivers		
		Use of analog cassette audio and video players/recorders (since 1960)	Ability to pay pre-recorded tapes and record audio content on magnetic tape (initially reel to reel audio tapes, then compact audio cassettes)	Ability to further redistribute by post
		Pre recorded tapes plus other audio sources		
		Use of instant cameras (since 1963)	Film processing within camera	Ability to further redistribute by post
		Polaroid instant camera		
		Reception of Australia's FM radio broadcasts (since 1975)	Some later equipment incorporated a cassette tape recorder.	Ability to further redistribute by post
1980 - present	Digital components (e.g. discrete integrated circuits and large integrated circuits which include microprocessors, analog to digital converters, digital to analog converters, digital signal processors, application specific integrated circuits, field programmable gate arrays, etc.).	Analog FM reception		
		Use of analog mobile phones (since 1981)	Early analog mobile phones limited to telephone number storage	Early mobile phones limited to voice transmission via mobile phone network
		Voice reception via mobile phone network		
		Use of personal computers (since 1975 with internet connection from 1989)	Central processor and storage (memory, cassette tape, floppy disk, hard disk). Ability to run general application software	Early computers had no internet connection. Subsequent computers had acoustic modems with slow dial up connection. Later computers with much higher speed internet connection and ability to upload audio and video content to internet.
		Digital content retrieval from cassette tapes, floppy disks. Subsequent connection to internet - reception of bulletin boards		
		Use of digital audio and video players/recorders	Ability to play pre-recorded media. Also ability to record audio on magnetic tape (initially reel to reel audio tapes, then compact cassette tapes, then compact discs)	Ability to further redistribute by post
		Purchase of commercial recordings plus ability to capture audio on a magnetic audio tape recorder and video on an analog camcorder.		
		Use of analog electronic and digital cameras (since 1986)	First recorded using analog on floppy disk. Then recorded digitally on compact flash memory cards. Ability to edit image added later	Ability to further redistribute by post and more recently by internet. Wifi communication
		Initially only able to capture still images then video content		
		Use of Australia's cable TV and satellite broadcasts (since 1995)	Digital storage of audio and video recording facilities in later receivers	Limited ability to redistribute recordings of satellite broadcasts
		Set top box with satellite receiver and transverter to downconvert satellite signal		
		Use of Australia's digital television broadcasts (since 2001)	Digital storage of audio and video	Not internet connection on early digital TVs. Smart digital TVs connected to the internet
		Digital TV receiver. Later Smart TVs able to stream downloads of audio and video content from internet.		
		Use of smartphones connected to the internet (iPhone 2007)	Digital storage, audio and video processing, ability to run general application software	Audio/video streaming over mobile phone networks and internet
		Audio/video capture, mobile phone receiver, internet access, which provides ability to receive most Australian radio and TV broadcasts that are streamed on the internet.		





At the turn of the 20<sup>th</sup> century:

- audiences had no broadcasts to listen to or view. Rather, their only options for accessing audio and video content were to:
  - attend live performances (e.g. theatre productions and concerts)
  - purchase early audio recordings (on Edison discs) or early silent movies, which had to be shipped to them using the limited transport services available at that time (i.e. mainly sea freight and the relatively slow land based postal system)
- Australian audiences had only just seen their first motion picture film in 1896.<sup>76</sup>

Since then, however, rapid advances in the development and application of electronic components have led to the creation of progressively smaller, and increasingly higher performance, consumer electronic equipment that has enabled audiences to receive, record, process and distribute (i.e. broadcast) all forms of information content, including text, audio, as well as still images and video content. For example, the development and use of:

- thermionic valves have facilitated the development of the “wireless” radio receivers required to receive Australia’s first longwave, medium wave and shortwave AM radio broadcasts in the 1920s and 1930s, as well as the TV receivers required to display Australia’s first black and white television broadcasts in 1956
- solid state devices (e.g. diodes and transistors) significantly reduced the size, improved the performance of radio and TV receivers (e.g. the “transistor radio”, portable black and white and colour TVs, as well as FM radio receivers capable of receiving much higher fidelity audio broadcasts), as well as consumer audio and video players and recorders (e.g. audio and video cassette tape players and recorders). In addition, it also reduced the cost of radio and TV receivers, as well as audio and video players and recorders, sufficiently to enable their ownership and use by individual family members (i.e. it enabled the shift from one large receiver or audio tape recorder that had to be shared by families, to multiple receivers and audio and video tape players and recorders that could be owned and used by individual family members), and
- digital electronic components (e.g. discrete and large scale integrated circuits), which have further reduced both the size and capabilities of consumer electronic equipment. This has culminated in the modern smartphone, which now replaces a wide variety of consumer electronic equipment as a result of its ability to receive radio and TV broadcasts via the internet; capture, record and replay high fidelity audio, still photographs and a high resolution videos; run a wide variety of applications software including audio and video processing software; and broadcast text, audio and video content over the internet (i.e. a broadcasting studio in the pocket).

### 3.3.2 More efficient use of broadcasting services

Increases in the quantities, types and qualities of broadcasting services from which to choose

As a result of these advances in technology, most audiences in Australia and the Asia Pacific now have access to unprecedented:

- quantities of broadcasts from both local and international broadcasters from which to choose
- ranges of different types of content from which to choose (e.g. text, audio, still picture and video content), and

<sup>76</sup> See <https://aso.gov.au/chronology/1890s/>



- qualities of broadcasts from which to choose, ranging from low quality audio and video broadcasts (e.g. local AM medium wave broadcasts, international shortwave broadcasts, lower quality audio and video content accessed over slower internet links) through to higher fidelity audio and high resolution video (e.g. high fidelity stereo audio analog FM radio broadcasts, high fidelity digital radio broadcasts, high resolution digital TV broadcasts, and high resolution video content accessed over high speed, “broadband”, internet links):

*Simplicity is a thing of the past. Today, consumers engage with video more than they ever have before, and technology continues to be the great leveller in allowing access to that video over any device. Investment in content continues to surge as we see more quality content in almost every genre and every language than at any time before.*<sup>77</sup>

With such large quantities, types and qualities of broadcasts from which to choose, audiences are now becoming much more:

- selective in the type of content and broadcasting platforms they choose to use. Audiences now have the ability to access specialist broadcasts that contain the specific content that better suits their interests. In addition, they are able to choose to use the types of broadcast platforms that suit their preferences regarding the extent of audience participation they prefer. Advances in technology have not only expanded the range of content from which audiences can choose, but also the extent of audience participation they desire. In the early years of broadcasting, audiences were confined to being passive listeners and viewers of the content broadcast. Over time, however, advances in technology have enabled audiences to play an increasing role in the production of the content that is broadcast (e.g. calling into talkback radio programs; providing Twitter and Skype feeds into the ABC’s Q&A TV broadcasts; participating in TV “reality” shows, quiz shows and cooking competitions; commenting on social media and internet “blogs”, and participating in online gaming), and
- sensitive to differences in the prices they have to pay to use that content (i.e. the costs they have to incur in order to use that content, which include not only any fees or subscriptions they have to pay in order to access that content, but also any inconveniences they might experience when using that content, such as disruptive and annoying advertising):

*Linear television is still enormous; pay television revenues still dwarf any other subscription business model, but never has growth been so hard to come by. Developed markets are seeing cord-cutting and shaving, and in developing markets the number of cord-nevers are not reducing significantly.*<sup>78</sup>

#### Reductions in the cost of using broadcasting and communications services

Advances in technology have also been significantly reducing the costs that audiences in Australia and the Asia Pacific have to incur in order to receive those broadcasts. This includes the cost of purchasing the consumer electronic equipment required to receive, record, process, and send content (e.g. radio and TV receivers, cable and satellite TV set top boxes, personal computers and smartphones), as well as the communications services required to use that equipment (e.g. mobile phone and internet connections).

<sup>77</sup> Asia Video Industry Association, *The Asia Video Industry Report*, 2019

<sup>78</sup> Asia Video Industry Association, *The Asia Video Industry Report*, 2019



It is important to note that these reductions in prices that audiences have to pay in order to use broadcasting and communications services have not been uniform across different types of consumer electronic equipment and communication services. Rather, as discussed in section 2.4.2 of this report, the prices that broadcasters have to pay in order to supply wireless services have decreased at an even greater rate than the prices of supplying wireline services. Given the highly competitive nature of both the commercial and consumer electronic equipment industries, it is likely that these trends in the relative prices of commercial equipment and communications services will also be reflected in the prices paid by consumers for their electronic equipment and communications services.

In particular, it is reasonable to expect that the relative prices that consumers have to pay to use wireless consumer equipment to receive audio and video content (e.g. smartphones) have decreased at an even greater rate than the prices they have paid to receive content over wireline communication services (e.g. cable TV and wireline internet connections). This explains, to some extent, the reason why Asia Pacific audiences prefer to use smartphones as their main consumer electronic platform of choice (i.e. since it replaces such a large number of different types of consumer electronic equipment, including a telephone, radio and TV receiver, digital still and video camera, recorder and player, general purpose personal computer capable of running a wide variety of applications software, as well as a means of streaming audio and video content to other internet users).

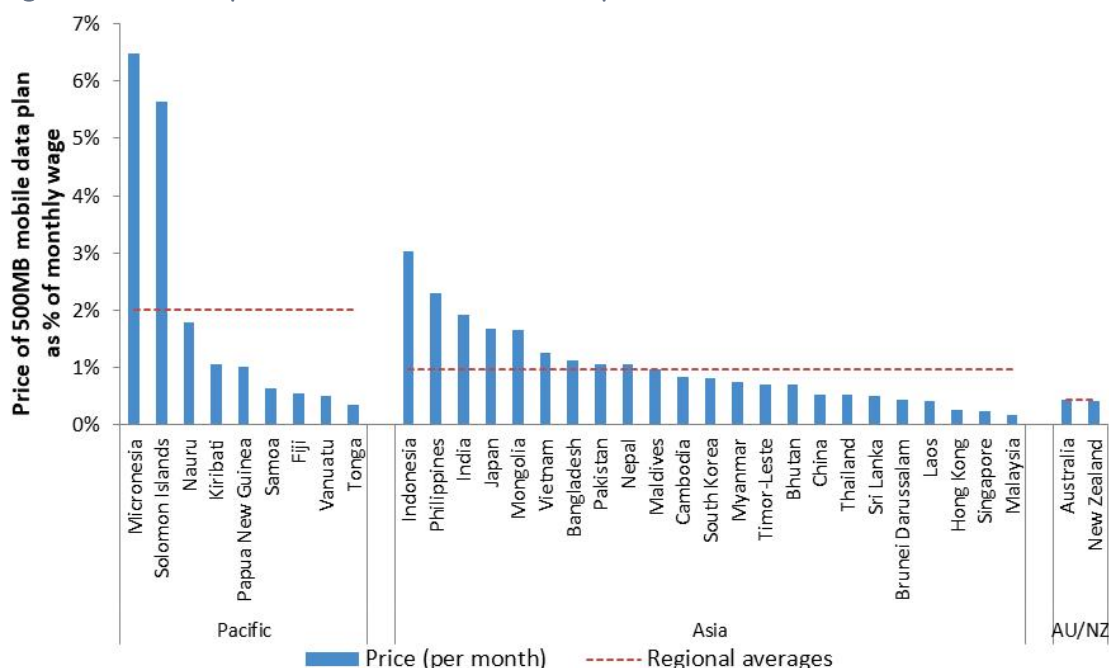
In addition, it is also important to note that the relative cost of audiences accessing Australian broadcasts is not uniform across countries in the Asia Pacific in view of the significant differences in the incomes of the audiences in those countries (i.e. there are significant differences in the ability of audiences to pay for those broadcasting services).

For example, Figure 28 provides information on the price that consumers across the Asia Pacific have to prepay for a 500MB mobile phone data plan, expressed as a proportion of their average monthly wage.<sup>79</sup>

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<sup>79</sup> Monthly wages are derived from ILO data, expressed in US dollars except Australia and Laos that have been converted to USD.

Figure 28: Mobile phone data costs for 500 Mb plan



**Note:** Australia and New Zealand are not in scope, but have been included for reference.

Source: International Telecommunication Union database, International Labour Organisation

This indicates that the cost of that data is:

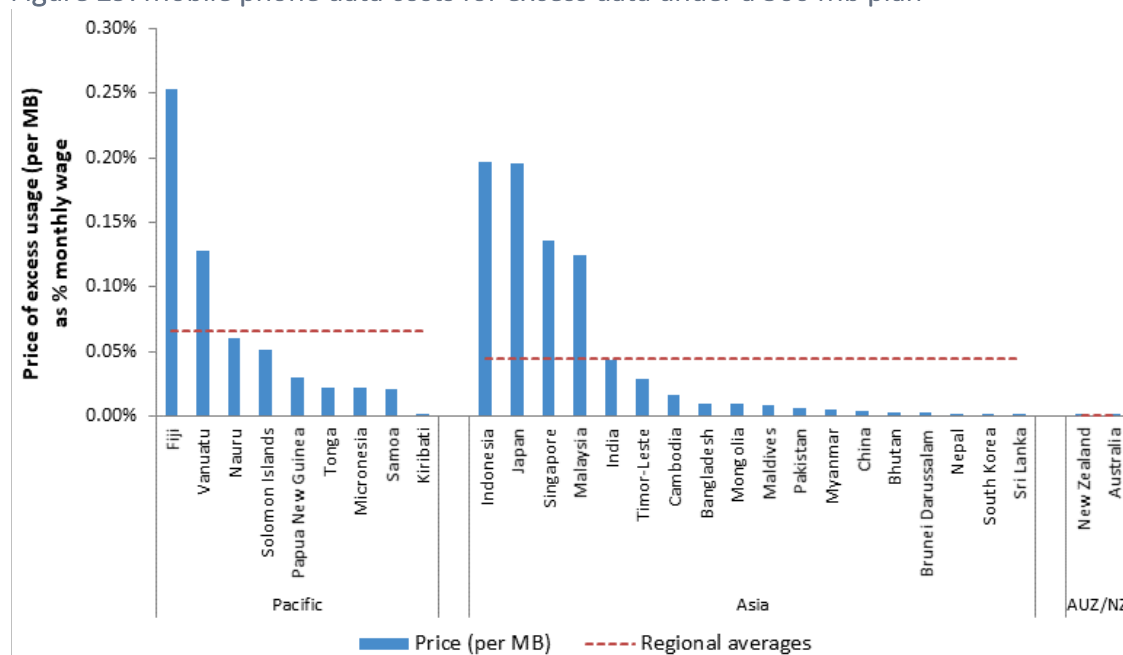
- relatively high in some countries in the Pacific (e.g. Micronesia and the Solomon Islands)
- on average, around twice as expensive in the Pacific than they are in Asia, and
- even lower in some Asian countries than in Australian and New Zealand (e.g. Hong Kong, Singapore and Malaysia).

Similarly, Figure 29 provides information on the prices that consumers across the Asia Pacific have to pay for excess data costs on that 500MB mobile phone data plan, expressed as a proportion of their average monthly wage. Once again, this indicates that there are significant differences in excess data charges across countries in the Asia Pacific region. It is important to note in this case, however, that these differences reflect not only differences in incomes across countries, but also differences in the extent to which some countries use high excess data charges as a means of providing their customers with an incentive not to exceed their data limits on more congested communication networks.

However, Figure 28 and Figure 29 also indicate that, on average, the prices paid by consumers for both standard and excess mobile data are actually reasonably comparable across countries in the Asia Pacific, particularly when some of the outlying countries that have very high or low prices are excluded from the analysis.



Figure 29: Mobile phone data costs for excess data under a 500 Mb plan



**Note:** Australia and New Zealand are not in scope, but have been included for reference.

Source: International Telecommunication Union database, International Labour Organisation

Table 13 illustrates the speed of change in mobile subscription costs across the Asia Pacific region for countries where data is available. Once again, there are substantial price decreases in general, while there are large variations between particular markets including apparent price increases in some markets.<sup>80</sup>

Over just a 3 year period there are average reductions by 50 per cent in Asia and nearly 70 per cent in the Pacific. This has closed the price differential between the regions by half, where average plan costs in the Pacific were nearly four times higher than in Asia in 2014.

<sup>80</sup> Note that common currency comparison in USD also captures currency fluctuations.



Table 13: Change in mobile subscription costs

Country (Pacific)	2014	2017	Change	Country (Asia)	2014	2017	Change
Fiji	\$13.25	\$2.90	-78%	Bangladesh	\$1.47	\$1.85	26%
Micronesia	\$30.00	\$30.00	0%	Bhutan	\$1.70	\$1.52	-11%
Papua New Guinea	\$24.38	\$3.14	-87%	Brunei Darussalam	\$15.79	\$7.24	-54%
Samoa	\$19.30	\$3.95	-80%	Cambodia	\$2.00	\$1.00	-50%
Solomon Islands	\$37.29	\$13.95	-63%	China*	\$4.82	\$4.44	-8%
Vanuatu	\$41.21	\$1.88	-95%	Hong Kong, China	\$11.67	\$4.88	-58%
				India	\$1.62	\$2.78	71%
				Indonesia	\$3.37	\$4.11	22%
				Japan*	\$29.75	\$47.18	59%
				Laos	\$4.97	\$1.20	-76%
				Malaysia	\$8.55	\$0.99	-88%
				Maldives	\$10.27	\$6.82	-34%
				Mongolia	\$6.60	\$6.76	2%
				Myanmar	\$10.16	\$0.70	-93%
				Nepal	\$4.53	\$0.67	-85%
				Pakistan	\$1.48	\$1.52	2%
				Philippines	\$6.73	\$5.93	-12%
				Singapore	\$11.84	\$7.24	-39%
				Sri Lanka	\$2.57	\$1.56	-39%
				Thailand	\$6.13	\$2.18	-64%
				Timor-Leste	\$10.00	\$1.00	-90%

**Note:** Values in \$US; China and Japan based on 2015-2017 data.

Source: International Telecommunication Union database

Like the change in mobile subscription rates in Figure 15, the available data indicates that the digital revolution is well advanced in nations in both the Asian and Pacific regions and is providing affordable access to online content services in general, and Australian online content services in particular.

#### Greater ability of audiences to tailor broadcasting services to meet their needs

In addition to providing audiences with a much wider range of content from which to choose, advances in technology have also increased their flexibility to tailor those services to meet their needs.

In particular, advances in technology have provided audiences with much greater flexibility to determine what content they listen to and watch. Over the last two decades, there has been a generational shift away from the use of the more traditional radio and TV broadcasts that bundle together news, entertainment and advertising content to the use of on demand services provided via cable, satellite and internet communication service providers. Advances in technology have enabled audiences to “unbundle” and repackage the content that interests them, while excluding the content that does not.

Advances in technology have also significantly reduced the size, increased the portability and capabilities of the devices available to receive broadcasts (e.g. smartphones that are capable of receiving both high quality video and audio streams over the internet). This has provided audiences with much greater flexibility to determine where they decide to listen to and watch all forms of broadcasts, including radio, TV and streaming of audio and video over the internet.





Audiences also have much greater control over when they receive those broadcasts and use the content contained in those broadcasts. Advances in audio and video recording technologies, as well as the provision of “on demand” video and audio streaming services over the internet, have given audiences the flexibility to determine when they view or listen to content.

Advances in technology have also provided audiences with much more effective and efficient ways of searching for the content that suits their preferences. As the incomes of individuals have increased, so too has the opportunity cost of their time and hence the cost of the time that they have to spend searching for broadcasts that contain the content they seek. While audiences can still derive enjoyment searching for new and interesting content, the need to manually tune the radio, channel surf with the TV remote, or consult radio and TV printed guides that rapidly become out of date, has been replaced by digital radio and television receivers that provide up to date online guides and online search engines.

Audiences also have access to much more information regarding the quality of content contained in the wide range of broadcasts they could listen to or watch. In the past, audiences had to listen to, or watch, broadcasts in order to determine whether or not they liked the content of those broadcasts (i.e. they had to “experience” those broadcasts themselves to assess their suitability). Given the massive quantities of content that audiences in the Asia Pacific can now potentially use, however, they are having to rely increasingly on the use of search engines to locate the content they prefer (e.g. Google) as well as the opinions expressed by family, friends and other people they respect on social media platforms (e.g. Facebook and Twitter), as well as blogs on the internet.

### 3.3.3 Expected future trends

Once again, the best indication of likely future trends in the demand for, and use of, broadcasting services in the Asia Pacific is that provided by past and current trends in the most technologically advanced countries in Asia.

With the top of the range consumer electronic equipment now having high fidelity audio and high resolution video that is approaching the limits of the human ear and eye, it is likely that audiences in the Asia Pacific region will be demanding:

- increases in the speed, coverage, and range of both existing wireless and wireline communications services so they can use more advanced and higher performance fixed and mobile devices, particularly those individuals who currently live outside urban areas that receive good radio, TV, satellite, and internet services
- increases in the battery life of mobile equipment and the ease with which that equipment can be charged (e.g. through greater use of induction charging pads rather than plug in chargers)
- further improvements in the portability of mobile equipment (e.g. larger fold up screens or holographic projection devices that still allow for high resolution video displays without reducing the portability of those devices)
- further improvements in the ease of use of equipment (e.g. through the seamless integration of communications and broadcasting services) and ability to locate content that is of interest to them
- increased ability for audiences to become even more involved, where they so desire, in the capture, recording, processing and production, and distribution of content, and
- more innovative, entertaining and informative content to listen to and watch, which continues to be in high and increasing demand.

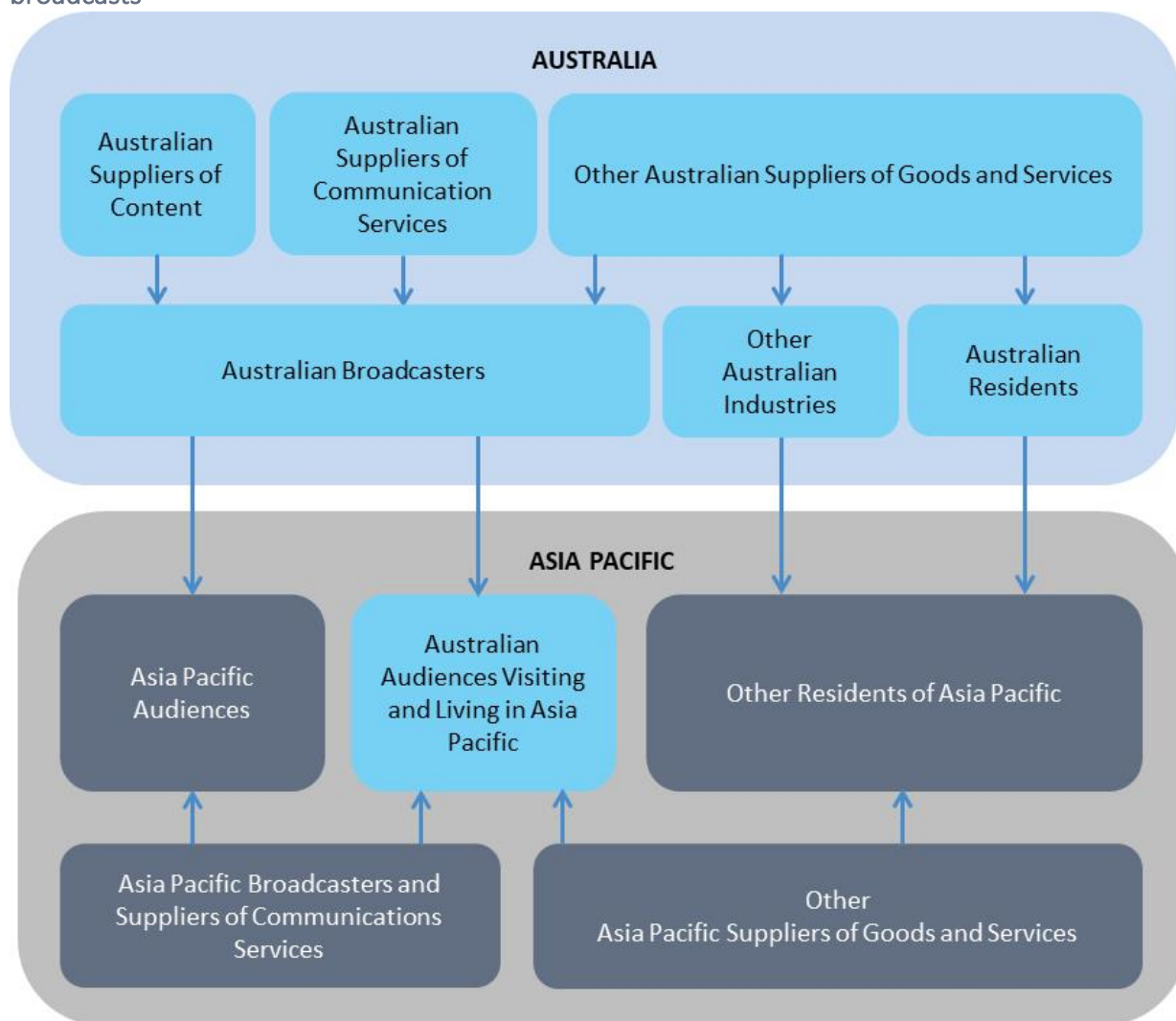


## 4. Costs and Benefits of Australia's Asia Pacific Shortwave Broadcasts

In addition to assessing the reach of Australia's Asia Pacific broadcasts, the Review also conducted a quantitative and qualitative analysis of the economic costs and benefits of Australia's publicly funded shortwave broadcasts to the Asia Pacific region. Specifically:

- a quantitative analysis has been used in order to provide indicative estimates of the potential magnitude of the economic costs and benefits Australia has incurred and derived in the past in order to supply shortwave broadcasts to the Asia Pacific (sections 4.2 and 4.3), and
- a qualitative analysis has been used in order to assess the potential economic costs and benefits of resuming Australia's shortwave broadcasts to the Asia Pacific, or a particular target audiences within that region (section 4.4).

Figure 30: Economic costs and benefits of Australia's publicly funded Asia Pacific shortwave broadcasts



As illustrated in Figure 30 and discussed further below, the net benefit Australia has derived from its publicly funded shortwave broadcasts to the Asia Pacific region in the past is equal to the difference between the:

- economic costs Australia incurred in order to supply those publicly funded shortwave broadcasts, which includes the:
  - direct costs incurred by those Australian businesses that were involved in supplying those shortwave broadcasts, which include the incremental costs incurred by the:
    - Australian suppliers of the content included in those Asia Pacific shortwave broadcasts
    - Australian broadcasters who produced those Asia Pacific shortwave broadcasts
    - Australian suppliers of the communications services that were used to transmit those broadcasts to the Asia Pacific
    - Australian businesses who supplied additional goods and services to the Asia Pacific as a result of those broadcasts
  - direct costs that Australian citizens living or travelling in the Asia Pacific region had to incur in order to listen to those shortwave broadcasts, and
  - indirect costs Australia incurred in order to raising the revenue required to fund those broadcasts
- economic benefits Australia derived from those publicly funded shortwave broadcasts, which includes the:
  - direct benefits derived by those Australian businesses that supplied those shortwave broadcasts to Asia Pacific audiences, which includes the incremental economic benefits:
    - Australian content suppliers derived from their sales of content to Australian shortwave broadcasters
    - Australian broadcasters derived from supplying shortwave broadcasts to Asia Pacific audiences (i.e. the actual economic value of those subsidised broadcasts)
    - Australian suppliers of communications services derived from their sales of shortwave transmission services to Australian broadcasters
  - direct benefits derived by those Australians citizens living or travelling in the Asia Pacific region who listened to those shortwave broadcasts, and
  - indirect benefits that other sections of the Australian community derived as a result of the contribution that those shortwave broadcasts have made to the achievement of Australia's broader community, national and international strategic policy objectives. This includes the contribution that those shortwave broadcasts have made to Australia's industry and trade policy objectives (e.g. by increasing Australia's exports of goods and services to that region), international aid and development objectives, and foreign policy objectives.

Only the economic costs incurred, and the economic benefits derived by Australians and Australian businesses are included in the analysis (i.e. as indicated by the Australians and Australian businesses are included in the analysis (i.e. those individuals and businesses represented by the teal coloured boxes in Figure 30). The blue arrows in Figure 30 represent the flows of real goods and services, including broadcasting services. An incoming blue arrow indicates the economic cost of goods and services used and an outgoing blue arrow indicates the economic benefit derived from the supply of goods and services to another business or individual.



## 4.1 What were the objectives of the Australia's shortwave broadcasts?

### Key findings

- Successive Australian governments:
  - subsidised provision of shortwave broadcasts to the Asia Pacific region from their commencement in 1939 to their cessation in 2017, and
  - still continue to subsidise Australia's direct satellite TV and radio broadcasts to the Asia Pacific, and indirect broadcasts to audiences in the Asia Pacific via local radio and TV stations, as well as the online media services delivered by the internet.
- Underlying these government decisions to publicly fund the provision of shortwave and other broadcasts to the Asia Pacific region is the:
  - recognition that Australia's welfare is heavily dependent on the welfare of the Asia Pacific region within which we reside and the potential role that Australia's international broadcasts can play in increasing the welfare of all residents of that region, and
  - concern that, in the absence of such government intervention, commercial and overseas public broadcasters would fail to provide sufficient quantities and appropriate types of services to that region due to the existence of a number of potential sources of "market failure" including the:
    - "public good" nature of the information provided by those broadcasts
    - large, up front, capital costs associated with providing those broadcasts
    - "external benefits" that Australia derives from the provision of those broadcasts to the Asia Pacific region, and
    - existence of "imperfect competition" between the suppliers of broadcasting services to the Asia Pacific region.

### 4.1.1 Objectives of Australia's shortwave broadcasts

In order to evaluate the economic costs and benefits of Australia's publicly funded shortwave services to the Asia Pacific region, it is essential to have a clear understanding of the fundamental reasons why past governments in Australia decided to subsidise the provision of those shortwave services. That is, it is important to clearly identify the "nature of the problem" that those subsidised shortwave broadcasts were intended to address.

In the absence of a clear understanding of those objectives, it is difficult to estimate the:

- net benefits Australia has derived from its shortwave broadcasts to the Asia Pacific region in the past, which are discussed further in section 4.3
- net benefits Australia would derive from resuming its shortwave broadcasts to particular target audiences in the future, which is discussed further in section 4.4, and
- how Australia can increase the net benefits it derives from its international broadcasts to the Asia Pacific region in the future, which is discussed further in section 5.2.



#### 4.1.2 Reasons given for the commencement of Australia's shortwave broadcasts

Australia's regular shortwave international broadcasts commenced on 20 December 1939 when the then Prime Minister, Sir Robert Menzies, opened the first broadcast with the now well-known quote, "The time has come to speak for ourselves".

This first regular international broadcast, which was translated into French, German, Dutch and Spanish, and was initially named "Australia Calling", was aimed to serve Australian troops stationed in Europe and North Africa. At the end of WWII the service was then renamed "Radio Australia" and in 1950 became part of the then Australian Broadcasting Commission, which is now the Australian Broadcasting Corporation.<sup>81</sup>

The full text of Menzies speech, however, reveals that Australia's international broadcasts were not just intended to give Australia the opportunity to speak for itself. Rather, the speech recognises Australia's place in the Asia Pacific region, its desire to ultimately build a partnership between the countries in that region (i.e. a "concert of Pacific powers"), and the important role that Australia's international broadcasts have in building that partnership:

*In the Pacific we have primary responsibilities and the primary risks. Close as our consultation with Great Britain is, and must be, in relation to European affairs, it is still true to say that we must, to a large extent, be guided by her knowledge and affected by her decisions. The problems in the Pacific are different. What Great Britain calls the Far East to us is the near north. Little given as I am to encouraging the exaggerated ideas of Dominion independence and separatism which exists in some minds, I have become convinced that in the Pacific Australia must regard herself as a principal providing herself with her own information and maintaining her own diplomatic contacts with foreign powers. I do not by this mean that we are to act in the Pacific as if we were a completely separate power; we must, of course, act as an integral part of the British Empire. We must have full consultation and co-operation with Great Britain, South Africa, New Zealand and Canada. But all those consultations must be on the basis that the primary risk in the Pacific is borne by New Zealand and ourselves. With this in mind, I look forward to the day when we will have a concert of Pacific powers, pacific in both senses of the word. This means increased diplomatic contact between ourselves and the United States, China and Japan, to say nothing of the Netherlands East Indies and the other countries which fringe the Pacific.<sup>82</sup>*

#### 4.1.3 Recognition of the importance of international broadcasts in the ABC's charter

Since the commencement of Australia's regular international shortwave broadcasts in 1939, successive Australian governments have recognised the importance of those international broadcasts to both the welfare of Australia and the Asia Pacific region as a whole and:

- continued to subsidise Australia's shortwave broadcasts to Asia until their cession in 2015, and to the Pacific until their cessation in 2017, and
- still continue to subsidise Australia's:
  - direct satellite TV and radio broadcasts to the Asia Pacific, and
  - indirect broadcasts to audiences in the Asia Pacific via local radio and TV stations, as well as online media services delivered by the internet.

<sup>81</sup> K.S. Inglis, *This is the ABC. The Australian Broadcasting Commission 1932-1983*, 2006

<sup>82</sup> A. Watt, *The Evolution of Australian Foreign Policy, 1938-1965*. Cambridge University Press, 1968



This importance that Australian governments have attached, and continue to attach, to international broadcasts is reflected in section 6(1)(b) of the ABC's Charter, which is set out in the *Australian Broadcasting Corporation Act 1983*. This requires the ABC to transmit to countries outside Australia broadcasting programs of news, current affairs, entertainment and cultural enrichment that will:

- encourage awareness of Australia and an international understanding of Australian attitudes on world affairs (section 6(1)(b)(i)), and
- enable Australian citizens living or travelling outside Australia to obtain information about Australian affairs and Australian attitudes on world affairs (section 6(1)(b)(i)):

**6 Charter of the Corporation**

**(1) The functions of the Corporation are:**

**(a) to provide within Australia innovative and comprehensive broadcasting services of a high standard as part of the Australian broadcasting system consisting of national, commercial and community sectors and, without limiting the generality of the foregoing, to provide:**

**(i) broadcasting programs that contribute to a sense of national identity and inform and entertain, and reflect the cultural diversity of, the Australian community, and**

**(ii) broadcasting programs of an educational nature**

**(b) to transmit to countries outside Australia broadcasting programs of news, current affairs, entertainment and cultural enrichment that will:**

**(i) encourage awareness of Australia and an international understanding of Australian attitudes on world affairs, and**

**(ii) enable Australian citizens living or travelling outside Australia to obtain information about Australian affairs and Australian attitudes on world affairs, and**

**(ba) to provide digital media services, and**

**(c) to encourage and promote the musical, dramatic and other performing arts in Australia.**

#### 4.1.4 Concern that broadcasters could underinvest in the provision of international broadcasts

Underlying the decisions of successive governments to publicly fund the provision of shortwave services to the Asia Pacific region is the:

- recognition that Australia's welfare is heavily dependent on the welfare of the Asia Pacific region within which we reside, and
- concern that, in the absence of such government intervention, broadcasters would fail to provide sufficient quantities and appropriate types of services to that region.

As noted in section 2.2.2, there are several reasons why, in the absence of government intervention, there is a risk that broadcasters would fail to provide sufficient quantities and appropriate types of broadcasting services.

These potential sources of "market failure" are particularly relevant in relation to Australia's "free-to-air" shortwave broadcasts in the past to the Asia Pacific region.





In particular, in the past, there was a risk that in the absence of a government subsidy, Australian broadcasters would not have supplied sufficient quantities and appropriate types of shortwave broadcasts to the Asia Pacific region due to the:

- Nature of the information provided by those shortwave broadcasts, which exhibits the features of a “public good” since the use of shortwave broadcasts by one individual does not reduce the quantity of shortwave broadcasts that can be used by other individuals. In addition, in view of the free-to-air nature of those broadcasts, it is both difficult and undesirable to exclude those individuals who have not paid for shortwave broadcasts from enjoying the benefits obtained from listening to those broadcasts (i.e. the benefits of such free-to-air shortwave broadcasts are “non-excludable”).
- Large, up front, capital costs associated with providing shortwave broadcasts (i.e. the existence of “economies of scale” in the supply of shortwave broadcasting services), which would be difficult for a commercial operator to recover in view of the free-to-air nature of those broadcasts. Although commercial broadcasters could use advertising to fund those costs, this would have the unintended adverse effect of reducing Asia Pacific demand for those broadcasts to the extent that audiences view such advertising as a cost of listening to free-to-air broadcasts and would prefer to listen to uninterrupted broadcasts.<sup>83</sup>
- “External benefits” that Australia derives from the provision of shortwave broadcasts to the Asia Pacific region that would not be taken into account by other private and overseas public broadcasters when making their investment decisions regarding their provision of services to that region (e.g. the strategic “soft power” benefits of those broadcasts to Australia, as well as the benefits Australia derives from clarifying any misconceptions created by other, less objective, information sources in that region).
- Existence of “imperfect competition” between the suppliers of broadcasting services to the Asia Pacific region. In the past, the market for international broadcasts was dominated by a few major international shortwave broadcasters in the Asia Pacific region).

The subsidisation of Australia’s shortwave broadcasts to the Asia Pacific region by successive Australian governments was intended to address those potential sources of “market failure”.

## 4.2 What were the economic costs of Australia’s shortwave broadcasts?

### Key findings

- The economic costs Australia has incurred in order to supply its publicly funded shortwave broadcasts to the Asia Pacific region in the past include the:
  - direct costs incurred by those Australian businesses that were involved in supplying those publicly funded shortwave broadcasts to the Asia Pacific
  - direct costs incurred by other Australian businesses as a result of those shortwave broadcasts
  - direct costs incurred by Australians in order to listen to those shortwave broadcasts while they were living or travelling in other countries in the Asia Pacific, and

<sup>83</sup> This is in addition to a broadcaster locating a client with a product for sale in sufficient international markets to justify the costs of advertising to audiences in those markets, particularly given the internationally undifferentiated content of direct broadcast platforms like shortwave and satellite television.



- indirect costs incurred by the rest of Australia in order to supply those shortwave broadcasts, including the economic costs of raising the revenue required and any other unintended adverse effects on national welfare.
- It is important, however, not to double count those costs. The economic costs incurred by the ABC include the incremental economic costs incurred by both the Australian businesses who supplied the content of those broadcasts by Broadcast Australia which transmitted those broadcasts to the Asia Pacific.
- Some indication of the potential magnitude of the economic costs of Australia's Asia Pacific shortwave broadcasts can be obtained using information supplied to the Review by the ABC on its expenditure on those broadcasts since 2007–08.
- Using that information, it is estimated that since 2007–08, Australia incurred \$80.6 million of economic costs, expressed in present value terms (i.e. 2018–19 dollars), in order to provide shortwave radio broadcasts to the Asia Pacific region, which included:
  - \$30.1 million of expenditure on providing shortwave broadcasts to Asia
  - \$44.5 million of expenditure on providing shortwave broadcasts to the Pacific, and
  - \$6.0 million of economic costs that Australia incurred in order to raise the taxation revenue required to fund those broadcasts, expressed in present value terms.
- These estimated economic costs are intended to be indicative only, since they exclude a range of other costs (e.g. the costs incurred by Australians living in or visiting the Asia Pacific and the economic costs Australia incurred as a result of any unintended adverse effects that the subsidisation of those broadcasts had on economic efficiency and distributional equity).

#### 4.2.1 Economic costs of Australia's publicly funded shortwave broadcasts

The economic costs Australia has incurred in order to supply its publicly funded shortwave broadcasts to the Asia Pacific region in the past are equal to the incremental value of real resources that it could have avoided using if it had not supplied those broadcasts (i.e. the "avoidable" or "incremental" economic cost of supplying those broadcasts).

These economic costs include the:

- direct costs incurred by those Australian businesses that were involved in supplying those publicly funded shortwave broadcasts to the Asia Pacific, which are discussed in section 4.2.2 below
- direct costs incurred by other Australian businesses as a result of those shortwave broadcasts (e.g. Australian businesses who sold additional goods and services as a result of those broadcasts), which are discussed in section 4.2.3 below
- direct costs that Australians incurred in order to listen to those shortwave broadcasts while they were living or travelling in other countries in the Asia Pacific, which are discussed in section 4.2.4 below, and
- indirect costs Australia incurred in order to supply those shortwave broadcasts, which are discussed in section 4.2.5 below.

Estimates of these economic costs, along with an outline of the approach used to estimate those economic costs, are provided in section 4.2.6 below.



#### 4.2.2 Direct costs incurred by Australian businesses that supplied those shortwave broadcasts

The main economic costs that Australia has had to incur in order to supply its publicly funded shortwave broadcasts to the Asia Pacific region include the incremental costs incurred by:

- Australian suppliers of the content that was included in those Asia Pacific shortwave broadcasts
- the ABC, which produced those publicly funded shortwave broadcasts to the Asia Pacific, and
- Broadcast Australia, which transmitted those publicly, funded shortwave broadcasts to audiences in the Asia Pacific.

Those incremental economic costs are equal to the additional value of capital, labour and other inputs that those businesses have had to use in order to supply those publicly funded broadcasts to the Asia Pacific.

It is important, of course, not to double count those costs, since the incremental economic costs incurred by the ABC include the incremental economic costs incurred by both the:

- Australian businesses who supplied domestically produced, or imported, content to the ABC to include in its shortwave broadcasts to the Asia Pacific, and
- Australian businesses who supplied the communications services required to transmit those shortwave broadcasts to the Asia Pacific (i.e. the incremental capital, labour and other input costs incurred by Broadcast Australia).

This is achieved by including only those costs incurred by the ABC, which already include the above costs.

#### 4.2.3 Direct costs incurred by other Australian businesses

Australia's supply of publicly funded shortwave broadcasts to the Asia Pacific is also likely to have increased the costs incurred by other Australian businesses that were not involved in the supply of those broadcasts.

For example, some Australian businesses will have incurred incremental costs in order to meet increases in Asia Pacific demand for Australian exports of other goods and services that has arisen as a result of those shortwave broadcasts.

#### 4.2.4 Direct costs incurred by Australians living or travelling in other Asia Pacific countries

The costs that Australian citizens have incurred in order to listen to Australia's shortwave broadcasts while there are living temporarily, or travelling, in other Asia Pacific countries also represent an economic cost to Australia that reduces the welfare of Australia and its citizens as a whole.

These costs include any incremental:

- capital costs those Australians have had to incur in order to listen to those shortwave radio broadcasts while they are living or travelling in other Asia Pacific countries (e.g. the purchase of a shortwave radio to receive those broadcasts)
- labour costs they have had to incur (e.g. the opportunity cost of the time they have spent searching for, and listening to, Australia's shortwave radio broadcasts), and
- other costs they have had to incur (e.g. the cost of other inputs such as the electricity or batteries required to power those radios).

The incremental costs that other Asia Pacific audiences have incurred in order to listen to Australia's shortwave broadcasts are not included since those individuals are not Australian citizens and the costs they incur do not constitute a direct cost to Australia.



It is important to note, however, that this does not mean that the costs have no impact on the welfare of Australia.

On the contrary, the incremental costs Asia Pacific audiences have to incur in order to listen to or view Australia's international broadcasts, including shortwave broadcasts:

- reduce the demand for Australia's international broadcasts by reducing both the willingness and ability of those audiences to pay for those broadcasts (i.e. to incur those incremental costs), and
- consequently indirectly reduce the welfare of Australia by reducing both the:
  - commercial benefits that Australian broadcasters, suppliers of content and suppliers of other goods and services derive from those international broadcasts, and
  - ability of Australia to achieve its broader strategic policy objectives for the Asia Pacific region.

That is, these indirect costs to Australia are reflected in the reduced direct and indirect benefits that Australia derives from its shortwave broadcasts to the Asia Pacific region.

#### 4.2.5 Indirect costs incurred by the rest of Australia

In addition to the direct costs outlined above, the decision of successive Australian governments to subsidise Australia's broadcasts to the Asia Pacific region has also imposed a number of indirect economic costs on the rest of Australia.

These indirect costs, which arise due to the unintended adverse effects that the subsidisation of shortwave broadcasts can have on the economic efficiency with which Australia uses its scarce resources, include the:

- economic costs of raising the revenue required to fund the subsidisation of Australia's shortwave broadcasts to the Asia Pacific region (i.e. the "excess burden" or "deadweight costs" of using the tax system to raise that additional revenue), and
- other potential sources of indirect economic cost arising from any other unintended effects that the subsidisation of shortwave broadcasting has had on the efficiency with which the broadcasting market, and any other markets, operate (i.e. the potential economic costs of any "regulatory failure").

#### Economic costs of raising the revenue required to fund shortwave broadcasts

In order to raise the revenue required fund the subsidisation of Australia's shortwave broadcasts to the Asia Pacific region, past Australian governments have either had to raise additional revenue through the tax system, or borrow additional funds, which increases the amount of tax revenue governments have to raise in the future, since those international broadcasts were supplied free of charge to audiences in the Asia Pacific region.

Unfortunately, the tax system does not just raise revenue from one section of the community (i.e. taxpayers) and redistribute it to another (e.g. to the ABC to fund its broadcasts). Rather, in the course of raising and redistributing revenue, the tax system also imposes economic costs on the nation as a whole by unintentionally reducing the economic efficiency with which it uses its resources.

As a result, the amount of revenue raised by the tax system is less than the economic costs the nation incurs in order to raise that revenue by an amount referred to as the "excess burden", or "deadweight costs" of taxation.



In general, the magnitude of those deadweight costs of taxation is greater the greater the extent to which the tax system unintentionally distorts the:

- relative rates of return that producers and investors derive from alternative economic activities that have to compete for each other in the markets for their inputs of resources (i.e. capital, labour and other material inputs), as well as the markets for their outputs of goods and services, and
- relative prices that consumers have to pay for substitutable goods and services.

Specifically, the magnitude of the economic costs increases significantly as the tax rate rises (i.e. since the size of these deadweight costs increases in line with the square of the tax rate).

This is, of course, the reason why best practice cost benefit analysis guidelines require consideration of the economic costs of raising the taxation revenue required to finance publicly funded investments.<sup>84</sup>

#### Other potential sources of indirect costs to Australia

Just as the tax system can have unintended effects on economic efficiency and distributional equity that reduce the welfare of the nation as a whole, so too can other forms of government intervention.

For example, in the course of intervening in the operation of a market to improve the efficiency with which it operates (e.g. by subsidising those activities that are expected to generate external benefits for the nation as a whole, such as international broadcasting) or achieving broader strategic policy objectives (i.e. “distributional equity” objectives), government intervention can also have a range of unintended effects that actually reduce, rather than improve, the welfare of the nation as a whole.

Once again, the size of these unintended economic costs increases with the magnitude of the unintended distortions it creates in the relative rates of return generated by alternative investments and the relative prices of goods and services to consumers (i.e. those economic costs will increase with the square of those unintended distortions in relative rates of return and relative prices).

As discussed further in section 4.4, this has important implications for the evaluation of publicly funded government investments where considerable uncertainty surrounds the economic costs and benefits of those investments (e.g. as it does surrounding the economic costs and benefits of resuming Australia’s shortwave broadcasts to the Asia Pacific).

In particular, it means that when the economic costs and benefits of a particular publicly funded investment are uncertain, the economic costs that the nation as a whole will bear if the proposed investment does not have its intended effects will be many times greater than the economic benefits the nation as a whole would derive if that government intervention does have its intended effects.

This is, of course, the reason why best practice government business case and regulation guidelines seek to mitigate those unintended economic costs by requiring proponents of publicly funded investments to:

- identify the objectives of the proposed investment (i.e. the nature of the problem that the specific form of government intervention is intended to address) and explain how the proposed investment is intended to achieve those objectives

<sup>84</sup> For example, *NSW Government Guide to Cost-Benefit Analysis*, TPP 17-03, March 2017, p. 61. [https://arp.nsw.gov.au/sites/default/files/TPP17-03\\_NSW\\_Government\\_Guide\\_to\\_Cost-Benefit\\_Analysis\\_0.pdf](https://arp.nsw.gov.au/sites/default/files/TPP17-03_NSW_Government_Guide_to_Cost-Benefit_Analysis_0.pdf)



- identify and evaluate the costs and benefits of the range of alternative ways of achieving those objectives, which includes not only the proposed investment, but also other potential investments that could achieve those objectives, and
- outline the ongoing process of review and reform that will be used to:
  - monitor the extent to which the investment is achieving its objectives
  - review and reform that investment to improve the extent to which it is achieving its objectives.

#### 4.2.6 Estimated economic costs of Australia's shortwave broadcasts

Estimates of the economic costs that Australia has incurred since 2007–08 in order to supply publicly funded shortwave broadcasts to the Asia Pacific region are set out in Table 14 below, expressed in present value terms (i.e. in 2018–19 dollars).

These indicative estimates indicate that since 2007–08, Australia has incurred \$80.6 million of economic costs, expressed in present value terms (i.e. 2018–19 dollars), in order to provide shortwave radio broadcasts to the Asia Pacific region.

These economic costs include:

- \$30.1 million of expenditure on providing shortwave broadcasts to Asia
- \$44.5 million of expenditure on providing shortwave broadcasts to the Pacific, and
- \$6.0 million of economic costs that Australia incurred in order to raise the taxation revenue required to fund those broadcasts, expressed in present value terms.

These estimates were derived using information supplied by the ABC on its expenditure on the provision of its shortwave broadcasts to Asia and the Pacific region since 2007–08.

These past expenditures on shortwave broadcasts were expressed in present value terms (i.e. 2018 dollars) using a 7 per cent real social discount rate that increases the values of those past expenditures to reflect their present values.

Consistent with best practice, these estimated economic costs of Australia's shortwave broadcasts also include an estimate of the economic costs of raising the taxation revenue required to fund the ABC's expenditure on those shortwave broadcast, which were estimated to be 8 per cent of those costs, or \$6 million in present value terms.





Table 14: Economic costs of Australia's shortwave broadcasts to the Asia Pacific

Type of economic cost	Estimated indicative economic cost incurred since 2007–08 (\$ 2018–19)
<b>Cost of providing:</b>	
Asia shortwave broadcasts	\$30.1 million
Pacific shortwave broadcasts	\$44.5 million
All Asia Pacific broadcasts	\$74.6 million
<b>Cost of raising revenue to fund:</b>	
Asia shortwave broadcasts	\$2.4 million
Pacific shortwave broadcasts	\$3.6 million
All Asia Pacific broadcasts	\$6.0 million
<b>Total economic cost of supplying:</b>	
Asia shortwave broadcasts	\$32.5 million
Pacific shortwave broadcasts	\$48.1 million
All Asia Pacific broadcasts	\$80.6 million

It is important to note, however, that these estimates are only intended to be indicative of the potential economic costs Australia has incurred in order to supply its shortwave broadcasts to the Asia Pacific since they exclude a number of economic costs such as the:

- additional economic costs that Australian businesses have incurred in order to supply the additional goods and services they sold as a result of Australia's Asia Pacific shortwave broadcasts, and
- any additional indirect economic costs Australia has incurred as a result of any unintended adverse effects that the subsidisation of shortwave broadcasts to the Asia Pacific has had on the welfare of the nation as a whole (e.g. due to unintended adverse effects on economic efficiency or distributional equity).

As a result, these estimates should be considered as providing a conservative, "lower bound", estimate of the actual economic cost that Australia incurred in order to supply those Asia Pacific shortwave radio broadcasts.



### 4.3 What economic benefits has Australia derived from its shortwave broadcasts?

#### Key findings

- The economic benefits Australia has derived from its publicly funded shortwave broadcasts to the Asia Pacific region in the past include the:
  - direct benefits derived by those Australian businesses that were involved in supplying those publicly funded shortwave broadcasts to the Asia Pacific
  - direct benefits derived by other Australian businesses as a result of those shortwave broadcasts
  - direct benefits Australians derived from listening to those shortwave broadcasts while they were living or travelling in other countries in the Asia Pacific, and
  - indirect benefits the rest of Australia derived from those shortwave broadcasts through the achievement of industry, trade, foreign policy and other objectives.
- It is important, however, not to double count those benefits. The economic benefits derived by the ABC include some of the incremental economic benefits derived by both the Australian businesses who supplied the content of those broadcasts and the benefits derived by Broadcast Australia which transmitted those broadcasts to the Asia Pacific.
- Some indication of the magnitude of the economic benefits Australia derived from its shortwave broadcasts to the Asia Pacific can be obtained using information supplied to the Review by the ABC on its expenditure on those broadcasts since 2007–08, which indicates the Australian Government’s “willingness to pay” for those broadcasts (i.e. the magnitude of the gross and net economic benefits they expected Australia to derive from those broadcasts).
- Using that information, it is estimated that since 2007–08, Australia derived \$120.9 million of benefits, expressed in present value terms, from its provision of shortwave radio broadcasts to the Asia Pacific region, which included:
  - \$48.8 million of benefits from providing shortwave broadcasts to Asia, and
  - \$72.1 million of benefits from providing shortwave broadcasts to the Pacific.
- By deducting the estimated economic costs of supplying those shortwave broadcasts from those estimated economic benefits, it is estimated that since 2007–08, Australia derived \$40.3 million net benefits from its shortwave broadcasts to the Asia Pacific region, which included:
  - \$16.3 million of benefits from the provision of shortwave broadcasts to Asia, and
  - \$24.0 million of benefits from the provision of shortwave broadcasts to the Pacific.
- Once again, it is important to note that these estimated net benefits are only intended to be indicative to the extent that they do not include a range of economic costs and benefits.

#### 4.3.1 Economic benefits of Australia’s Asia Pacific shortwave broadcasts

The economic benefits that Australia has derived from its publicly funded shortwave broadcasts to the Asia Pacific region in the past is equal to the incremental value of real outputs of goods and services generated by those shortwave broadcasts.

These economic benefits include the:

- direct benefits derived by those Australian businesses that were involved in supplying those shortwave broadcasts, which are discussed in section 4.3.2 below



- direct benefits derived by Australian businesses who sold additional goods and services as a result of those shortwave broadcasts, which is discussed in section 4.3.2 below
- direct benefits that Australians derived from listening to those shortwave broadcasts while they were living or travelling in other Asia Pacific countries, which are discussed in section 4.3.4 below, and
- indirect benefits Australia derived as a result of its shortwave broadcasts to the Asia Pacific region, which are discussed in section 4.3.5 below.

Estimates of these economic benefits, along with an outline of the approach used to estimate those economic benefits, are provided in section 4.3.6 below. This includes estimates of both the gross value of those economic benefits, as well as the net benefits Australia derived from those shortwave broadcasts (i.e. economic benefits less the economic costs).

#### **4.3.2 Direct benefits derived by Australian businesses who supplied those shortwave broadcasts**

The main economic benefits Australia has derived from its publicly funded shortwave broadcasts to the Asia Pacific region include the incremental benefits derived by:

- Australian suppliers of the content that was included in those Asia Pacific shortwave broadcasts
- the ABC, which produced those publicly funded shortwave broadcasts to the Asia Pacific, and
- Australian suppliers of the communications services that were used to transmit those publicly funded shortwave broadcasts to the Asia Pacific.

Those incremental benefits are equal to the additional value of outputs of goods and services (e.g. content, broadcasting services, and transmissions services) those businesses produced in order to supply Australia's shortwave broadcasts to the Asia Pacific, which is reflected in the amount of revenue they received for supplying those goods and services.

Once again, it is important not to double count those benefits, since the incremental economic benefits derived by the ABC include some of the incremental economic benefits derived by both the:

- Australian businesses who supplied domestically produced, or imported, content to the ABC to include in its shortwave broadcasts to the Asia Pacific, and
- Australian businesses who supplied the communications services required to transmit those shortwave broadcasts to the Asia.

#### **4.3.3 Direct benefits derived by other Australian businesses**

Australia's publicly funded shortwave broadcasts are also likely to have generated benefits for other Australian businesses that were not involved in the supply of those broadcasts.

For example, it is likely to have increased the value of other goods and services sold by Australian businesses to the Asia Pacific region. The value of these additional goods and services sold is an economic benefit to the nation as a whole.

#### **4.3.4 Direct benefits derived by Australians living or travelling in other Asia Pacific countries**

The benefits that Australian citizens have derived from listening to Australia's shortwave broadcasts while there are living temporarily, or travelling, in other Asia Pacific countries also represent an economic benefit to Australia that increases the welfare of Australia and its citizens as a whole.



These incremental benefits are equal in value to the incremental value that these Australians derive from the use of those broadcasts (i.e. the “value in use” of those broadcasts), which are the sum of:

- what they actually had to pay in order to listen to those broadcasts, and
- the additional amount that they would have been willing to pay for those services (i.e. the net benefit, or “consumer surplus” they derived from listening to those shortwave broadcasts, which is equal to the difference between what they were willing to pay for those services less what they actually had to pay in order to listen to those broadcasts).

The incremental benefits that other Asia Pacific audiences derived from listening to Australia’s shortwave broadcasts are not included since those individuals are not Australian citizens and the benefits they derive do not constitute a direct benefit to Australia.

Once again, however, it is important to note that this does not mean that those benefits derived by Asia Pacific audiences have no impact on the welfare of Australia.

On the contrary, the incremental benefits those Asia Pacific audiences have derived from listening to Australia’s international broadcasts, including shortwave broadcasts:

- increase the demand for Australia’s international broadcasts by increasing the willingness of those audiences to pay for those broadcasts, and
- consequently indirectly increase the welfare of Australia by increasing both the:
  - commercial benefits that Australian broadcasters, suppliers of content and suppliers of other goods and services derive from those international broadcasts, and
  - ability of Australia to achieve its broader strategic policy objectives for the Asia Pacific region.

That is, these indirect benefits to Australia are reflected in the increased direct and indirect benefits that Australia derives from its shortwave Asia Pacific region (e.g. when Asia Pacific season workers visit Australia, they not only derive net benefits that increase the welfare of the Australia Pacific region, but they also develop a much better understanding of Australia that generates indirect benefits for Australia).

#### 4.3.5 Indirect benefits derived by the rest of Australia

In addition to generating direct benefits for Australia’s shortwave broadcasters and suppliers of the content contained in those broadcasts, as well as other Australian businesses who sold additional goods and services as a result of those shortwave broadcasts, the public funding of Australia’s shortwave broadcasts also has the potential to generate indirect or “external” benefits for the result of Australia by:

- increasing the efficiency of use of Australia’s resources (i.e. increasing “economic efficiency”), by addressing the concern that in the absence of government subsidisation of shortwave broadcasts to the Asia Pacific, commercial operators might have provided less than socially optimal levels of broadcasts to that region (i.e. by addressing the potential sources of “market failure” that were identified in section 4.1.4 of this report), and
- helping the Australian Government and community groups to achieve their broader community, national and international strategic policy objectives (i.e. improving “distributional equity”, by helping the Government to achieve its broader industry, trade, Asia Pacific regional develop, foreign aid and foreign policy objectives).



This is, of course, the reason why best practice cost benefit analysis guidelines require consideration not only of the extent to which a proposed investment would improve the efficiency with which the nation's resources are used (i.e. "economic efficiency"), but also the extent to which it would help the government achieve its broader equity objectives (i.e. "distributional equity"). That is, better practice cost benefit analysis guidelines involve the consideration of proposed investments from the point of view of their effects on national welfare (i.e. it involves the application of "welfare economics", which is the foundation of cost benefit analysis).<sup>85</sup>

#### 4.3.6 Estimated economic benefits of Australia's shortwave broadcasts

Estimates of the economic benefits that Australia has incurred since 2007–08 from its supply of publicly funded shortwave broadcasts to the Asia Pacific region are set out in Table 15 below, expressed in present value terms (i.e. in 2018–19 dollars).

These indicative estimates indicate that since 2007–08, Australia has derived \$120.9 million of economic benefits, expressed in present value terms (i.e. 2018–19 dollars), from its shortwave radio broadcasts to the Asia Pacific region.

These economic benefits include:

- \$48.8 million of expenditure on providing shortwave broadcasts to Asia
- \$72.1 million of expenditure on providing shortwave broadcasts to the Pacific.

The estimated economic costs of supplying those shortwave broadcasts were then deducted from those estimated economic benefits, in order to estimate the net benefits that Australia has derived since 2007–08 from its shortwave broadcasts to the Asia Pacific.

As indicated in Table 15, it is estimated that since 2007–08, Australia derived \$40.3 million net benefits from its shortwave broadcasts to the Asia Pacific region, which included:

- \$16.3 million of benefits from the provision of shortwave broadcasts to Asia, and
- \$24.0 million of benefits from the provision of shortwave broadcasts to the Pacific.

These estimates of the gross and net benefits Australia derived from its shortwave broadcasts to the Asia Pacific were derived using the approach illustrated in Figure 31 below, which involved estimating what the Australian Government, and the ABC acting as the Australian Government's international broadcasting agent:

- actually spent on the ABC's shortwave broadcasts to the Asia Pacific (i.e. area  $OP_1AQ_1$  in Figure 31 which is equal in value to the price paid for those broadcasts  $P_1$ , multiplied by the quantity of those broadcasts  $Q_1$ ), which was estimated using information supplied by the ABC on its expenditure on the provision of its shortwave broadcasts to Asia and the Pacific region since 2007–08, and
- was willing to spend on those shortwave broadcasts (i.e. area  $ODAQ_1$ ). This willingness to pay, which reflects the potential magnitude of the gross benefits that the Australian Government expected Australia would derive from those shortwave broadcasts, was estimated by assuming that its demand for those shortwave broadcasts was a linear function of the price that has to be paid to use those broadcasts to reach audiences, and has a slope of minus one (which means that the demand is neither highly sensitive nor insensitive to changes in that price). Under this simplifying assumption, the Australian Government's willingness to pay for those shortwave

<sup>85</sup> For example, *NSW Government Guide to Cost-Benefit Analysis*, TPP 17-03, March 2017, Appendix 1, section 1.2, and Appendix 6. [https://arp.nsw.gov.au/sites/default/files/TPP17-03\\_NSW\\_Government\\_Guide\\_to\\_Cost-Benefit\\_Analysis\\_0.pdf](https://arp.nsw.gov.au/sites/default/files/TPP17-03_NSW_Government_Guide_to_Cost-Benefit_Analysis_0.pdf)



broadcasts is equal to the sum of what it actually paid for those broadcast (i.e. area  $OP_1AQ_1$ ), plus one half of that amount (i.e. area  $DAP_1$ ).

Table 15: Economic benefits from Australia's shortwave broadcasts to the Asia Pacific

Type of economic benefit	Estimated indicative economic benefit derived since 2007–08 (\$2018–19)
<b>Gross economic benefits from:</b>	
Asia shortwave broadcasts	\$48.8 million
Pacific shortwave broadcasts	\$72.1 million
All Asia Pacific broadcasts	\$120.9 million
<b>Net economic benefits from:</b>	
Asia shortwave broadcasts	\$16.3 million
Pacific shortwave broadcasts	\$24.0 million
All Asia Pacific broadcasts	\$40.3 million

As illustrated in Figure 31, the net benefit Australia derived from its shortwave broadcasts (i.e. area  $DAP_1$ ) is equal to the difference between the:

- amount that the Australian Government and the ABC were willing to pay for shortwave broadcasts to the Asia Pacific (i.e. area  $ODAQ_1$ )
- amount that the Australian Government and the ABC actually had to pay in order to provide those shortwave broadcasts to the Asia Pacific (i.e. area  $OP_1AQ_1$ ).

That is, under these simplifying assumptions, the net benefit that Australia derived from its past broadcasts to the Asia Pacific is equal to one half of its actual expenditure on those shortwave broadcasts (which is commonly referred to as the “rule of a half” approach to estimating net benefits).<sup>86</sup>

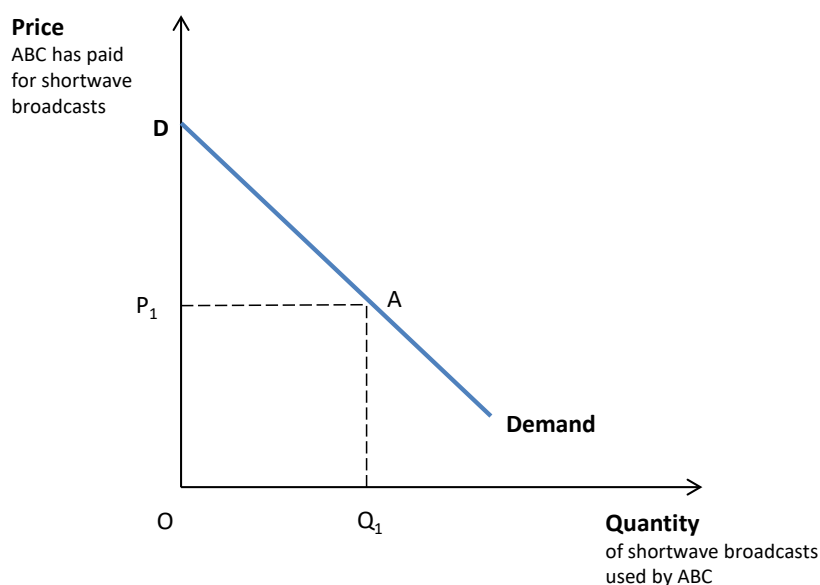
These past benefits that Australia has derived from its shortwave broadcasts were expressed in present value terms (i.e. 2018 dollars) using a 7 per cent real social discount rate that increases the values of those past benefits to reflect their present values.

<sup>86</sup> For example, Transport for NSW, *Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives*, June 2018, Appendix 9





Figure 31: Net benefits from Australia's past Asia Pacific shortwave broadcasts



Once again, it is important to note, however, that these estimates of the gross and net benefits Australia derived from its shortwave broadcasts are only intended to be indicative of the potential economic benefits Australia actually derived since:

- the net benefit estimates exclude certain costs (e.g. costs incurred by other Australian businesses and any indirect costs arising from any unintended adverse effects that subsidising shortwave broadcasts might have on the welfare of the nation), and
- both the estimated gross and net benefits exclude certain benefits (e.g. any benefits the Australian government and the ABC did not take into account when deciding how much to spend in the past on those shortwave broadcasts).

As a result, these estimates should be considered as providing a conservative, “lower bound”, estimate of the actual net benefits that Australia derived from its past shortwave broadcasts to the Asia Pacific.



## 4.4 Would Australia derive net benefits from resuming its shortwave broadcasts?

### Cessation of Australia's shortwave broadcasts

#### Shift away from the use of shortwave broadcasts by international broadcasters

##### Key findings

- The Review conducted a qualitative analysis of the potential economic costs and benefits Australia could expect to incur and derive in the future if it resumed those shortwave broadcasts.
- Although Australia is likely to have derived significant net benefits from its shortwave broadcasts to the Asia Pacific in the past, this does not necessarily mean that it would continue to derive those net benefits in the future if it resumed those broadcasts.
- Rather, it is likely that ongoing advances in technology, as well as increases in the competition that publicly funded Australian shortwave broadcasters would face in the Asia Pacific markets for their broadcasts, would continue to decrease any net economic benefits Australia derived from those broadcasts by:
  - increasing the direct costs of shortwave broadcasts in relation to the costs of using other broadcast platforms, and
  - increasing the availability of alternative platforms that could be used to reach those target audiences.
- This does not mean that Australia would not generate net benefits from resuming shortwave broadcasts to certain areas of the Asia Pacific, particularly those audiences living in the more remote areas who have little access to alternative broadcasts via satellite, TV, or the internet.
- Rather, it means that in order to ensure that public funding of those shortwave broadcasts is in Australia's best interests, it would be necessary to conduct a detailed evaluation of those proposed investments from the nation's perspective (i.e. conduct a detailed social cost benefit analysis using existing best practice evaluation guidelines) to establish that those shortwave broadcasts would:
  - generate a net benefit for the nation as a whole
  - generate a greater net benefit for the nation as a whole than alternative investments in other broadcasting platforms that could be used to reach the target audience, and
  - generate a greater net benefit to the nation as a whole than alternative investments in broadcasts to reach other target audiences.
- This would require the detailed evaluation of alternative broadcasting investments, including any proposed investment in the provision of publicly funded shortwave broadcasts to a particular target audience in the Asia Pacific, such that the Review is unable to undertake in the absence of a clear statement of the objectives Australia's Asia Pacific broadcasts.
- However, in the light of the evidence presented to this Review, it seems unlikely that shortwave broadcasts would generate the greatest net benefits compared to the alternatives given the:
  - high costs of shortwave transmission services
  - costs of subsidising the purchase of shortwave radios for some audiences
  - low cost of alternative platforms or investments, and
  - significant uncertainty surrounding the actual use of shortwave broadcasts across Asia Pacific media markets.



Like many other international broadcasters, the ABC has been phasing out its use of shortwave broadcasts in favour of other potentially more effective and efficient platforms to reach its audiences in the Asia Pacific region (e.g. satellite TV and radio services, rebroadcasts through local Asia Pacific radio and TV stations, and the internet).

For example, as noted by the ABC in its submission to the Senate Environment and Communications Legislation Committee Inquiry into the *Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*, which is discussed further in section 4.4.2 below, many of the world's largest international broadcasters, including the BBC, Radio Netherlands and Deutsche Welle, Radio Netherlands and Radio Canada have closed or substantially reduced their shortwave broadcasts and moved to the use of alternative broadcasting platforms:

*Shortwave technology has been increasingly abandoned by international radio broadcasters over the last two decades as an audience platform due to the cost of maintenance, the availability of alternative technologies and decreased audience demand for a shortwave service. The BBC, Radio Canada, Radio Netherlands, Vatican Radio and Deutsche Welle have each closed or substantially reduced their international shortwave services in recent years. For example, the BBC World Service ceased its North American and Australasian shortwave services in 2001, its European and Middle Eastern shortwave services in 2007 and 2008, and Mandarin shortwave service in 2011, instead, focussing their resources on satellite and online radio services in line with audience listening habits shifting to these alternative platforms.<sup>87</sup>*

Of course, not all international broadcasters have completely abandoned their shortwave broadcasts.

As noted in submissions received by the Review, some international broadcasters have retained their shortwave broadcasts to more remote regional areas that are still difficult to reach using alternative broadcasting platforms.

For example, in its submission to the Review, the Lowy Institute noted that the BBC and other international broadcasters are still investing in the provision of shortwave services to the Asia Pacific, particularly in order to reach more remote audiences who have few other communication options:

*Unlike the ABC, other public international broadcasters are investing in shortwave, particularly to reach audiences who have few other communication options. The BBCWS is using shortwave to expand broadcasts targeting the Korean Peninsula. Closer to home, even the Papua New Guinea government is considering the technology to improve radio services to the Autonomous Region of Bougainville.<sup>88</sup>*

Regarding PNG, as noted in section 3.1.3, even in the news source cited by the Lowy Institute and other submissions, new shortwave transmission is one of several options under consideration. Another option is to use two additional FM transmitters. These also overlook the admission by the responsible Minister that shortwave receivers are not generally available for purchase, requiring government intervention.

<sup>87</sup> Australian Broadcasting Corporation, *Submission to the Senate Environment and Communications Legislation Committee Inquiry into the Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*, May 2017, [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Shortwaveradio/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Shortwaveradio/Submissions)

<sup>88</sup> Lowy Institute, [Submission to the Review](#)



### Cessation of the ABC's shortwave broadcasts to Asia

As noted in its submission to the *Restoring Shortwave Radio* inquiry, the ABC used to provide shortwave services to the Middle East, India, China, Indonesia and Asia, which were gradually phased out and switched off in 2015 in favour of the use of alternative broadcasting platforms such as FM transmissions and online streaming:

*In past years the ABC also provided Radio Australia shortwave services to the Middle East, India, China, Indonesia and Asia, however these services were gradually switched off over the last decade as audiences transitioned to newer radio technologies, including FM transmissions and online streaming. The last of these services, broadcasting to Asia, was switched off in early 2015. The cessation of these services did not lead to a parliamentary inquiry.<sup>89</sup>*

### Cessation of the ABC's shortwave broadcasts to the Pacific

The ABC also used to provide domestic shortwave broadcasting services to the Northern Territory, as well as international shortwave services to PNG and the Pacific, until those remaining services were ceased on 31 January 2017.

Once again, in its submission to the *Restoring Shortwave Radio* inquiry, the ABC noted that:

*In making its decision to cease its international shortwave services, the ABC also utilised external and internal research on audience listenership trends in Papua New Guinea and the Pacific, which indicated that:*

- *Listeners in these countries have moved and are continuing to move away from traditional forms of radio listening towards internet streaming and/or listening to FM transmissions or radio streamed via mobile phones. The findings from this research informed the ABC's decision to discontinue the shortwave services and identified.*
- *In Papua New Guinea, FM radio remains the dominant waveband, with less than 5% of all weekly radio listeners tuning into radio programming on any other frequency band.*
- *Mobile coverage across Fiji, Samoa, Solomon Islands, Tonga and Vanuatu has jumped from less than half of the population in 2005 to 93 per cent in 2014, the cost of mobile calls declined by one third between 2005 and 2014, and international internet bandwidth jumped over 1500% between 2007 and 2014. The ABC's international shortwave contract was due to expire in January 2017, and based on international broadcasting trends, audience listening trends and the availability of the ABC's Radio Australia via FM transmissions, satellite and online services, the ABC considered that the significant investment required to retain international shortwave services would not be an effective use of taxpayer money.*

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<sup>89</sup> Australian Broadcasting Corporation, *Submission to the Senate Environment and Communications Legislation Committee Inquiry into the Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*, May 2017, [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Shortwaveradio/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Shortwaveradio/Submissions)



In addition, the ABC also noted that although complaints had been received from industry, interest groups, politicians and members of the Australian public, it had only received 20 responses from people within the intended coverage areas for those services:

#### *Outcomes*

*In the three months since the NT and international shortwave services ceased, the ABC has received feedback from a range of stakeholders regarding this decision. Complaints have been received from industry and interest groups as well as from politicians and members of the public. Of these, however, the number of contacts from people within the intended coverage areas for the services was 20. The ABC has provided each of these listeners with advice about alternative ways to listen to NT Local Radio and Radio Australia respectively. The ABC believes that the limited response from individual audience members in affected regions bears out the weight of evidence the ABC utilised in making its decision to cease these services.*

#### 4.4.1 Calls for Australia to resume its Asia Pacific shortwave broadcasts

Although the cessation of shortwave broadcasts to Asia did not receive much public attention, the ABC's decision to cease its shortwave broadcasts to the Pacific did and resulted in the introduction of a private members bill into the Senate, which ultimately culminated in this Review of Australian Broadcasting Services in the Asia Pacific.

##### **Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017**

On 13 February 2017, Senator Nick Xenophon introduced the *Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017* (the Bill), which sought to require the ABC to:

- restore its shortwave transmission services to the Northern Territory and international audiences
- maintain three domestic shortwave transmission services providing wide area coverage across the Northern Territory which will broadcast the proximate local radio service
- maintain at least three domestic shortwave transmission services which were operating up until the cessation of the domestic shortwave transmission on 31 January 2017
- maintain an international shortwave transmission service for Papua New Guinea and parts of the Pacific which will use at least three transmitters and broadcast the ABC's international service, and
- broadcast in the relevant language of the population that it is broadcasting to ensure that people in those regions have access to important news, weather and emergency information.

##### **Submissions received by the Senate Inquiry into the Restoring Shortwave Radio Bill**

The Bill was subsequently referred by the Senate on 16 February 2017 to the Senate Environment and Communications Legislation Committee for inquiry and report by 10 May 2017. This reporting date was subsequently extended by the Senate to 9 August 2017.

As noted in its report, the Committee received a number of submissions which raised concerns about the impact of the cessation of the ABC's international shortwave services, including the:

- perceived neglect of remote communities in the Pacific
- loss of capacity for emergency warning broadcasts, and
- potential loss of an avenue for diplomacy and the pursuit of Australia's regional interests in the Pacific. Submitters also disputed the ABC's argument that other technologies now available provide greater access to ABC international broadcasts.

The Committee concluded that the measures proposed in the Bill were not an appropriate way to address the concerns raised by some submitters about the cessation of the ABC's shortwave services.



In particular, the Committee noted in relation to the concerns expressed in submissions about the cessation of the international shortwave service that the ABC is:

- working to ensure its continued presence in international broadcasting by developing a new international strategy across all its content divisions
- expanding the provision of broadcasts through an array of technologies and investing in more FM transmitters in PNG. The new strategy will enable the ABC to align its services to the way in which audiences access news, current affairs and other programs. The Committee supported the ABC's approach to ensuring that it remains a recognisable source of independent, high quality broadcasting in PNG and the Pacific.

In addition, the Committee:

- acknowledged the concerns expressed by some submitters that emergency broadcasts will no longer be received by certain domestic and overseas audiences. However, it is also noted that it is not the sole responsibility of the ABC to ensure that communities, especially communities outside Australia, are briefed on weather warnings. Rather, this responsibility lies with government authorities with ABC broadcasts serving as an alternative source of emergency information, and
- expressed its concern that the measures in the Bill would, if enacted, impinge on the independence of the ABC and could lead to increased costs. While the Committee noted that the proposed amendments do not affect the ABC's editorial independence, the Committee was not convinced that dictating the broadcaster's choice of technology is in line with the established tradition and understanding of independence that has been fostered over many decades. The Committee noted the ABC has made the decision to terminate its shortwave broadcasts, and is seeking a modern and efficient way forward for the dissemination of content, which are legitimate activities for the broadcaster to undertake.<sup>90</sup>

As a result, the Committee recommended that the Senate not pass the Bill.

Senator Xenophon disagreed with these conclusions and issued a dissenting report that:

- highlighted the importance of the shortwave service, as illustrated by the submissions from:
  - Tecsun Radio Australia, which identified the different types of domestic and international audiences for shortwave broadcasts and its sales of shortwave receivers (see section 3.1.3)
  - the Prime Minister of the Republic of Vanuatu, the Honourable Charlot Salwai, who outlined how the people of Vanuatu relied on shortwave radio when Cyclone Pam struck in 2015. Prime Minister Salwai stated in his submission:

*In times of crisis when other forms of media like FM and digital services are damaged or unavailable such communities rely on broadcasts safely transmitted from outside the disaster zone. This is exactly the role Radio Australia shortwave broadcasts played during Cyclone Pam... people around our nation relied on Radio Australia's shortwave broadcasts to stay up-to-date about the cyclone's progress and they took the thorough and expert advice on the shortwave service very seriously indeed. It is undoubtedly the case that Radio Australia's shortwave service helped save Ni-Vanuatu lives.*

<sup>90</sup> Report, Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017, 9 August 2017  
[https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Shortwaveradio/Report](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Shortwaveradio/Report)





- highlighted the foreign policy value of shortwave broadcasts that were raised in submissions and expressed concerns that as Australia was reducing its shortwave broadcasts to the region, while China was increasing its shortwave broadcasts and using as many shortwave frequency allotments as it could, and
- concluded that the Bill should be passed.<sup>91</sup>

#### Submissions received by this Review of Broadcasting Services in the Asia Pacific

As outlined in greater detail in [Appendix 3](#) of this report, the submissions received by the Review broadly reiterated the views expressed in submissions to the Senate Environment and Communications Legislation Committee inquiry into *The Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*.

Many submissions expressed concern that successive budget cutbacks have caused reductions in Australia's supplies of international broadcasting services more generally, and the cessation of ABC's shortwave services in particular. This view was also reflected in the ABC's submission, in which they stated that budget cuts in 2014 "significantly reduced the ABC's ability to deliver optimal international services".

Although any reductions in the ABC's budget will reduce the funds it has available to spend on both its domestic and international broadcasting activities, it is also important to note that the decline in the funds that the ABC has decided to allocate to its international division, which was noted by several submissions, also reflects the ABC's decision to:

- phase out its use shortwave broadcasts to reach its Asia Pacific audiences, in the light of the considerable uncertainty that surrounds the actual numbers of people that use those broadcasts, the high costs of those broadcasts in relation to other platforms, and the potential benefits Australia is deriving from those broadcasts, and
- increase its use of other broadcasting platforms to distribute its content to Asia Pacific audiences either:
  - directly through satellite transmissions (i.e. satellite TV and radio broadcasts, as well as satellite internet communication services), or
  - indirectly through local Asia Pacific broadcasters and internet streaming, which are the main platforms that the ABC now uses to reach its Asia Pacific audiences (see discussion in section 2).

As a result of this shift in the types of broadcasting platforms the ABC now uses to reach its international audiences, the amount of funding the ABC decides to allocate to its international division no longer provides an accurate indication of the ABC's expenditure on the provision of international broadcasting services. Rather, it means that most of the ABC's expenditure is now attributable, to varying degrees, to the provision of its international broadcasts to the Asia Pacific.

<sup>91</sup> Senator Nick Xenophon's Dissenting Report, *ABC—A Bad Call, Shutting Down of ABC Shortwave Radio* [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Shortwaveradio/Report/d03](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Shortwaveradio/Report/d03)





Most of the submissions received by the Review also:

- advocated restoring the ABC's shortwave broadcasts to the Asia Pacific region for a variety of reasons, including the:
  - wider regional benefits of Radio Australia's services, including the promotion of democracy, stability and security, and good governance restore Australia's reach and foreign policy influence in the region
  - particular importance of these services in countries with restricted press freedom, and
  - need to retain a critical mass of expertise, and support regional stability through an independent media presence
- disputed the claim that shortwave broadcasts are an out-dated technology, noting:
  - the advantages of shortwave broadcasts over other platforms (e.g. its ability to reach rural and remote communities and at sea, its affordability, ability to run off battery power, and reduced susceptibility to local political interference)
  - benefits of shortwave broadcasts in emergency preparedness and response in Pacific Island nations, particularly in relation to weather events such as cyclones, and
  - continued, and in some cases increased, use of shortwave broadcasts by other major international broadcasters to reach their target markets.

For example, like many other submissions received by the Review, the Lowy Institute's submission argued that although shortwave use was declining in urban areas, it was still a vital service to many parts of the South Pacific, pending further extensions of the local Asia Pacific FM radio networks:

*While short-wave use is declining in urban areas, it remains a vital service in many parts of the South Pacific, where it is the only lifeline of daily communications to the outside world.*

*And while rebroadcasting services via FM do provide services to a mass audience, those services rely on local infrastructure—such as electricity and the security of transmitter sites—and continued political support by the host nation. A natural disaster, or political upheaval can quickly take a transmitter off the air.*

*Clearly, a continued shortwave capability from Australia is an important asset. It can also be justified as a public good for the broader region, support people in times of disaster and strife. This can generate considerable goodwill among Australia's close neighbours and would enhance its soft power in the region.*

*Continued transmission over shortwave can be supplemented through infill and rebroadcast arrangements such as the FM Radio retransmissions being implemented throughout the region. These are also a priority, and the ABC's work to extend its network of FM transmissions must be commended.*<sup>92</sup>

By contrast, the submissions received by the Review contained very little information on either the:

- sizes of the audiences in the Asia Pacific region who either own, or have access to, the shortwave radio receivers required to listen to Australia's shortwave radio broadcasts, and
- the proportion of those audiences who actually listen to and enjoy Australia's shortwave radio broadcasts, which depends on their individual preferences, cultural backgrounds, language and the extent to which they find the content of Australia's broadcasting to be both interesting and relevant.

<sup>92</sup> Lowy Institute, [Submission to the Review](#)



In particular, as noted in section 3.1.3, there is relatively little information available on the actual ownership and use of shortwave radios in the Asia Pacific.

The limited information that is available, however, suggests that although shortwave radios are still used by particular communities in the Asia Pacific for particular purposes:

- the market for shortwave receivers is limited in relation to the market for alternative technologies (e.g. FM radios and mobile phones), and
- subsidies are often required to encourage the ownership and use of shortwave radio receivers.

This lack of information on the actual use of Australia's shortwave broadcasts by Asia Pacific audiences makes it difficult for international broadcasters, such as the ABC, to justify the cessation of their shortwave broadcasts.

For example, the Lowy Institute's submission criticised the limited information used by the ABC to make its decision to cease its shortwave services to the Pacific and subsequently justify that decision to the Senate Committee inquiry:

*The ABC has cited a 2014 study of media use in PNG as part of its reasoning, saying it showed a 50 per cent drop in shortwave listenership. It also says it has had "very few" complaints following the cessation of the service. But it also admits it has limited information on the audience that was using the broadcasts, with one executive telling a parliamentary inquiry that it would be more expensive to conduct a comprehensive survey than to continue providing the service.*

*But relying on a lack of audience feedback as justification for the decision is disingenuous. This is because the people who most relied on these services—because of a lack of functioning alternatives—are the same audiences that face significant obstacles to providing feedback through modern communication channels. Withdrawal of Australian broadcasting services via shortwave from those audiences has left them without a service.*

At the same time, however, it is also important to note that this lack of information on the actual use of Australia's shortwave broadcasts by Asia Pacific audiences also makes it difficult to justify either the continuation or resumption of those shortwave broadcasts.

#### Provision of emergency services in the Pacific

Emergency broadcasting, as opposed to communications between emergency responders, has two primary functions. Before the event communities can prepare for emergencies when broadcasters issue regular warnings. After the event communities and emergency services can respond and begin to recover with up-to-date information from news bulletins.

Several submissions focusing on the withdrawal of shortwave Radio Australia broadcasting to the Pacific highlighted the role of shortwave radio services in relation to metrological emergencies in the region. This included the Prime Minister of the Republic of Vanuatu, who noted the citizens of remote islands have limited access to modern communications technology:

*In times of crisis when other forms of media like FM and digital services are unavailable such communities rely on broadcasts safely transmitted from outside the disaster zone.*<sup>93</sup>

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<sup>93</sup> Vanuatu Government, [Submission to the Review](#)



Broadcasts of emergency warnings need to be trusted, relevant and scalable. This requires relationships with various observatory and forecasting services such as:

- Metrological Services in each country
- Tropical Cyclone Warning Centre Port Moresby
- Tropical Cyclone Warning Centre Fiji South West Pacific Ocean
- United States Department of Commerce/National Oceanic and Atmospheric Administration's National Weather Service Pacific Tsunami Warning Center (which provides graded emergency messages by email or text message, reception of which may be subject to local reliability of communication services), and
- Port Moresby Geophysical Observatory.

There is no reliable method/authority for flood warnings that are the most significant threat in Papua New Guinea.

Radio New Zealand Pacific (Radio NZ Pacific) has a formal role in Pacific disaster management under an agreement with NZ Ministry of Foreign Affairs and Trade, operating a cyclone service operates from November to March/April. Radio NZ Pacific has a relationship with NZ MetService, which in turn has links with Pacific Metrological Services. Once a cyclone is named the analog shortwave transmitter is turned on to start the service, which broadcasts weather bulletins hourly, updated by the local metrological service. Concurrently RNZ Pacific updates messages on social media (Facebook, Twitter).

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Emergency services response efforts in the Pacific are subject to availability of resources, principally money and fuel. In general the terrain in PNG, for example, requires helicopter access to flood affected areas.

Disaster response broadcasting includes providing information about local conditions and responses (e.g. the locations of disaster relief services such as shelters). This requires obtaining local information through local journalists, frequently subject to the same constraints as emergency services response (i.e. money and fuel).

Radio NZ Pacific arrangements with local disaster offices vary in terms of their formality—Radio NZ is named in some Demand Management Plans, and also works via local broadcasters and has strong relationships with local NGOs.

Radio NZ noted many Pacific Island countries are stepping up their disaster planning as cyclones increase in their intensity.

#### Further call to restore funding for international broadcasting services

Since the commencement of the Review, there has been a further call by Senator Hanson-Young for the Government to reinstate the Australia Network and restore funding for that network to the ABC. Specifically, on 14 November 2017, Senator Hanson-Young moved in an Amendment to General Business Notice of Motion No 1180 that the Senate:

**(a) notes that:**

**(i) the Australian Broadcasting Corporation Act 1983 states that the “corporation or prescribed companies [are] to be the only providers of Commonwealth-funded international broadcasting services”**

<sup>94</sup> Review consultation with Radio New Zealand



- (ii) *the Abbott Government stripped funding for the Australia Network from the Australian Broadcasting Corporation (ABC), and*
- (iii) *the Morrison Government has indicated that it plans to work “with our commercial media operators to ensure the Pacific can connect to quality Australian media content”, and*
- (b) *calls on the Federal Government to reinstate the Australia Network and award the public funding for the Australia Network broadcasting in the Asia-Pacific to the ABC.*<sup>95</sup>

That notice was not passed by the Senate.

#### 4.4.2 Expected net economic benefits from resuming Australia’s shortwave broadcasts

Although Australia is likely to have derived significant net benefits from its shortwave broadcasts to the Asia Pacific in the past, this does not necessarily mean that it would continue to derive those net benefits in the future if it resumed those broadcasts.

Rather, it is likely that ongoing advances in technology and increases in the competition that publicly funded Australian shortwave broadcasters faces in the Asia Pacific markets for their broadcasts will continue to decrease any net economic benefits Australia would derive from those broadcasts by increasing the direct costs of shortwave broadcasts in relation to the costs of using other broadcast platforms.

As noted in section 2.4, although advances in technology have reduced the financial cost of the equipment required to supply shortwave broadcasts to some extent, they also have had the effect of reducing the cost of using alternative platforms to reach Asia Pacific audiences to an even greater extent. Similarly, as noted in section 3.3, advances in technology have reduced the financial cost to Asia Pacific audiences of the equipment required to use alternative platforms to access Australian content. Consequently, as noted in section 3.1, the available evidence suggests that the audience for shortwave broadcasts is extremely limited across the 40 markets considered, to the extent that shortwave receivers may need to be subsidised.

Other broadcasting platforms (e.g. AM and FM radio broadcasts, as well as online content including audio streaming) provide broadcasters with much greater scope to spread the high fixed costs of broadcasting (e.g. the costs of purchasing appropriate content and distributing/transmitting that content to target audiences) across a much larger potential audience (i.e. in order to reap greater “economies of scale”) and across a wider range of higher quality services (e.g. video and higher quality audio services) than do shortwave broadcasts.

As illustrated in Figure 32, these increases in the relative prices that Australian broadcasters have to pay in order to use shortwave broadcasts to reach their target audiences (i.e. from  $P_1$  to  $P_2$ ) will:

- reduce the quantity of shortwave broadcasts they use (i.e. from  $Q_1$  to  $Q_2$ ), and
- reduce the net benefits broadcasters expect to derive from using shortwave broadcasts to reach their target audience (i.e. from an initial net benefit equal in value to the area  $DAP_1$  to a reduced net benefit equal in value to the area  $DBP_2$ , which is equal to the difference between what they were willing to pay to use those shortwave broadcasts to reach their target audience  $ODBQ_2$  and what they actually had to pay to use those shortwave broadcasts to reach their target audience  $OP_2BQ_2$ ).

<sup>95</sup> Australian Government, Senate Notice Paper No. 127—14/11/2018

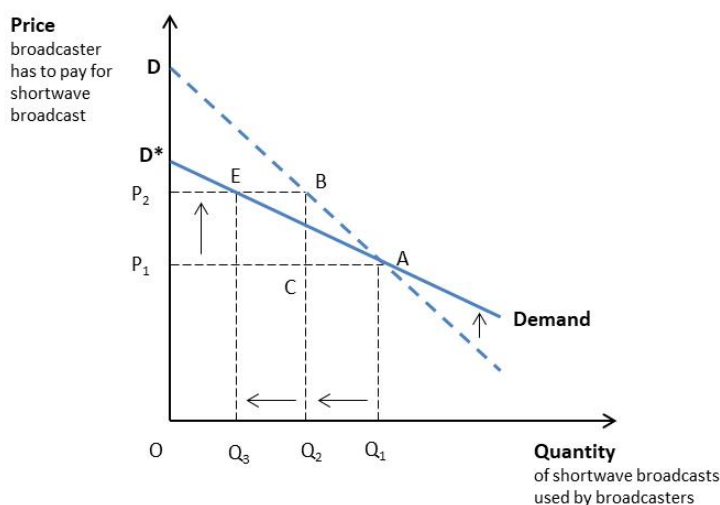


In addition to increasing the relative prices that Australian broadcasters would have to incur in order to use shortwave broadcasts to reach their target audiences, further advances in technology and increases in competition are also expected to increase the availability of substitutable platforms that can be used to reach those target audiences.

As illustrated in Figure 32, such an increase the availability of alternative platforms that could be used to reach those target audiences will:

- increase how sensitive broadcaster demand is to such a relative price increase, since those broadcasters would have (e.g. by reducing the slope of the original demand curve  $D$ , to a flatter demand curve  $D^*$ )
- result in an even greater reduction in the use of shortwave broadcasts to reach target audiences for a given increase in the relative price of those broadcasts (e.g. an increase in the relative price of using shortwave broadcasts from  $P_1$  to  $P_2$  will reduce the demand from  $Q_1$  to  $Q_3$ , instead of from  $Q_1$  to  $Q_2$ ), and
- result in an even greater reduction in the net benefits broadcasters expect to derive from their shortwave broadcasts for a given increase in the relative price of those broadcast (e.g. an increase in the relative price of using shortwave broadcasts from  $P_1$  to  $P_2$  will reduce the net benefits broadcasters expect to derive from using shortwave broadcasts from an initial net benefit equal in value to the area  $DAP_1$  to a reduced net benefit equal in value to the area  $D^*EP_2$ , rather than from  $DAP_1$  to  $DBP_2$ ).

Figure 32: Effects of increases in the availability of alternative broadcasting platforms



The extent of these reductions in the net benefits that publicly funded Australian shortwave broadcasters could expect to derive from their use of shortwave broadcasts to reach their target audiences will depend on the extent to which advances in technology and increases in competition:

- increase the relative prices that Australian broadcasters would have to pay in order to use shortwave broadcasts to reach their Asia Pacific markets, which will tend to vary across target audiences, and
- increase the sensitivity of broadcaster demand to such increases in the relative prices of shortwave broadcasts (i.e. reduce the slope of the demand curve), which will also vary across target markets in the Asia Pacific, depending on the availability of other alternative broadcasting platforms that are capable of reaching those target audiences (e.g. the price elasticity of broadcaster demand for using shortwave broadcasts to reach their target audiences will tend to be greater when those audiences are located in urban areas that can be reached by a range of other broadcasting platforms).



#### 4.4.3 Conditions that would have to be met to ensure Australia derives a net benefit from resuming its shortwave broadcasts

In order to ensure that it is in Australia's best interests to resume shortwave broadcasts to a particular target audience in the Asia Pacific region, it is important to ensure that such a proposed investment is subject to the same detailed cost benefit analysis that is applied to other proposed publicly funded infrastructure investments.

This would require the use of the same best practice evaluation framework that is used to estimate the economic costs and benefits that Australia is expected to derive from other publicly funded infrastructure investments.

In particular, as outlined below, and discussed further in section 5.2.1, it would be necessary for the results of that detailed cost benefit analysis to establish that:

- the resumption of shortwave broadcasts to that particular target audience would generate a net benefit for Australia (i.e. there is need to establish that Australia would derive a net benefit from using shortwave broadcasts to reach that particular target audience), and
- the net benefit generated by those shortwave broadcasts would be greater than the net benefits Australia would derive from investing instead in either:
  - an alternative broadcasting platform to reach that target audience (i.e. there is a need to consider the net benefits Australia could derive if it invested instead in the use of other broadcasting platforms to reach that target audience), or
  - broadcasting to other target audiences (i.e. there is a need to consider the net benefits Australia could derive from using the available funds to increase broadcasts to other target audiences).

##### Need to establish there is a net benefit from using shortwave broadcasts to reach that particular target audience

Before resuming shortwave broadcasts to a particular target audience in the Asia Pacific, it is important to establish that Australia would actually derive a net benefit from those shortwave broadcasts.

This would require the use of a rigorous cost benefit analysis of that proposed investment from the point of view of the overall nation as a whole, not just from the point of view of the financial position of the publicly funded broadcaster.

As previously noted, this would involve identifying, and where possible quantifying, both the:

- incremental economic costs Australia would have to incur in order to resume those shortwave broadcasts to that particular audience, which include both the:
  - incremental capital and operating costs of supplying those broadcasts, including both the costs of supplying shortwave transmission and possibly supplying the target audience with shortwave receivers (see section 3.1.3), and
  - incremental economic costs of raising the additional revenue required to fund those shortwave broadcasts
- incremental economic benefits Australia would derive from resuming those broadcasts to that particular target audience. This would require an assessment to be made of the extent to which those shortwave broadcasts would:
  - potentially reach the target audience, which would require an analysis of their:
    - ability to receive those broadcasts, which will depend on their access to a suitable shortwave receiver, and





- ability to understand those broadcasts, which will depend on both the language used by those broadcasts and those languages used by the target audience, and
- actually reach the target audience, which would require an analysis of both their:
  - willingness to pay for those broadcasts, which will depend on the personal preferences of those audiences and their consequent demand for the content contained in those shortwave broadcasts, and
  - ability to pay for those broadcasts, which will depend on their incomes and the proportions of those incomes they would have to spend in order to purchase the equipment required to receive those shortwave broadcasts.

#### **Need to consider the net benefits from using alternative broadcasting platforms to reach the target audience**

It is important to note, however, that simply establishing that Australia could potentially derive a net benefit from resuming its shortwave broadcasts to a particular target audience in the Asia Pacific region does not necessarily mean that it would be in Australia's best interest to do so.

Rather, it is also necessary to establish that such publicly funded shortwave broadcasts would be the most effective and efficient way of reaching that particular audience. That is, it is necessary to establish that the net benefits Australia would derive from supplying publicly funded shortwave broadcasts to that target audience are greater than the net benefits that would be derived from using alternative broadcasting platforms to reach that audience, such as:

- partnering with local AM/FM broadcasters to rebroadcast Australian content
- expanding the existing network of FM repeaters broadcasting Australian content, and
- locally advertising the online accessibility of Australian content, including the particular streaming radio content that it is proposed to deliver by shortwave broadcasting.

#### **Need to consider the net benefits from other alternative investments**

Even if it is established that the resumption of shortwave broadcasts to a particular target audience in the Asia Pacific would generate greater net benefits than would the use of other alternative broadcasting platforms, this still does not necessarily mean that it would be in Australia's best interests to resume those broadcasts.

Rather, it is also necessary to establish that the net benefits Australia would derive from investing in the provision of those publicly funded shortwave broadcasts are greater than those it would derive from other alternative publicly funded investments, including:

- investments in the provision of expanded or improved broadcasting services to other audiences in the Asia Pacific
- investments in other initiatives that would improve the welfare of Australia by improving the overall welfare of the Asia Pacific region (e.g. investments in other projects in the Asia Pacific such as investments in communications and broadcasting infrastructure), and
- other alternative investments competing for funding by the Australian Government (e.g. domestic investments in the health and education of Australian residents).



With regard to rural and remote regions in the Pacific, for example, these alternative investments in communication infrastructure might include:

- expanding high power medium wave (AM) radio broadcasts, as in Vanuatu (see section 3.1.3)
- expanding the mobile communications network, including options for FM repeaters and mobile TV, such as the World Bank Rural Communications Project for Papua New Guinea, expanding internet access to 89 districts and in excess 95 per cent population coverage,<sup>96</sup> and
- subsidising satellite receivers to tune into existing Australian satellite radio and television broadcasts.

#### Potential net benefits from resuming shortwave broadcasts

In the absence of a clear statement of the objectives Australia's Asia Pacific broadcasts (see section 5.1.1) and a clear articulation of the full range of alternative options for achieving those objectives, it is not possible to determine whether Australia would derive a net benefit from resuming its shortwave broadcasts to the Asia Pacific.

However, in the light of the evidence presented to this Review, it seems unlikely that shortwave broadcasts would generate the greatest net benefits compared to the alternatives given the:

- high costs of shortwave transmission services
- costs of subsidising the purchase of shortwave radios for some audiences
- low cost of alternative platforms or investments such as:
  - rebroadcasting through local AM/FM radio stations, for which receivers are widely available, and
  - online broadcasting, given that internet access is rapidly increasing, and costs are rapidly decreasing, across the Asia Pacific, and
- the significant uncertainty surrounding the actual use of shortwave broadcasts across Asia Pacific media markets.

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<sup>96</sup> See <http://projects.worldbank.org/P107782/rural-communications-project?lang=en>

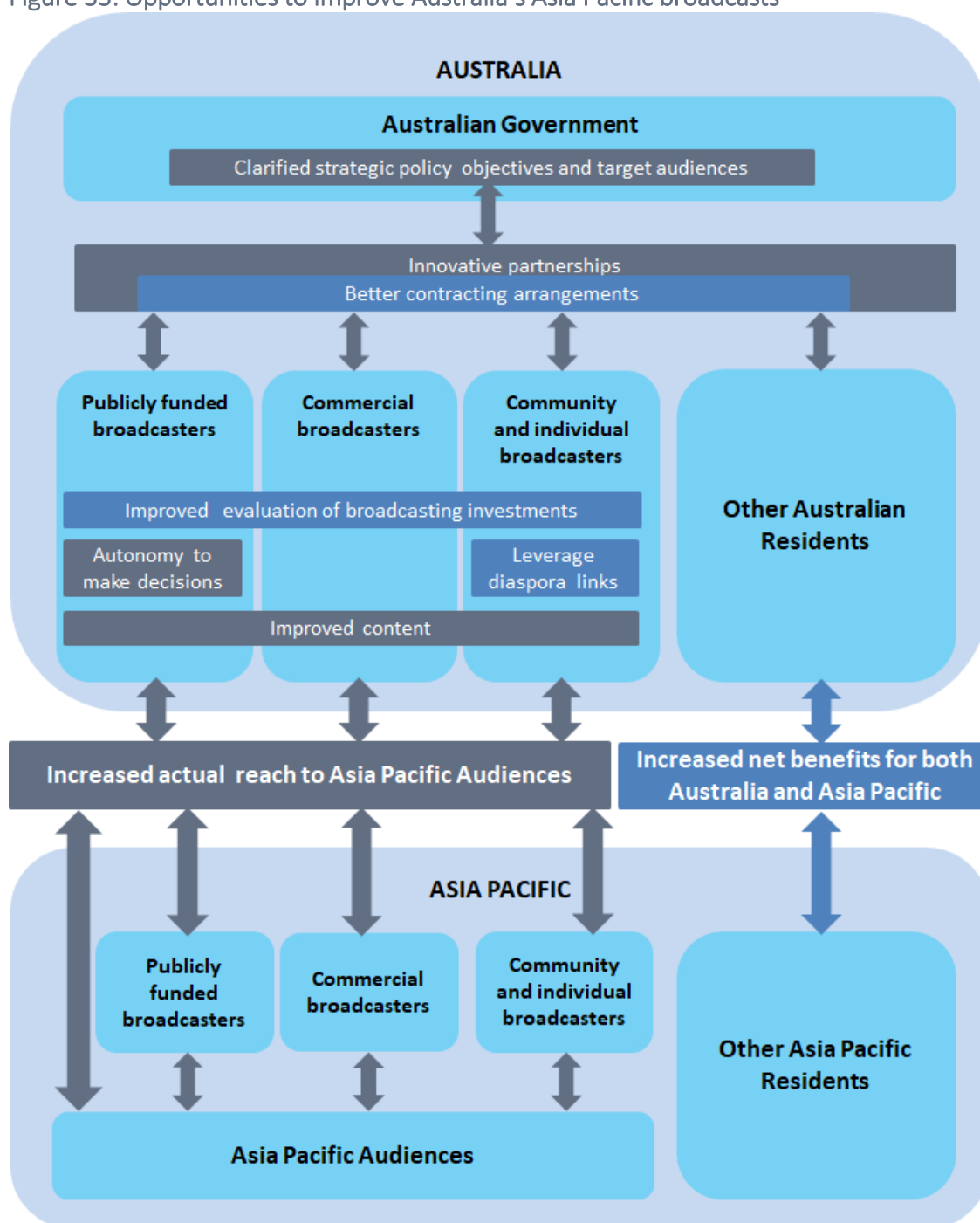


## 5. Opportunities to Improve Australia's Asia Pacific Broadcasts

Advances in technology and increases in the competition Australian broadcasters face in the Asia Pacific markets for their services do not just present threats to the actual reach of Australia's Asia Pacific broadcasts and the benefits that Australia derives from those broadcasts.

Rather, as illustrated in Figure 33 and discussed further below, these developments also provide Australia with opportunities to improve both the actual reach of its Asia Pacific broadcasts and the net benefits that both Australia and the Asia Pacific derive from those broadcasts.

Figure 33: Opportunities to improve Australia's Asia Pacific broadcasts



In particular, as illustrated in Figure 33 and discussed further below, these developments also provide Australia with opportunities to:

- improve the actual reach of its Asia Pacific broadcasts by:
  - clarifying the objectives of Australia's publicly funded Asia Pacific broadcasts, which involves:
    - identifying Australia's strategic policy objectives and clarifying the role that publicly funded broadcasts should play in achieving those objectives
    - identifying the target markets for Australia's Asia Pacific broadcasts and the relative priorities that Australia's publicly funded international broadcasters should place on reaching audiences in those target markets
  - giving Australia's international broadcasters with the autonomy they need to determine the most effective and efficient platforms, and content, they need to reach those target audiences, and
  - providing local Asia Pacific broadcasters with the unique content that is of interest to their local audiences. The opportunities Australia has to develop, market and distribute that content are discussed further in section 5.2.2 and section 5.2.3 of this report.
- increase the net benefits Australia derives from its Asia Pacific broadcasts by:
  - improving the evaluation of alternative investments by Australia's publicly funded Asia Pacific broadcasters
  - facilitating the growth of innovative partnerships between public, commercial, community and individual broadcasters, and
  - leveraging Australia's multicultural resources and community to develop more relevant content for target Asia Pacific audiences.

A brief overview of these opportunities to improve Australia's Asia Pacific broadcasts is provided in section 5.3.

## 5.1 How can Australia improve the actual reach of its Asia Pacific broadcasts?

### Key findings

- Although advances in technology and increases in the competition Australian broadcasters face in the Asia Pacific markets for their services pose a potential risk to Australia's Asia Pacific broadcasts, they also provide Australia with opportunities to improve the actual reach of those broadcasts.
- In particular, Australia has the opportunity to improve the actual reach of its broadcasts to the Asia Pacific region by:
  - clarifying the objectives of its Asia Pacific broadcasts (i.e. the role that Australia's international broadcasts to the Asia Pacific region are intended to play in achieving Australia's broader strategic policy objectives, as well as the target audiences for those broadcasts). The submissions received by the Review identified a range of alternative approaches to achieving such a clarification and additional opportunities to clarify the strategic policy objectives of Australia's Asia Pacific broadcasts will arise:
    - following the Government's consideration of the recommendations of the Soft Power Review and the *Independent Review of the Public Governance Performance and Accountability Act* (PGPA Act)



- due to the significant scope there is for the key stakeholders involved in Asia Pacific Broadcasts (e.g. Australia's publicly funded broadcasters and suppliers of content, commercial broadcasters, as well as community and individual broadcasters, the Department of Foreign Affairs and Trade and the Department of Communications and the Arts) to work together in partnership on the development of integrated strategic plans to increase the actual reach of Australia's Asia Pacific broadcasts in order to achieve those broader strategic policy objectives
- giving Australia's international broadcasters the autonomy they need to determine the most appropriate languages to use, and content to include, in its broadcasts, as well as the most effective and efficient broadcasting platforms to use in order to reach those target audiences, and
- improving the content of Australia's Asia Pacific broadcasts to increase the actual use of those broadcasts by Asia Pacific audiences. The opportunities Australia has to develop and distribute that content are discussed further in section 5.2.2 and section 5.2.3 of this report.

### 5.1.1 Opportunities to clarify the objectives of Australia's Asia Pacific broadcasts

In order to improve both the actual reach of Australia's Asia Pacific broadcasts and the net benefits Australia and the Asia Pacific region as a whole derive from those broadcasts, it is essential to have a clear understanding of fundamental objectives of those broadcasts (i.e. the "nature of the problem" they are intended to address).

This is, of course, the fundamental reason why best practice government business case, cost benefit analysis and regulatory review and reform guidelines stress the importance of identifying the nature of the problem a proposed publicly funded investment is intended to address.

In the absence of clearly defined objectives, it is difficult to:

- outline how the proposed investment is intended to achieve those objectives
- identify other alternative ways of achieving those objectives, and
- evaluate the relative economic costs and benefits of the proposed investment in relation to those other alternative investments.

In particular, as discussed further below, the submissions received by the Review confirmed that there is a need to clarify:

- Australia's strategic policy objectives and the role that Australia's international broadcasts should play in achieving these objectives, which include industry, trade, international aid and development, as well as foreign policy objectives, and
- the target audiences for Australia's international broadcasts, as well as the priorities that are attached to reaching those target audiences, both in relation to each other and in relation to the priority that is attached to reaching domestic audiences in Australia.

This is the key information that is required by Australia's publicly funded broadcasters in the future so that they can decide the most effective and efficient broadcasting platforms to use in order to reach those audiences and tailor the content and language of those broadcasts to meet the specific needs of each of those target audiences.



As outlined below, there are several opportunities to clarify the role of Australia's Asia Pacific broadcasts in achieving the Government's strategic policy objectives arising from:

- submissions to the Review, which confirm the need to clarify the objectives of Australia's Asia Pacific broadcasts and suggest some alternative ways of achieving such a clarification
- the 2017 Foreign Policy White Paper, which has already identified the important role that digital engagement and communication has to play in achieving Australia's foreign policy goals, and the Soft Power Review, which is being conducted by the Department of Foreign Affairs and Trade in parallel with this review. There will be further opportunities to clarify the role of Asia Pacific broadcasts in achieving Australia's strategic policy objectives following the Government's consideration of the results of both this current Review and the Soft Power Review
- the recommendations of the Independent Review of the Public Governance, Performance and Accountability Act 2013 (the PGPA Act), which include proposed reforms to the application of the Act that are intended to improve the outcomes of major strategic policy initiatives by facilitating greater inter-agency co-operation, and
- the significant scope there is for the key stakeholders involved in Australia's Asia Pacific broadcasts to work together in partnership on the development of integrated strategic plans to increase the actual reach of Australia's Asia Pacific broadcasts in order to achieve Australia's broader strategic policy objectives.

#### Opportunities identified by submissions to the Review

This need to clarify the objectives of Australia's international broadcasts was confirmed in the submissions received by the Review.

For example, in his submission to the Review, Mr Geoff Heriot, who is currently the Director of Heriot Media & Governance Pty Ltd and formerly Chief of Corporate Planning and Governance among other senior roles at the ABC, observes that although the ABC Act defines the purpose of international broadcasting as "... encouraging the awareness of Australia and an international understanding of Australian attitudes on world affairs" it contains little other guidance regarding how the ABC might approach its role as an international broadcaster.<sup>97</sup> As a result, he notes that "... coordination and feedback arrangements have varied over time, between the ABC and legitimate stakeholder interests from within other organisations in the executive branch of government":

- i. *The ABC Charter defines the associated but distinct purpose of international broadcasting—to 'encourage awareness of Australia and an international understanding of Australian attitudes on world affairs', while the main domestic broadcasting purpose is to 'contribute to a sense of national identity ... and reflect the cultural diversity of the Australian community'. Subtleties of wording should not camouflage the substantive distinction between the purpose of national and international services.*
- ii. *International broadcasting shares the ABC's responsibility to act with independence and integrity (ss6(2)(iii), 6(i)(b), 25(4)), to provide independent news (s27(1) that is accurate and impartial (s8(1)(c)), and to exercise administrative independence from the government of the day (s78(6)). As discussed above, this confers an important reputational benefit.*

<sup>97</sup> Mr Geoff Heriot. [Submission to the Review](#)





- iii. *But the Act provides no other guidance as to how the ABC might approach its role as an international broadcaster. In contrast the legislation does offer guidance in relation to other matters without compromising the Corporation's independence. For example, the ABC must 'take account' of services provided by the commercial and community broadcasting sectors, and, when providing educational content, it must take account of the responsibilities of the states for education (s6(2)(a)(i), (v)).*
- iv. *The Act makes no provision requiring the Corporation to have a standing review committee for international broadcasting despite the recommendations of at least three government inquiries prior to 1983. As a consequence, coordination and feedback arrangements have varied over time, between the ABC and legitimate stakeholder interests from within other organisations in the executive branch of government. Arguably, the lack of such stakeholder acknowledgment contributes to silo decision-making and does nothing to discourage the exercise of institutional self-interests.*

Similarly, in his submission to the Review, Mr Jean-Gabriel Manguy, who was Head of Radio Australia for ten years (1997-2007), stressed the need to clarify those objectives prior to making any further investment decisions (e.g. whether or not to reintroduce shortwave broadcasting technologies):

*Before considering reintroducing or not technologies such as shortwave broadcasting and committing new levels of resources, serious thought needs to be given to defining first the objectives of Australian Broadcasting Services for the Asia Pacific. How we decide to develop effective models of public engagement with the various communities in Asia and the Pacific will determine how best to reach audiences and what will be the most appropriate technologies.*

*Do we want to limit ourselves to a promotional operation for Australia?...to be yet another international news network?...or a "home away from home" service mainly directed at Australian expatriates throughout the region? These approaches have all been tried and tested before but with limited success in terms of reaching regional audiences.*

*Do we seek, rather, to present Australia to a broad audience as an integral regional partner, a credible and well-meaning point of reference in the Asia Pacific region for focussed and relevant economic, social, political information and debate on development issues of mutual interest?*

*My own experience and research into current developments in the region certainly suggest more than ever that in order to effectively reach and engage broad audiences we need to demonstrate that Australia is part of the Asia Pacific and wants to engage positively with the region. To achieve this, we need to develop a strategy based on linkages, networks and technical versatility. There is no one size-fits-all centralised approach, but digital technology provides the ideal tools to reach multiple audiences.*

*An Australian Asia Pacific regional broadcasting service in a strategically competitive age also needs to move beyond the country's insularity. It needs to shift from a traditional Australia-centric and Australia-centred model to that of a region-based network. This applies across the board to the key areas of: Content Production, Content Delivery and Audience Engagement.<sup>98</sup>*

As noted in [Appendix 3](#), the Review also received several submissions expressing concern that reductions in the ABC funding have resulted in a reduction in expenditure on international broadcasting and too much focus being placed on domestic, rather than international, audiences.

<sup>98</sup> Mr Jean-Gabriel Manguy, [Submission to the Review](#)



For example, in its submission to the Review, the Lowy Institute noted that international broadcasting was under-resourced and only limited investments were being made in that important diplomatic tool:

*Australia's long-running underinvestment in international broadcasting has limited its ability to project its values in pursuit of "soft power" diplomatic influence. In addition, a series of poor political decisions by governments from both major parties have undermined the efficacy of Australia's limited efforts in projecting soft power in the region. Repeated policy changes and political interventions with the public broadcaster ABC have left it underresourced in international broadcasting and making only limited investments in this important diplomatic tool. Australia must overcome its poor record in this area, and make a renewed investment in international broadcasting platforms and content to restore its relevance as a constructive and independent soft power partner in the region. This is particularly important in the Pacific region where Australia's traditional role is under challenge from emerging international powers.*<sup>99</sup>

However, only a few of those submissions specifically identified the audiences within the Asia Pacific region that should be the target for Australia's international broadcasts.

One such exception was the Lowy Institute's submission, which recommended that Australia should focus on broadcasting and media strategies that engage regions in the Asia Pacific that have a strong interest in and connection with Australia—namely, the Pacific. Specifically, the Lowy Institute recommended that the initial focus should be on Melanesia and the South-West, growing to encompass the Northern Pacific, and eventually extending to the broader arc of South-East Asia and the Indian Ocean region to the north and west:

*Australia should focus on broadcasting and media strategies that engage regions of strong interest to and connection with Australia. Primarily, this should be the Pacific—initially Melanesia and the South-West, and growing to encompass the Northern Pacific. Beyond this region, the broader arc of South-East Asia and the Indian Ocean region to the north and west should be additional priorities for future investment.*

*Promoting an Australian voice in these areas will provide support for the goals of the Foreign Policy White Paper, and also provide a platform for Australia to respond to the complex and evolving security and political challenges of the region.*<sup>100</sup>

The Review also received some submissions that argued there was a need for more significant changes to both the current model that is used to deliver broadcasting services to the Asia Pacific, as well as the Charter governing those operations.

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<sup>99</sup> Lowy Institute, [Submission to the Review](#)

<sup>100</sup> Lowy Institute, [Submission to the Review](#)



For example, in their submission to the Review, Mr Bruce Dover and Mr Ian Macintosh called for Australia's international broadcasting service to be placed in the hands of an independent corporation or foundation governed by a bipartisan Charter that clearly enunciates the mission of Australia's future international broadcasting service, including the need to target regional audiences and not just Australian expatriates:

*We would argue that if, as a country, we are serious about having a powerful and credible voice in the region, then we need bipartisan political agreement, supported by business and other relevant sectors, on a Charter that clearly enunciates the mission of Australia's future international broadcasting service, including the need to target regional audiences and not just Australian expatriates. It needs to be a service that provides independent, contextualised and trustworthy news, information and entertainment programs for Asia Pacific audiences via multiple digital delivery platforms.<sup>101</sup>*

These calls to make more significant changes to the way in which Australia currently supplies broadcasting services to the Asia Pacific region are discussed further in section 5.2.3 of this report.

### Opportunities arising from the Foreign Policy White Paper and the Soft Power Review

Some progress towards clarifying the role of international broadcasting in achieving Australia's strategic policy objectives has already been made by the 2017 Foreign Policy White Paper, which identified the important role that digital engagement and communications have to play as a "soft power" instrument for achieving Australia's foreign policy goals:

#### *Digital engagement*

*Digital engagement is increasingly important to attract, build and mobilise support for our foreign policy goals. More broadly, digital engagement supports a more open and consultative form of government, one in which governments both communicate their own messages and listen to diverse views.*

*Digital communication platforms also help us to monitor international developments and track sentiment towards Australian policy. Through digital media, we can also help to shape debate and understanding of Australia's interests, and improve crisis management and consular services, for example through immediate warning messaging.*

*... At the same time, we need to be ready to dispel misconceptions and ensure our voice is heard when new and traditional media are used to sow misinformation or misrepresent Australian policies.<sup>102</sup>*

Further opportunities to clarify the role of Asia Pacific broadcasts in achieving Australia's strategic policy objectives will arise following the Government's consideration of the results of both this current Review and the Soft Power Review, which is being conducted by the Department of Foreign Affairs and Trade. The Terms of Reference of that review are as follows:

*The review will explore options for the Government to maximise our soft power, particularly in the Indo-Pacific region. It will do this by:*

- *exploring the nature of attraction and influence in the changing global context, particularly in the face of rapid globalisation and unprecedented technological change*
- *identifying Australia's soft power objectives and Australia's key soft power assets and challenges*

<sup>101</sup> Mr Bruce Dover and Mr Ian Macintosh, [Submission to the Review](#)

<sup>102</sup> Australian Government, *Foreign Policy White Paper*, 2017 <https://www.fpwhitepaper.gov.au/>



- *examining policy options to build and leverage soft power assets to promote Australia's security and prosperity, and strengthen Australia's reputation in an increasingly networked world*
- *considering new and more effective partnerships with other governments, the private sector, development partners and civil society, drawing on examples of best practice.*<sup>103</sup>

Although the Soft Power Review is separate from this Review, the key findings of this Review will provide an input into the Soft Power Review.

#### Opportunities arising from the recommendations of the Independent Review of the PGPA Act

Additional opportunities to clarify the role of Australia's Asia Pacific broadcasts in achieving the Government's strategic policy objectives have also arisen as a result of the recommendations of the Independent Review of the Public Governance, Performance and Accountability Act 2013 (the PGPA Act), which sets the standards of governance, performance and accountability for:

- Commonwealth entities, including the Commonwealth Departments that are involved in Australia's Asia Pacific broadcasts (e.g. the Department of Communications and the Arts, as well as the Department of Foreign Affairs and Trade), and
- Commonwealth corporations, including those involved in Australia's Asia Pacific broadcasts (e.g. the ABC, SBS and Screen Australia). As discussed further below, however, it is important to note that both the ABC and the SBS are currently exempted from certain provisions of the PGPA Act.

In accordance with section 112 of the PGPA Act, a review has now been conducted of the Act and the final report of that independent review was released in September 2018.

This Independent Review of the PGPA Act explored the approaches being used by the New Zealand and United States governments to improve the outcomes of major strategic policy initiatives by facilitating greater inter-agency co-operation:

*Two examples of this approach come from New Zealand and the United States. In 2012, the Government of New Zealand created a system of interagency performance targets to drive collaboration between government entities and improve outcomes for citizens. Ministers chose 10 cross-government problems that were important to New Zealanders, covering matters such as unemployment, education, health and crime, and set a challenging five-year target for each. During the course of the five years, responsibility for achieving targets shifted from individual responsibility, with a lead chief executive assigned for each target, towards collective responsibility, where relevant executives are held collectively responsible for the achievement of outcomes. There were large improvements in all priority areas and the approach is considered a success.*

*In the United States, the GPRA Modernization Act of 2010 requires the Office of Management and Budget to coordinate with agencies to develop cross-agency priority goals, which are four-year outcome-oriented goals covering a number of complex or high-risk management and mission issues. The Office of Management and the Budget and Performance Improvement Council have introduced a goal governance structure that includes agency leaders, and holds regular senior-level reviews on cross-agency priority goal progress. Cross-agency priority goal teams report that this approach has increased leadership attention and improved interagency collaboration on these issues.*<sup>104</sup>

<sup>103</sup> See <https://dfat.gov.au/people-to-people/soft-power-review/Pages/soft-power-review.aspx>

<sup>104</sup> Alexander, E. and Thodey, D., *Independent Review into the operation of the Public Governance, Performance and Accountability Act 2013 and Rule*, Australian Government, September 2018



The Independent Review expressed its view that although the existing Government resourcing and accountability framework is focused on outcomes, there is scope to put outcomes at the centre of government planning, and build frameworks around delivering those outcomes (i.e. better define how the “outputs” of government entities are intended to achieve those desired “outcomes”):

*The Commonwealth resourcing and accountability framework is set up around outcomes, but it appears to us that other governments do better in clarifying to their citizens their highest strategic priorities and marshalling resources towards achieving those goals. We are attracted to the approaches taken in New Zealand and the United States, which have also been used in state and territory governments and other international jurisdictions, put outcomes at the centre of government planning, and build frameworks around delivering those outcomes.*

*We believe that the Government could identify a select number of priority, whole-of-government initiatives that require strong cooperation between entities for successful delivery, and trial similar approaches to those taken in New Zealand and the United States.*

As noted by the Independent Review, this would not require a change to the PGPA Act. Rather, it could be achieved through improvements to the application of section 34, which allows the Government to publish a statement of key priorities and objectives (i.e. desired “outcomes”), and section 35 of the Act, which would require all relevant entities to outline how their activities (i.e. “outputs”) will contribute to achieving those priorities and objectives (i.e. the Government’s desired “outcomes”):

*The PGPA Act already contains a mechanism to support trialling these approaches. Section 34 of the PGPA Act allows for the Australian Government to publish a statement outlining its key priorities and objectives. We consider that the Government is missing an opportunity to drive better cooperation across the Commonwealth by not publishing a statement of key priorities and objectives under section 34 of the PGPA Act. In our view, publishing a statement of the Government’s key priorities and objectives could help with implementation of identified whole-of-government initiatives.*

*Section 35 of the PGPA Act would then require all relevant entities to outline, in their corporate plans, how their activities will contribute to achieving those priorities and objectives. They would then have to report on their performance in achieving those priorities and objectives in their annual performance statements. Where multiple entities have responsibility for achieving a key priority or objective, these entities would have to outline their contribution to achieving these and how they will work with other entities.*

To this end, the Independent Review has proposed to conduct “proof of concept” trial of this approach to test whether it would improve cooperation in the Commonwealth and, potentially, between multiple entities and external parties:

*In line with developments in other jurisdictions such as New Zealand and the United States a trial could involve:*

- *government identifying key priorities*
- *the use of shared outcomes or a separate budget controlled by one portfolio entity to achieve targets linked to each of the identified initiatives, and*
- *relevant portfolio secretaries driving the implementation of each of the selected initiatives and reporting on progress, individually and as a group.*

*We are proposing this as a proof of concept, to test whether the scheme that is embedded in the PGPA Act, and the flexibility that we understand is inherent in the appropriation framework, offer a way forward to improving cooperation in the Commonwealth and, potentially, between multiple entities and external parties.*





Specifically, the Independent Review of the PGPA Act recommended that:

**RECOMMENDATION 33**

*The Government should use section 34 of the PGPA Act to set priorities and objectives in key areas of activity, which will facilitate trials of alternative planning, resourcing, governance and reporting arrangements for these priorities.*

In addition, the Independent Review recommended that the Secretaries Board should play a leading role in the development and reporting of whole-of-government performance information:

*The Secretaries Board is in an ideal position to leverage its leadership role and drive the implementation of the priorities identified by the Government. This should include the board leading the development of whole-of-government performance information across key priorities and objectives. This would enable a consistent approach to measuring and reporting performance across initiatives, and allow for meaningful whole-of-government reporting of results against the Government's key priorities and objectives.*

**RECOMMENDATION 34**

*[Subject to the implementation of Recommendation 33] The Secretaries Board should leverage its leadership role by driving the implementation of priorities and objectives identified by the Government, including the development and reporting of whole-of-government performance information.*

These recommendations of the Independent Review are particularly relevant to the clarification of the role that Australia's international broadcasts to the Asia Pacific region have in achieving Australia's strategic policy objectives, since this is a priority, whole-of-government, initiative that requires strong cooperation between entities for successful delivery, including the:

- Commonwealth entities involved in Asia Pacific broadcasting (e.g. the Department of Communications and the Arts, as well as the Department of Foreign Affairs and Trade), that are subject to the provisions of the PGPA Act
- Commonwealth corporations involved in Asia Pacific broadcasting (e.g. the ABC, SBS and Screen Australia, which are also subject to the PGPA Act, but are currently exempted from certain provisions of that Act (e.g. section 31B(2) of the ABC Act exempts the ABC from having to apply section 35(3) of the PGPA Act, which requires entities to set out in their corporate plans how their activities contribute to achieving the priorities and objectives set out in a statement of the Australian Government's key priorities and objectives published under section 34 of the PGPA Act), and
- other entities involved in Asia Pacific broadcasting (e.g. commercial broadcasters, community groups and individuals), that are not subject to the provisions of the PGPA Act.

Specifically, these recommended reforms would provide an opportunity for the Government to:

- use section 34 of the PGPA Act specify its strategic policy objectives and the role it expects Australia's publicly funded Asia Pacific broadcasters to play in achieving those desired outcomes, and



- obtain the information it needs from its agencies that are subject to the reporting requirements under section 35 of the PGPA Act to:
  - monitor the extent to which the outputs supplied by its publicly funded broadcasters and suppliers of content are actually achieving the Government's desired outcomes (e.g. by actually reaching those target audiences and providing them with content that they find interesting, informative and entertaining), and
  - review and reform Australia's publicly funded Asia Pacific broadcasts to improve their actual reach and the net benefits Australia and audiences in the Asia Pacific region derive from those broadcasts.

#### Opportunities for key stakeholders to work in partnership

Since the PGPA Act does not apply in full to all of the key stakeholders involved in the supply of broadcasting services to the Asia Pacific, it is not possible to rely on sections 34 and 35 of that Act alone to provide guidance to those stakeholders regarding the role of those broadcasts in achieving Australia's strategic policy objectives.

Rather, it will be necessary to explore additional ways of providing that guidance to all of those key stakeholders in a manner that preserves the independence of Australia's broadcasters.

As outlined above, some of the submissions received by the Review have suggested that the ABC Act should be amended in order to clarify the objectives of Australia's international broadcasts and the important role they have to play in achieving Australia's strategic policy objectives.

It is important to note, however, that such a legislative amendment to the ABC Act is not the only, nor necessarily the most appropriate, way of providing Australia's publicly Asia Pacific broadcasters with more detailed guidance regarding the Government's strategic policy objectives, the role of international broadcasting is expected to play in achieving those desired outcomes, and the target audiences for those broadcasts.

In particular, such an amendment to the ABC Act would do little to provide that important guidance to the other key stakeholders involved in the provision of broadcasting services to the Asia Pacific (e.g. Australia's publicly funded suppliers of content, such as SBS and Screen Australia; commercial broadcasters that receive public funding for content they supply to the Asia Pacific; and any community broadcasters that might receive public funding in the future).

An alternative approach would be for the key stakeholders involved in Australia's Asia Pacific broadcasts to work together in partnership on the:

- development and documentation of integrated strategic plans that clearly:
  - identify the outputs they intend to supply in order to achieve their respective statutory objectives, and
  - explain how the provision of those outputs is also expected to contribute towards the achievement of the Government's broader strategic policy objectives. Although Australia's Asia Pacific broadcasters are not all required by the PGPA Act to explain in their corporate plans how their outputs are expected to contribute towards the achievement of Australia's broader strategic policy objectives, this does not prevent them from choosing to do so when they consider this is consistent with their statutory objectives and best practice reporting





- provision of information to the Government on the:
  - outputs they have provided in order to achieve their statutory objectives, and
  - extent to which those outputs are achieving not only those statutory objectives, but also the Government's broader strategic policy objectives (e.g. information on the sizes of the audiences actually reached and the extent to which they found the content of those broadcasts interesting, informative and entertaining).

The development of such partnerships would provide opportunities for key stakeholders to work together on increasing not only the actual reach of Australia's Asia Pacific broadcasts, but also the net benefits that Australia and the Asia Pacific region derive from those broadcasts, in a manner consistent with section 17 of the PGPA Act, which imposes a duty on Commonwealth entities to encourage their officials to cooperate with each other, where practicable, to achieve common objectives:

***17 Duty to encourage cooperation with others***

***The accountable authority of a Commonwealth entity must encourage officials of the entity to cooperate with others to achieve common objectives, where practicable.***

### **5.1.2 Giving Australia's Asia Pacific broadcasters the opportunity to perform their role efficiently**

In addition to providing Australia's publicly funded international broadcasters with more detailed guidance regarding the Government's strategic policy objectives, the role of international broadcasting is expected to play in achieving those desired outcomes, and the target audiences for those broadcasts, it is also important to give them the opportunity to determine the most effective and efficient way of achieving both their statutory objectives and those broader strategic policy objectives.

#### **Opportunity to select the most appropriate content and broadcasting platforms**

In particular, it is important to ensure Australia's public funded Asia Pacific broadcasters are provided with the autonomy they need to determine the most effective and efficient:

- types of outputs of broadcasting services that should be provided in order to achieve their statutory objectives and Australia's broader strategic policy outcomes. This involves providing publicly funded international broadcasters with the autonomy they need to determine the most appropriate languages to use and content to include in those broadcasts to maximise the actual reach of those broadcasts, which are discussed further in section 5.1.3 below, and
- most effective and efficient ways of providing those outputs to the target audiences identified by the Government. This includes the independence to determine the most appropriate broadcasting platforms to use in order to reach the target audiences identified by the Government.

This need for Australia's publicly funded international broadcasters to have the flexibility to determine the most appropriate broadcasting platforms to reach their target audiences in the face of rapid changes in technology was recognised in submissions.



For example, in his submission to the Review, Mr Jean-Gabriel Manguy stressed the importance of technical flexibility, responsiveness to changing media environments in the Asia Pacific, and a policy of active “diplomatic” engagement with the region’s governments and media outlets:

### **3. “Agnostic” technology strategy**

*With the demise, two years ago, of the last of Radio Australia’s shortwave (SW) broadcasting capacity to the Pacific, we are today revisiting an issue already considered...20 years ago! In 1997, the government shut down all Radio Australia shortwave broadcasts to Asia on the premise that the future was now with TV.*

*When the ABC announced two years ago the end of the last of its SW broadcasts to the Pacific, it explained this was ‘ahead of a transition to FM transmission’. This was the very strategy developed by Radio Australia in...1997! Radio Australia then developed an innovative approach that gave priority to program content and audience engagement, ahead of particular transmission delivery technologies such as SW broadcasting, etc..*

*Shifting depleted resources from SW transmission to digital online production, satellite delivery and local FM rebroadcasts and relays, Radio Australia reinvented itself. By 2007, it had successfully negotiated some 150 rebroadcast agreements in two dozen countries in the Asia Pacific. It had established 15 x 24hour local FM relays and its multilingual website was one of the more innovative at the ABC. It was involved in media capacity development programs in PNG, Vanuatu, Solomons, Cambodia and Timor Leste, etc...*

*The ABC has since then had to make hard decisions about its international operation under further budgetary pressure from government. However, what remains is that the success of Radio Australia’s short lived revival rested on its technical flexibility, its responsiveness to changing media environments in the Asia Pacific and its policy of active “diplomatic” engagement with the region’s governments and media outlets.*<sup>105</sup>

In particular, the submissions received by the Review, in conjunction with the information outlined in section 2 and 3 of this Report on the potential and actual reach of alternative broadcasting platforms in the Asia Pacific region, highlight the need for Australian broadcasters to have the flexibility they require in order to select the most effective and efficient broadcasting platforms to use to reach the audiences in their target Asia Pacific markets, which is likely to vary across those markets.

No one broadcasting platform is appropriate for all Asia Pacific markets and some platforms that might be appropriate in some markets, can be inappropriate in others.

For example, although the Review received numerous submissions that argued that shortwave broadcasts were still an effective and efficient way of reaching more remote audiences in the Asia Pacific region, it also received a submission from Professor Wanning Sun from the University of Technology Sydney highlighting that it is not an appropriate way of reaching audiences in China:

*As always, communicating Australia’s views, perspectives and voices to audiences in the Asia-Pacific region is important. And, more than ever before, finding effective pathways for accessing audiences in this region presents the utmost challenge.*

*Shortwave radio broadcasting is no longer a viable option. As early as 2010, I led a team that investigated the prevalence of shortwave radio listening in a number of provinces in China, and found that the number of people listening to shortwave radio from foreign nations was negligible.*

<sup>105</sup> Mr Jean-Gabriel Manguy, [Submission to the Review](#)



*Shortwave is not only subject to deliberate disruption by the censorship mechanisms of receiving countries, but it is also increasingly disrupted by the ubiquitous use of battery-powered electronic bikes in urban spaces throughout Asian countries.*<sup>106</sup>

#### Opportunity to explain the practical constraints that limit the achievement of those objectives

In addition to giving Australia's Asia Pacific broadcasters the autonomy to determine the most effective and efficient ways of achieving their statutory objectives and Australia's broader strategic policy objectives, it is also important to ensure they have the opportunity to explain the practical constraints that limit the extent to which it is possible for them to achieve those objectives.

These constraints include the:

- practical constraints that limit the extent to which it is possible to reach target audiences in the Asia Pacific region using alternative broadcasting platforms, particularly audiences living in the more remote areas of the Asia Pacific
- information constraints, particularly the limited amount of information that is available regarding the extent to which Australia's Asia Pacific broadcasts reach audiences in more remote areas
- potential conflict that can arise between objectives (e.g. the inherent conflict that can arise between the economic efficiency and distributional equity objectives of the Government. Attempts to achieve the distributional equity objectives of the government, such as reaching audiences in a more remote area, can have the effect of reducing the effectiveness and efficiency with which Australia's resources are used due to the high costs of reaching those audiences), and
- budget constraints, which limit the services that can be provided by all of Australia's broadcasters, including publicly funded broadcasters.

Although these constraints were recognised in the submissions that the ABC made to both the Senate *Inquiry into Resuming Shortwave Radio* and this Review, it is clear from many other submissions received by the Review that there is a need to improve public understanding of those constraints by ensuring Australia's broadcasters have the opportunity to document those constraints in the course of preparing their strategic plans.

#### 5.1.3 Improve the content of Australia's Asia Pacific broadcasts—content is “king”

As noted in section 3, the actual reach of Australia's Asia Pacific broadcasts depends on the demand for those broadcasts, which ultimately depends on the:

- ability of those audiences to receive those broadcasts (i.e. on the “potential demand” for those broadcasts), which is influenced by the access they have to the equipment required to receive those broadcasts, and
- willingness and ability to pay for those broadcasts (i.e. on their “actual demand” for those broadcasts), which is influenced by the preferences of those audiences and their cultural background, the extent to which those audiences find the content of Australia's broadcasts interesting and culturally appropriate, and their incomes.

When Australia commenced its regular international broadcasts in 1939, there were only a few broadcasting platforms that could be used to reach audiences in the Asia Pacific region (e.g. longwave and shortwave radio broadcasts) and only limited ability for broadcasters to target particular audiences in that region (e.g. through the use of directional antennae and foreign language

<sup>106</sup> Professor Wanning Sun, [Submission to the Review](#)



broadcasts). In general, the same linear content had to be broadcast to all members of that target audience.

Since then, however, rapid advances in technology have resulted in an unprecedented expansion in the size of the audience in the Asia Pacific region that can be potentially reached through direct satellite radio and TV broadcasts, as well as indirect broadcasts through local radio and TV stations and online streaming services.

Although some audiences are still difficult to reach, the sizes of those audiences are tiny in relation to the sizes of the potential audiences Australia can reach through its satellite broadcasts, rebroadcasts through local radio and TV stations, and online streaming of content over the internet.

As a result, technological constraints are no longer the most important factor that imposes the greatest constraints on the actual reach of Australia's international broadcasts. Rather, it is the language used, and content provided by those broadcasts that continues to constrain the size of the audiences in the Asia Pacific region that Australia's international broadcasts reach.

Broadcasters are no longer technologically constrained to using a single broadcasting platform to provide the same content to all audiences (e.g. a single radio station broadcasting the same linear program to all of the target audience). Rather, they now have unprecedented flexibility to:

- select from a wide range of alternative broadcasting platforms the most effective and efficient ways of reaching their target audiences, and
- tailor the content they broadcast to suit the specific needs of those audiences (i.e. through "narrowcasting" of on-demand content to individuals based on the content they have chosen to listen to and view in the past).

Similarly, most of Australia's Asia Pacific audiences are no longer constrained to listening to a few local or international broadcasts. Rather, they now have the ability to choose from a wide range of broadcasting content supplied via a wide range of alternative broadcasting platforms (e.g. large numbers of AM and FM radio and TV stations, as well as internet audio and video streaming from all over the world, including most of the world's radio stations, as well as an increasing number of TV stations).

As a result, the main competition that Australia faces in the largest Asia Pacific markets for its broadcasts is now on the basis of the:

- language in which the content is broadcast, which potentially constrains the extent to which it can be understood by the target audience, and
- quality of that broadcast, which ultimately determines the willingness of audiences to actually view or listen to that broadcast. This includes the:
  - quality of the content of that is broadcast to those target audiences (i.e. the extent to which it suits their preferences and cultural backgrounds), and
  - quality with which that content is broadcast to those target audiences (i.e. the resolution of the video and fidelity of the audio).

This importance of the language and content of Australia's international broadcasts to the actual reach of those broadcasts was highlighted in several submissions received by the Review.



For example, in its submission to the Review, the Supporters of Australian Broadcasting in Asia and the Pacific, noted the complexity of international broadcasting and need to recognise that technology will only ever be as good as the content it carries, and that partnerships with local broadcasters, including placement of Australian programs on local high-rating media networks, is also an important route to achieving maximum reach:

*Options for the future of Australian broadcasting in the Asia Pacific*

*International broadcasting is a far more complex activity than may other forms of mass media. It aims to engage highly diverse audiences, in multiple languages, geographies and topographies. These audiences have widely different life experiences, aspirations, knowledge of Australia and access to the internet and mobile data.*

*Achieving maximum reach depends on compelling, culturally appropriate and tailor-made content as well as an effective mix of broadcast and online/digital technology.*

*While this review began with an interest in the role broadcast technology (such as shortwave) in achieving reach, it needs to be recognised that technology will only ever be as good as the content it carries. Partnerships with local broadcasters, including placement of Australian programs on local high-rating media networks is also an important route to achieving maximum reach.*<sup>107</sup>

The opportunities for Australia to use innovative partnerships to improve both the actual reach of its broadcasts and the net benefits Australia and the Asia Pacific region derive from those broadcasts is discussed further in section 5.2.3.

Similarly, the Lowy Institute's submission to the Review also highlighted the need to invest in content relevant to audiences in the Asia Pacific region:

**4. INVESTMENT IN CONTENT**

*A renewed investment in international broadcasting by Australia will be most successful if it makes provision to reflect voices of the region more effectively. One of the consequences of Australia's underinvestment in international broadcasting has been a substantial reduction in the amount of content that is produced for international audiences. Among the programs on the reduced Radio Australia network schedule are only two that target news, current affairs and culture for the Pacific region: Pacific Mornings and Pacific Beat. A limited Tok Pisin language service "Wantok" continues the ABC's long-standing tradition of broadcasting to Melanesia. There are no radio programs that target South-East Asia. On television, there are no programs that target the Asia-Pacific region directly.*<sup>108</sup>

**Content options for Pacific audiences**

In addition to highlighting the need for Australia to increase its investment in the content of its Asia Pacific broadcasts, the submissions received by the Review also expressed a range of views on the types of content that should be provided to Pacific and Asian audiences.

<sup>107</sup> Supporters of Australian Broadcasting in Asia and the Pacific, [Submission to the Review](#)

<sup>108</sup> Lowy Institute, [Submission to the Review](#)



For example, the Supporters of Australian Broadcasting in Asia and the Pacific recommended that Australia's content initiatives in the Pacific should focus on the provision of significantly expanded news and current affairs capability, emergency and weather forecasting and "near news" and other specialist programs and events:

*Content options in the Pacific*

*Content priorities in the Pacific should be based around*

- 1) *Enhanced news and current affairs capability. This is a vital service for the Pacific. The ABC's current service has become too focussed on domestic audiences. The Australian audience's understanding of the Pacific is limited. Improving that understanding of the Pacific is vitally important, but this should not come at the expense of the service for communities in the region who have a much deeper understanding of the Pacific and whose needs are completely different. Significant additional staffing is needed in Australia, with more capability to make reporting and partnership trips to the region. A strong, well-paid and well-supported network of Pacific journalists working for the ABC is also needed. The time and effort RNZ Pacific has put into its stringer network is one of the reasons it is now the leading broadcaster in the region. We suggest that rather than hiring two or three full-time stringers in each country, more stringers be employed part-time. The journalists working with the ABC are expected to be among their nation's best. Most of these journalists play an important role in their own national media and media organisations. Part-time, well-paid contracts with the ABC would allow them to continue to play this important role while also working for the ABC. Hiring more part-time ABC stringers in the Pacific would avoid a brain-drain of local talent from national media organisations, minimise political pressure on ABC stringers by spreading the reporting load and increase diversity of reporting voices on the ABC.*
- 2) *Emergency broadcasting. This is an expensive but essential and lifesaving service for the Pacific. The ABC is a world leader in emergency broadcasting. Disaster preparedness and response is a key focus of Australia's aid in the region. Emergency content would be prioritised on radio and online/digital delivery.*
- 3) *"Near news" and other programs. High quality specialist "near news" programs including environment, music, culture and the arts would be a priority along with sports broadcasts and programs connecting Australian Pacific diaspora communities and South Sea Island communities in Australia with the communities. A strong focus on collaborative production with media organisations and journalists in the region will set Australian broadcasting on an innovative path that would rebuild respect at the same time as supporting media in the region by creating jobs and sharing expertise. To regain its role as the premier broadcaster in the region and the unique role it used to play in debate on regional issues, the ABC needs a stable of specialist programs and podcasts on radio and specialist programs on television. Re-instating region-wide events such as the Pacific Break song competition should also be a priority.<sup>109</sup>*

**Content options for Asian audiences**

The submissions received by the Review also highlighted some of the key differences between the Asian and Pacific markets for Australia's international broadcasts and the consequent need for Australia to tailor both the content of its broadcasts, as well as the broadcasting platforms used to distribute that content, to suit the differing needs of audiences in those markets.

<sup>109</sup> Supporters of Australian Broadcasting in Asia and the Pacific, [Submission to the Review](#)





For example, the Supporters of Australian Broadcasting in Asia and the Pacific recommended that the priorities for Australian broadcasting in Asia should be the creation of new best-in-class English language learning, news and “near news” programs using a multi-media offering (radio, TV and online/digital, including social media) that can be broadcast by local partners as well as by the Australian international broadcaster:

***Content options in Asia***

***In Asia’s crowded market, media offerings need to be tightly focussed and best-in-class to achieve significant reach. In almost all Asian countries best-in-class requires a tri-media offering (radio, TV and online/digital, including social media) that can be broadcast by local partners as well as by the Australian international broadcaster. In Asia priorities should include***

- 1) English language lessons. Asian countries are increasingly prioritising English as a development tool. More recently some Asian governments are seeing English language proficiency as one way to counter the growing influence of China. English is the language of the internet and employment and individuals, as well as governments, see it as a path to education and better jobs. English language learning programs allow Australia to be source of a significant development dividend for partner countries and an entirely positive experience for the audience. The best English language learning programs are put together in partnership with local stations with tri-media production. The ABC is already a proven best practice producer of English language programs. Even though the ABC has not made a new series since 2014, people across the region are still using re-run ABC language-learning programs. Generally, English language-learning programs are regarded as having maximum shelf -life of around 10 years so there is clearly a limited time in which these programs will continue to be viable.***
- 2) News. Providing high quality news bulletins and news programs, including copyright, to local partners is a crucial role for Australian broadcasting in the Asia Pacific. Again, in this competitive market a smaller quantity of best-in-class programs (daily rather than more frequently) is the most effective way to build partnerships and reach significant audiences. Providing access to copyright allows partners to mine the footage for their own bulletins throughout the day.***
- 3) Near News. “Near news” is up-to-the-minute material on topics such as health, agriculture, science, environment, business, arts and culture, sport or technology. It focuses on topics of specific interest to the audience and the development requirements of the partner country, regional or sub-regional grouping for whom or with whom it is made. Australian ‘near news’ should play to Australia’s strengths such as science, agriculture, health, sport and arts and culture.***

The Supporters of Australian Broadcasting in Asia and the Pacific also highlighted the need to support those three flagship products with 24 hour FM radio broadcasts in key cities:

***In addition to these three flagship products Australian International broadcasting should prioritise programs for 24-hour FM radio in key cities and radio program placement with partner stations. Radio production does not require long lead times so can respond quickly to new situations. It is information dense and very easy to repurpose to create parallel high-quality online and digital offerings.***

***Television has a wide audience in the region. A multi-genre service highlighting Australian media strengths such as comedy, entertainment, children’s programs, sport, science etc as***



*well as bespoke news bulletins would give Australian television a unique and attractive offering.*

The submission received from Professor Wanning Sun also highlighted the need for Australia to move away from a simple sender-receiver transmission model of communication and adopt a more flexible, agile, multi-platform, interactive, diffused model:

*Much of the debate about Australia's influence in the Asia-Pacific region via the media has so far focused on the role of the ABC in promoting Australia's views and perspectives. Implicit in this is the assumption that broadcast transmission will continue to be relevant as a means of content delivery.*

*While public diplomacy through international broadcasting—via services such as the BBC—has been in operation for many decades, the broadcast transmission model—whether it be delivered by satellite or terrestrially—is no longer viable. Public diplomacy in the digital era demands a very different suite of approaches from those of days gone by. The sooner we rid ourselves of a simple sender-receiver transmission model of communication and start to adopt a more flexible, agile, multi-platform, interactive, diffused model, the sooner we will begin to make progress in identifying suitable solutions to the challenges facing public diplomacy today.<sup>110</sup>*

In particular, Professor Wanning Sun identified two main reasons for such a shift in focus—technological changes which mean that many people in the Asia Pacific are now streaming their audio and video content via the internet, and social changes in Australia that have led to the development of a global diasporic network of individuals:

*There are two main reasons that demand such a paradigm shift, the first of which is technological. We have now truly entered the post-broadcasting, digital era. While many locations in the Asia-Pacific region still do not have extensive Internet coverage, both rural and urban areas in the most populous Asian countries—India, Indonesia, China—are highly digitalised. As a consequence, the pattern of media usage among the populations of these regions has changed dramatically. Most people nowadays typically access audio (including radio) and visual (including TV) content via online platforms delivered to mobile devices. The future clearly lies in the effective online delivery of a wide variety of content in an assortment of different of forms, including written-word content, podcasts, vodcasts, digital radio, and digital TV.*

*The second reason that a new paradigm is needed is social. The size of Australia's migrant population from the Asia-Pacific region has grown exponentially. Migrants' life strategies have also changed; many of them now routinely and frequently travel between Australia and Asia-Pacific for business and for pleasure. Moreover, the media consumption practices of these migrants have also changed. There is an unprecedented high level of interface and overlap between what these migrants consume in Australia and what people in their home countries consume. The diasporic media in Australia, thanks to digitalisation, are no longer operating on the old model of "ethnic media" (i.e., mainly via print newspapers and radio), but more as part of the digitalised, transnational, global diasporic network.*

The opportunities that the growth in this global diasporic network of individuals creates for Australia to improve the development, marketing and distribution of content to audiences in the Asia Pacific region are discussed further in section 5.2.2 below.

<sup>110</sup> Professor Wanning Sun, [Submission to the Review](#)



## 5.2 How can Australia improve the net benefits derived from its Asia Pacific broadcasts?

### Key findings

- In addition to providing opportunities to increase the actual reach of Australia's Asia Pacific broadcasts, the growth in the number of local broadcasters in the Asia Pacific region and advances in technology also provide opportunities for Australia to increase the net benefits that both Australia and the Asia Pacific region derive from those broadcasts.
- In particular, Australia and the Asia Pacific region have the opportunity to improve the net benefits they derive from Australia's Asia Pacific broadcasts by:
  - improving the evaluation of alternative investments by Australia's publicly funded Asia Pacific broadcasters. The Independent Review of the Public Governance, Performance and Accountability Act 2013 has recommended the Secretaries Board should take initiatives to improve the quality of performance reporting, including through more effective and informed use of evaluation, focusing on strategies to improve the way Commonwealth entities measure the impact of government programs. This provides an opportunity to improve both the:
    - evaluation of major investment decisions made by Australia's publicly funded international broadcasters (e.g. whether or not to continue or cease shortwave broadcasts to the Asia Pacific). When making major social infrastructure investment decisions, public broadcasters need to apply the same best practice approaches to evaluating alternative options as do the other government agencies that are responsible for making infrastructure investments decisions on behalf of the Government, and
    - documentation, transparency and public understanding of those decisions. In addition to undertaking more rigorous evaluations of proposed investment decisions to ensure they are in the nation's best interests, it is also important to ensure that the results of those evaluations are documented and publicly available
  - leveraging Australia's multicultural resources and community to develop more relevant content for target Asia Pacific audiences, building on the 2017 Foreign Policy White Paper, which recognises the strength of Australia's diaspora communities and the Government's commitment to working with those diaspora communities to promote Australia's image and reputation, to encourage trade and investment and, where appropriate, to support Australia's development assistance program
  - facilitating the growth of innovative partnerships between public, commercial, community and individual broadcasters, by:
    - building on the Australia Government's recent decision to work with Australian commercial media operators to ensure that audiences in the Pacific have access to more quality Australian content on television and other platforms
    - learning from Australia's other successful international partnerships, and
    - applying contracting arrangements that are more suited to those innovative partnerships (e.g. "alliance contracting" models).



### 5.2.1 Improve the evaluation of alternative international broadcasting investments

Although it is important to ensure publicly funded international broadcasters have sufficient autonomy to perform their roles effectively and efficiently as possible, it is also important to ensure that the investment decisions they make are in the best interests of the nation as a whole.

#### Opportunities to improve the evaluation of alternative international broadcasting investments

In its final report, the Independent Review of the Public Governance, Performance and Accountability Act 2013 noted that accountable authorities under the PGPA Act, which include the ABC, should make greater use of evaluation to improve the quality of performance reporting:

*Accountable authorities should also drive a wider use of policy evaluation approaches by government departments to improve the quality of performance reporting. The Australasian Evaluation Society noted that while evaluation is often used at the end of an activity or program, it is also a powerful tool in program design and implementation. Academics suggested to us that the use of independent evaluation of government programs and services could be increased and was more frequent in the 1990s than it is now. It is not clear why evaluation practice has fallen away, but it can be reinvigorated through attention from the top, including from the Secretaries Board, accountable authorities and ministers.*<sup>111</sup>

As a result, the Independent Review recommended that the Secretaries Board should take initiatives to improve the way Commonwealth entities evaluate the impact of government programs:

#### **RECOMMENDATION 4**

*The Secretaries Board should take initiatives to improve the quality of performance reporting, including through more effective and informed use of evaluation, focusing on strategies to improve the way Commonwealth entities measure the impact of government programs.*

This recommendation provides an opportunity to improve both the:

- Evaluation of major investment decisions made by Australia's publicly funded international broadcasters (e.g. whether or not to continue or cease shortwave broadcasts to the Asia Pacific). When making major social infrastructure investment decisions, public broadcasters need to apply the same best practice approaches to evaluating alternative options as do the other government agencies that are responsible for making infrastructure investments decisions on behalf of the Government.
- Documentation, transparency and public understanding of those decisions. In addition to undertaking more rigorous evaluations of proposed investment decisions to ensure they are in the nation's best interests, it is also important to ensure that the results of those evaluations are documented and publicly available.

As noted by Infrastructure Australia, Australians expect major publicly funded investment decisions to be robust, transparent, accountable and to be in the best interests of the nation as a whole:

#### *Infrastructure Australia's Infrastructure Decision-making Principles*

*Australians expect decisions on public infrastructure projects to be robust, transparent and accountable. Businesses and households across the country rightly want to know that governments are investing limited public funds in infrastructure that will bring strong*

<sup>111</sup> Alexander, E. and Thodey, D., *Independent Review into the operation of the Public Governance, Performance and Accountability Act 2013 and Rule*, Australian Government, September 2018



*productivity benefits to the economy, support our quality of life, and help to deliver a collective vision of a strong, fair and prosperous Australia for many years to come.*<sup>112</sup>

This is the reason why Infrastructure Australia has developed guidelines to guide infrastructure decisions:

*Australia needs clear principles to guide infrastructure decisions*

*By establishing clear lines of responsibility and accountability, governments can provide assurance to industry and the community that the projects that are being identified, prioritised, funded and delivered are in the public interest, and will provide value for money on taxpayers' investments.*

While Infrastructure Australia notes that long-term planning processes are now underway across most jurisdictions, it considers that there is still room for improvement:

*Most of these principles come as second nature to the governments and professionals who make decisions on Australia's infrastructure. In particular, long-term planning processes are now routinely undertaken across most jurisdictions, leading to a greater understanding of current and future infrastructure challenges, and an increased integration across systems and networks.*

*However, there is still room for improvement. For example:*

*Across all stages of many projects' lifecycles, decisions should be more transparent, with an enhanced focus on public release of analysis and processes that form the basis of infrastructure decisions.*

*Projects are often developed without fully considering all available options to solve an identified problem, including potential solutions that make better use of existing infrastructure through technology and data.*

*Too often we see projects being committed to before a business case has been prepared, a full set of options have been considered, and rigorous analysis of a potential project's benefits and costs has been undertaken.*

*Governments could generally do better at engaging with communities, both in communicating the long-term plan, the benefits and risks of public infrastructure priorities, and by incorporating community input in a meaningful way in project processes.*

*Despite broad agreement on the merits of undertaking post-completion reviews of projects, including the application of lessons and feedback for future investments, these reviews are rarely undertaken and published.*

As a result, Infrastructure Australia has developed a set of infrastructure decision-making principles, which are set out in Figure 36 of [Appendix 5](#). These principles are also relevant to the evaluation of major international broadcasting investment decisions.

<sup>112</sup> Infrastructure Australia, *Infrastructure Decision-making Principles*, Australian Government, July 2018 [https://infrastructureaustralia.gov.au/policy-publications/publications/files/Infrastructure\\_Decision-Making\\_Principles.pdf](https://infrastructureaustralia.gov.au/policy-publications/publications/files/Infrastructure_Decision-Making_Principles.pdf)



### 5.2.2 Leverage Australia's multicultural resources and community to develop, market and distribute more relevant content for target Asia Pacific audiences

As a migrant nation, with a large and constantly growing multicultural community, Australia has a wide range of "diaspora communities" comprising people, including migrants and their descendants, who live outside but maintain active connections to their shared country of origin or ancestry.

This provides Australian broadcasters with a unique opportunity to work in partnership with this rich resource of people to develop, market and distribute content that is more relevant for Asia Pacific audiences.

This would help to increase both the actual reach of Australia's international broadcasts, as well as the net benefits Australia and the Asia Pacific region derive from those broadcasts. As noted in section 3, one of the most important factors constraining both the actual reach of Australia's Asia Pacific broadcasts and the magnitude of the net benefits Australia and the Asia Pacific region derive from those broadcasts is the content of those broadcasts (i.e. content is "king"). Even if Australia's broadcasts have the potential to reach large audiences in the Asia Pacific, the actual use of those broadcasts, as well as the net benefits Australia derives from those broadcasts, ultimately depends on the extent to which Asia Pacific audiences find Australian broadcasts to be sufficiently interesting, informative and entertaining to encourage them to actually listen to or watch those broadcasts.

#### Government's commitment to work in partnership with Australia's diaspora communities

The Australian Government's 2017 Foreign Policy White Paper recognises the strength of Australia's diaspora communities and its commitment to working with those diaspora communities to promote Australia's image and reputation, to encourage trade and investment and, where appropriate, to support our development assistance program:

##### *Diasporas*

*Australia is a migrant nation. The Government considers our diversity a national strength and ensures that all diaspora communities regardless of origin, enjoy full rights and protections under Australian law.*

*These communities often have the connections, language skills and cultural understanding to assist Australia to deepen ties with other countries. They help to facilitate trade and investment, including by sharing information on overseas markets and customs. Diaspora communities can also influence how Australia is perceived internationally.*

*Our diaspora communities often contribute to developing countries through remittances. They also have the knowledge and networks to help improve our understanding of development and humanitarian issues in other countries.*

*The Government is committed to working with diaspora communities to promote Australia's image and reputation, to encourage trade and investment and, where appropriate, to support our development assistance program.<sup>113</sup>*

#### Opportunities to develop, market and distribute content more relevant to Australia's Asia Pacific audiences

The opportunities that Australia has to work in partnership with its diaspora communities to improve the development, marketing and distribution of the content of its broadcasts to the Asia Pacific region was also recognised in submissions to the Review.

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<sup>113</sup> Australian Government, *Foreign Policy White Paper*, 2017 <https://www.fpwhitepaper.gov.au/>





For example, Professor Sun's submission to the Review highlights the need to identify and assess possible approaches to capitalising on the potential diasporic ethnic-language media to achieve Australia's strategic policy objectives:

*One important implication of these developments is that we must identify and assess possible mechanisms and strategies for capitalising on the potential of diasporic ethnic-language media to function as de facto instruments of public diplomacy on behalf of Australia. The Australian government's Public Diplomacy Strategy (2014-2016) rightly points to the importance of "diaspora diplomacy", and promises to take steps to "engage diaspora communities drawing on their linguistic skills, social networks and cultural community connections", by making active use of "online and social media as public diplomacy tools". The latest Foreign Policy White Paper also reinforces this point.<sup>114</sup>*

In particular, Professor Sun argues that there are opportunities for Australia to shift away from more traditional transmission-based models of delivery to country-specific "narrowcasting" using multiple broadcasting platforms that make use of diasporic language media in Australia:

*It is important to note that, in moving away from a transmission-based model of delivery, we must also renounce broadcasting and begin to embrace something closer to narrowcasting, as the underlying philosophy of content development. This means that, while we will increasingly need to adopt a country-specific approach, we must also think about how to use—simultaneously—multiple approaches to target one particular country/region.*

*This may involve setting up digital content platforms that can reach these destinations directly. Ideally, there should be a public service—led digital strategy, plus good offline support and localization. It may also involve forming partnerships with foreign media organisations—government, commercial, or independent—that can serve as hosts of Australian content. Finally, but perhaps most importantly, we must take concrete steps towards making good use of the diasporic language media in Australia.*

*For instance, China presents a most challenging case due to its censorship practices and a regulatory framework that is characterised by a suspicion and distrust of foreign media. At the same time, there is a vast and growing number of Chinese migrants in Australia, and an almost ubiquitous uptake of the Chinese social media platform WeChat—both in China itself and among PRC migrants all over the world. Given that most people in the globally extended Chinese community now access at least some of their news and information through various WeChat subscription accounts, it seems particularly urgent for Australia to explore how to effectively access Chinese audiences through such subscription accounts, particularly those that are used by diasporic Chinese users. In this way, the social media platforms used by Chinese-speaking migrants in Australia are potential intermediaries for reaching Chinese audiences in China. Some may say that WeChat is subject to the Chinese government's censorship—and indeed it is. But so are any other forms of foreign content going to China. Moreover, compared to broadcasting, digital platforms present more opportunities for dealing with, if not bypassing, censorship.*

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<sup>114</sup> Professor Wanning Sun, [Submission to the Review](#)



In addition, Professor Sun also notes that diasporic language media in Australia provides an opportunity to shift away from more traditional public diplomacy and start exploring how “people-to-people” diplomacy can be harnessed to work towards the same goal as public diplomacy via media:

*The last point is particularly worth emphasising, given that, to date, current debates about Australia’s exercise of public diplomacy and soft power within the Asia-Pacific region have more or less ignored this sector. It is time we started regarding diasporic language media in Australia not just as isolated pockets of ethnic language media, but rather as potentially powerful gateways for projecting Australia’s interests, values and ideas into the heartland of a number of Asia-Pacific nations.*

*It is also time we went beyond the traditional understanding of public diplomacy and started exploring how people-to-people diplomacy can be harnessed to work towards the same goal as public diplomacy via media.*

*In summary, public diplomacy in the digital era requires not simply a rejigging of the current broadcast transmission model; it also requires a complete paradigm shift. And the process of identifying strategies and solutions within this new paradigm should draw on research from fields such as business management, political communication (particularly theories of nation-branding), and international and cross-cultural communication strategies, as well as from international relations studies.*

### 5.2.3 Facilitate the growth of innovative partnerships between public, commercial, community and individual broadcasters

#### Calls to reform the supply of Australia’s international broadcasting services

Although most of the submissions received by the Review considered the ABC was well placed to provide broadcasting services to the Asia Pacific on the Government’s behalf, some submissions argued that there was still scope to reform the provision of those international broadcasting services.

The nature and extent of those proposed reforms varied across submissions received by the Review.

For example, in their submission to the Review, Mr Bruce Dover and Mr Ian Macintosh noted suggestions to set up an Australian International Broadcasting Corporation within the ABC as proposed by Mr Graeme Dobell, but questioned whether that would be in Australia’s best interests:

*Various options seeking to create a subsidiary, autonomous or arms-length corporation for international broadcasting located inside the ABC appear to have some merit.*

*The Australian International Broadcasting Corporation (AIBC) proposed by respected foreign correspondent and commentator Graeme Dobell is one such example.*

*We question, however, whether any such body under the ABC “umbrella” could meet all the criteria set out above, and to what extent it could be vulnerable to “mining” by the ABC when domestic priorities outweighed international broadcasting needs, as has happened in the past.*

*Whilst acknowledging the very significant experience of the ABC in international broadcasting, we would argue that it is not the sole repository of expertise and talent in this field, and now is a timely opportunity to cast a much wider net. The service needs to reflect a genuine plurality of views—including those emanating from outside the ABC—which can only be guaranteed to occur via a truly independent body established outside the purview of the national public broadcaster.<sup>115</sup>*

<sup>115</sup> Bruce Dover & Ian Macintosh, [Submission to the Review](#)



As a result, they argued that it would be in the best interests of Australia to introduce a new independent model that would ensure that new public funding for international broadcasting would not simply go to the ABC, but would be contestable by both the commercial media sector and independent production houses:

### *3. Independent Model*

*We submit the independent model, as proposed above, is in the best long-term interest of Australia securing a respected, admired and trusted voice for itself in an uncertain and fast changing world.*

*Our model would ensure Australia offers to international audiences a plurality of views that best reflect an accurate and balanced perspective on Australia and Australians. It provides for a level of flexibility and efficiency that would guarantee the service was well placed to utilize the wide variety of media platforms accessible by current and future audiences so as to fulfil its Charter to the maximum extent possible. The independent model also ensures that any significant injection of new public funding into international broadcasting would not simply go to the ABC but would be contestable by both the commercial media sector and independent production houses.*

*We recognize this model, if accepted, may require amending the existing ABC Charter. If so, we would hope such amendments did not preclude the new corporation or foundation benefitting from the ABC's acknowledged international broadcasting expertise.*

*Our proposed model allows Australia to choose how it might best develop a commanding international voice capable of engaging and informing Asia Pacific audiences today and into the future.*

To this end, Mr Dover and Mr Macintosh noted that further research was required into related initiatives being undertaken by smaller powers in the Asia Pacific region (e.g. South Korea's KIBF and New Zealand's PBCL/Pasifika TV) to determine whether they would be suitable to use in Australia:

### *Next Steps*

*Further research is required to examine related initiatives being undertaken by other middle and smaller powers in our region (e.g. South Korea's KIBF, the foundation operating the Arirang international network, and PBCL/PasifikaTV in New Zealand) to determine whether they have relevance to the proposed new model and, if so, can be scaled to Australia's needs.*

*A fresh start based on the above criteria involves an operating model applicable to few, if any, current international broadcasters. We have yet to find an identical model elsewhere and accept that moving to an independent corporation or foundation presents both considerable challenges and an exciting opportunity to represent who today's Australians are, what we stand for and how we see ourselves in the Asia Pacific.*

*Meanwhile, international broadcasters, both major (e.g. BBC/UK, DW/Germany, BBG/USA, France Médias Monde/France, CGTN & RCI/China and NHK World/Japan) and smaller players (e.g. TVNZ & RNZ Pacific/New Zealand and Arirang/South Korea), continue to boost both funding and multi-platform program offerings to retain and build their respective international audiences.*

*Australia should not be allowed to fall any further behind.*



The Lowy Institute's submission to the Review also noted that it is relevant at this point to consider whether the ABC remains the best vehicle for delivering an enhanced investment in international broadcasting. In addition, they recognised there were some who advocate for a separation of responsibilities—that the ABC should be relieved of its international obligations, and that the government should establish a new entity to handle its international broadcasting policy.

While they considered this might have some appeal, the Lowy Institute noted that they continue to think the ABC is the agency best placed to deliver international broadcasting services.

### ***3.1 ABC is best placed as international broadcaster***

***For broadcasting to be effective as a means of projecting Australian influence, it needs to be credible and reliable. The ABC has been effective in this regard for decades, and public trust in the ABC remains high among Australian media outlets.***

***Unlike other media organisations, it has consistently invested in journalism in the Pacific, and its basing of a correspondent and local journalist in Port Moresby means it is better connected to the region than any other Australian media outlet. As a large established broadcaster, it has technical capabilities and infrastructure that mean it is able to produce complex and detailed programming from a number of locations in Australia. It also has long-standing partnerships with a number of regional media organisations, and maintains a capacity to deliver training and development projects.***<sup>116</sup>

However, the Lowy Institute recognised the need to ensure that any renewed investment in international broadcasting must allow for Australia's interests to be represented and suggested that a useful template to use for that purpose would be the original Australia Network contract, modified to separate content funding from distribution funding. This proposed modification is intended in order to allow discussions about transmission technology to be separated from conversations about content and audience targets:

***However, it is clear that recent decisions the ABC has made—resulting from a decade of funding cuts—are having an adverse impact on Australia's national interest. The recent axing of shortwave transmissions shows that the ABC's decisions may not always align with Australia's regional priorities.***

***Therefore, any renewed investment in international broadcasting must allow for Australia's interests to be represented. This must be done carefully as the independence of the ABC and its international services has been one of the key qualities that have allowed it to be a respected and trusted information source.***

***A useful template on how to achieve this—despite its political failure—is the contract for the operation of the Australia Network. The ten-year agreement—had it been allowed to continue—would have provided funding certainty but was also a means for the government to contribute to the decision-making process on content and distribution priorities.***

***A future model for funding could go a step further, separating content funding from distribution funding. This would mean there could be discussions about transmission technology separate from conversations about content and audience targets.***

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<sup>116</sup> Lowy Institute, [Submission to the Review](#)

### Opportunities to form innovative partnerships between the Australian Government, publicly funded and commercial broadcasters, other Australian businesses and community groups

Australia's Asia Pacific broadcasts have the potential to generate benefits for a wide range of entities, including the:

- Australian government and the governments of its Asia Pacific neighbours that share Australia's desire to build stronger partnerships in the region
- Australia's publicly funded broadcasters and other publicly funded broadcasters in the Asia Pacific region who are interested in rebroadcasting that content
- Australia's commercial broadcasters and other commercial broadcasters in the Asia Pacific region who are also interested in rebroadcasting that content, and
- Australia community groups, including Australia's diaspora communities and their relatives and friends in the Asia Pacific region.

This means that there is significant scope for the Australian Government to enter into innovative partnerships between these potential beneficiaries with a view to:

- pooling the diverse range of skills, experience and resources available to these parties to improve Australia's broadcasts to the Asia Pacific. This includes the funding required to finance those broadcasts. In particular, such innovative partnerships provide an opportunity for the Australian government to move away from being the sole funder of those broadcasts, to providing seed finance that is complemented by additional funding from other partners, and
- sharing in the benefits that Australia and the Asia Pacific derive from those improved broadcasts.

One example of such an innovative partnership is the Australian Government's recent decision to work with Australian commercial media operators to ensure that audiences in the Pacific have access to more quality Australian content on television and other platforms. This decision was announced by the Prime Minister in his address—Australia and the Pacific: A New Chapter, which was delivered at Lavarack Barracks, Townsville on 8 November 2018:

*I've been speaking to Free-TV Australia and the commercial TV networks about how we get more of our Australian content into the region. Our pacific family switching on to the same stories, news, drama and sports we are watching at home. What better way of staying connected than through the people, the lifestyle and the every-day experiences we are lucky enough to enjoy.*

*That's why I am pleased to announce that the Government will be working with our commercial media operators to ensure our friends in the Pacific have access to more quality Australian content on television and other platforms.*

*This will include things like lifestyle programs, news, current affairs, children's content, drama and sports potentially.*

*This is an initial step towards providing more Australian content that is highly valued by the Pacific community.*<sup>117</sup>

<sup>117</sup> See <https://www.pm.gov.au/media/address-australia-and-pacific-new-chapter>



This announcement was welcomed in a media release on 8 November 2018 by Free TV Australia that:

- confirmed it has entered discussions with the Australian Government on an initiative to deliver premium Australian content to the Pacific region
- recognised the Prime Minister's strategic intent to prioritise the Pacific region and are pleased to be working towards this important policy direction, and
- noted that this initiative will provide an opportunity for Australia to showcase the best and most popular Australian content, which was a powerful way to strengthen Australia's Pacific partnerships and connection to the region.<sup>118</sup>

This new innovative partnership with commercial broadcasters is part of two new Australian Government initiatives that:

- Create a \$2 billion Australian Infrastructure Financing Facility for the Pacific (AIFFP), which will significantly boost Australia's support for infrastructure development in Pacific countries and Timor Leste. It will use grant funding combined with long term loans to support high priority infrastructure development and invest in essential infrastructure such as telecommunications, energy, transport, and water.
- Allocate an additional \$1 billion to Australia's export financing agency in callable capital and a new more flexible infrastructure financing power to support investments in the region which have broad national benefit for Australia.

When announcing these new initiatives, the Prime Minister noted the importance to Australia of a Southwest Pacific that is secure strategically, stable economically and sovereign politically:

*Australia has an abiding interest in the Southwest Pacific that is secure strategically, stable economically and sovereign politically.*

*This is not just our region, or our neighbourhood. This is our home.*

*It's where Australia can make the biggest difference in world affairs.*

*A strong, stable region keeps us more secure and enables our economies to grow and for our peoples to prosper.*

*While we have natural advantages in terms of history, proximity and shared values, Australia cannot take its influence in the Southwest Pacific for granted. And sadly I think too often we have.*

*Notwithstanding we build from strong foundations our Government has refocused more of our aid contribution to the region. We remain the largest aid donor to the Pacific. We maintain high standards of governance while aligning our assistance with the practical priorities of Pacific Island countries.*

In particular, in concluding his address, the Prime Minister stressed the importance of strengthening Australia's Pacific partnerships:

*So in conclusion let me say this for all these great stories of human connection, our relationships with our Pacific friends need to be nurtured and valued.*

*And if our standing and influence in the Pacific is to grow, our commitment must be genuine, authentic and enduring.*

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<sup>118</sup> [http://www.freetv.com.au/content\\_common/pg-free-tv-working-towards-australias-step-up-to-the-pacific.seo](http://www.freetv.com.au/content_common/pg-free-tv-working-towards-australias-step-up-to-the-pacific.seo)





*The world is changing, it's true and we need to ensure that our Pacific partnerships get stronger with time, that we never take them for granted, that we are a reliable and steady member of the family.*

*I want to see a new level of respect, familiarity and appreciation between us. Where our shared interests sit alongside shared values.*

*That's not to say we will always agree. But that's not the true test of friendship or family. Tell me a family that always agrees.*

*The real test is showing respect, love, commitment, and knowing that together we can make our region and all of our communities even stronger.*

### Opportunities to learn from other successful partnerships

In the course of developing new Asia Pacific broadcasting partnerships, there are also opportunities to learn lessons from other successful partnerships, including the:

- Department of the Environment and Energy research into the co-design of cross sector partnerships that seek to:
  - attract additional resources, and
  - harness the expertise, innovation and flexibility of the business and non-government sectors to find new ways to achieve environmental outcomes<sup>119</sup>
- Sustainable Development Investment Portfolio (SDIP), which aims to improve the integrated management of water, energy and food in three major Himalayan river basins—the Indus, Ganges and Brahmaputra, which cover eastern Afghanistan, Pakistan, northern India, Bangladesh, Nepal and Bhutan. The SDIP:
  - draws on Australia's expertise and technologies in the water, food and energy sectors and is delivered through a combination of Australian and South Asian partners:
    - Australian Centre for International Agricultural Research (ACIAR)
    - Commonwealth Scientific and Industrial Research Organisation (CSIRO)
    - International Centre of Excellence in Water Resources Management (ICE WaRM)
    - International Centre for Integrated Mountain Development (ICIMOD)
    - World Bank—South Asia Water Initiative Phase II (SAWI)
    - International Finance Corporation (IFC)
    - The Asia Foundation (TAF)
  - develops the capacity of senior water resource managers in South Asia, including through the sharing of Australia's water modelling and water resource management expertise. In the agricultural sector, SDIP is building on and adapting the water and energy efficient farming systems to more diversified farming systems and will strength the field to policy links. In the area of energy, SDIP is working with governments to bring quality hydro power investments to market, as well as extending solar power to remote populations through private enterprise, and working with industry to implement energy efficient products and processes
- InfraCo Asia, which is one of the Private Infrastructure Development Group (PIDG) of companies, formed as an international coalition of partners including the Australian Government Department of Foreign Affairs and Trade, which aim to mobilise private sector investment providing infrastructure in developing countries. PIDG companies offer specialised financing and project development expertise to overcome obstacles to private sector

<sup>119</sup> Department of the Environment and Energy, *Co-designing an approach to environmental partnerships*, 25 April 2018



investment including inadequate financial and human capacity and expertise in public and private sectors.<sup>120</sup>

#### Opportunities to use more appropriate relationship contracting arrangements

In addition to learning lessons from other successful infrastructure partnerships, there is also an opportunity to improve the development of new international broadcasting partnerships through the use of more appropriate relationship contracting arrangements.

Traditional contracting arrangements work well for government projects and programs that require the input of a particular subcontractor that has the necessary skills and experience required to deliver those services in an effective and efficient manner, and mitigate and manage the risks associated with the delivery of those services.

However, those more traditional contracting arrangements are less well suited to the development and delivery of government projects and programs that require the inputs of multiple project partners that have quite different skills and experience to contribute to the project (e.g. as is likely to be the case in relation to innovative Asia Pacific partnerships between public, commercial, community and individual broadcasters, which have quite different types of skills and experience that are all important to the ultimate success of Australia's Asia Pacific broadcasts).

For those types of innovative partnerships, it is more appropriate to consider the use of alternative long term "relationship contracting", or shorter term "collaborative contracting", approaches that focus on aligning the goals of the principal and contractor (and other relevant parties) so that all decisions are made for the benefit of the project.

Relationship contracting seeks to encourage the parties to those contracts to manage and resolve problems and potential conflicts in a proactive manner to their mutual benefit and the overall success of the project. This is intended to reduce or eliminate the adversarial relationship that can emerge between principals and contractors under the more traditional forms of project delivery.

There is a broad spectrum of alternative relationship contracting arrangements from which to choose, which differ in terms of the range of collaboration they involve between the project partners (from "partnering", which involves the least co-operation, through to "alliance contracting" which allows the greatest scope for collaboration).

These different types of "relationship contracting" or "collaborative contracting" include:

- "Partnering", which is a commitment by those involved in a project to work closely and co-operatively together, rather than competitively in an adversarial environment. Partnering relationships can be either long-term or one-off
- "Managing Contractor" model used by the Australian Department of Defence. This model makes the managing contractor responsible for the design and construction of the project from feasibility through to the commissioning stage. It shares some of the features of the more traditional "Design and Construct" (D&C) and Engineering, Procurement, Construction Management (EPCM) contracts
- "Engineering, Procurement, Construction Management" (EPCM) contracts. The role of the EPCM contractor is similar to the role of a managing contractor but exposes the EPCM contractor to a lower level of risk regarding the quality of the work performed

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<sup>120</sup> See <https://www.pidg.org>



- “Delivery Partner” model combines the elements of the managing contractor, alliance and EPCM models. It enables the client to supplement its internal project management capabilities by engaging one or more delivery partners to assist the client with project planning, programming, design management and construction management services
- “Alliance contracting”(or “Integrated Project Delivery”), which is an extension of the partnering concept that involves the owner and one or more service providers (e.g. those involved in the design of the project and the head contractor) working together as a team to deliver a project under a contractual framework where their commercial interests are aligned to project outcomes, and
- “Early Contract Involvement” (ECI) delivery models, which combine some of the features of alliancing with traditional design and construct contract principles. It involves engaging the contractor during the pre-delivery phase of a project to assist in developing the design, a detailed project plan and a risk adjusted price for the delivery phase. As such, it involves much more dialogue between the owner, the designer and contractor at the early stages of the project and the risk adjusted prices of the contract are not fixed until all project risks can be fully assessed by the contractor.

Relationship contracting arrangements are being used increasingly to develop and deliver large scale infrastructure project in Australia, including road, rail and water infrastructure projects.

For example, recently the NSW Government released an action plan outlining its 10 point commitment to the construction industry, which recognises that the NSW Government can only achieve its infrastructure objectives in partnership with the private sector, and that this depends on healthy ongoing competition between a capable field of construction firms, sub-contractors and the industry supply chain—not just now, but for years to come.

Specifically, the 10 point plan sets out the NSW Government’s commitment to:

1. Procure and manage projects in a more collaborative way.
2. Adopt partnership-based approaches to risk allocation.
3. Standardise contracts and procurement methods.
4. Develop and promote a transparent pipeline of projects.
5. Reduce the cost of bidding.
6. Establish a consistent NSW Government policy on bid cost contributions.
7. Monitor and reward high performance.
8. Improve the security and timeliness of contract payments.
9. Improve skills and training.
10. Increase industry diversity.

The first point of that plan indicates the NSW Government’s commitment to procure and manage projects in a more collaborative way, which involves a commitment to:

- use early market engagement to elicit industry’s views on the best choice of procurement pathway for each major project, and (where appropriate) for each works package within that project, drawing on good practice in NSW and other jurisdictions
- move away from a reliance on fixed price, lump sum procurement methods, and be open to collaborative contracting models like alliancing
- adopt expedited engagement processes like Early Contractor Involvement (ECI) where a project’s risk profile justifies it and where it saves time and resources without sacrificing value for money



- develop in partnership with industry, and then publish, simple guidelines which document “best practice” for each of the main procurement methods, and the circumstances in which each method is likely to be preferred
- “close the loop” with potential bidders once market soundings for major projects have been undertaken, including through an interactive session prior to the finalisation of tender documentation, so that prospective bidders can test and understand the rationale for procurement decisions
- ensure that, once awarded, contracts are managed by both parties in a professional and mutually respectful fashion, and
- use inception workshops to establish strong behavioural alignment and shared objectives between the parties soon after contract award.

In order to provide consistent and leading practice guidance on alliance contracting to public sector agencies that develop and own infrastructure projects, the Department of Infrastructure and Regional Development has also released its *National Alliance Contracting Guidelines*.

Those guidelines recognise the potential benefits of collaborative alliance contracting:

***Benefits of alliancing***

***Alliancing has evolved to become a broadly accepted procurement and delivery method, which has been used to successfully deliver many risky and complex projects. Under an alliance contract, the Owner and the Non Owner Participants (NOPs) work together to collaboratively determine the best project solution and deliver the project.<sup>121</sup>***

In addition, the guidelines also highlight the key difference between alliance and traditional contracting models—namely the treatment of risk:

***Risk sharing v risk allocation***

***The most significant difference between traditional contracting methods and alliance contracting is that in alliancing, all project risk management and outcomes are collectively shared by the Participants. In more traditional methods of risk allocation, specific risks are allocated to Participants who are individually responsible for best managing the risk and bearing the risk outcome. This concept of collective risk sharing provides the foundation for the characteristics that underpin alliance contracting including collaboration, making best-for project decisions and innovation. If substantial and significant risk is allocated to individual Participants, then it may not be an alliance and those characteristics may not be necessarily required or appropriate.***

As a result, alliance contracting is particularly suited to the establishment of innovative international broadcasting partnerships where there are several partners that need to work closely together, each with quite different types of skills, experience and resources, all of which are critical to the success of the project or program.

The key features of alliance contracting are illustrated in Figure 34 below.

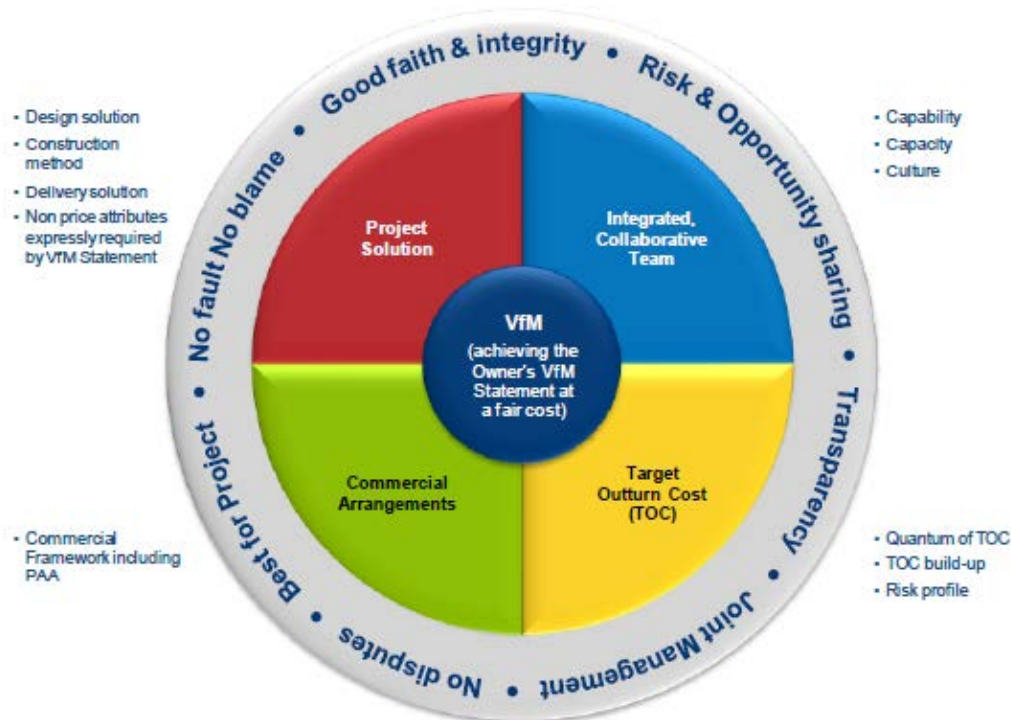
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<sup>121</sup> Department of Infrastructure and Regional Development, *National Alliance Contracting Guidelines, Guide to Alliance Contracting*, September 2015.

[https://infrastructure.gov.au/infrastructure/ngpd/files/National\\_Guide\\_to\\_Alliance\\_Contracting.pdf](https://infrastructure.gov.au/infrastructure/ngpd/files/National_Guide_to_Alliance_Contracting.pdf)



Figure 34: Key features of alliance contracting



Source: Figure 2.2, p. 14. Department of Infrastructure and Regional Development, *National Alliance Contracting Guidelines, Guide to Alliance Contracting*, September 2015.

As illustrated in Figure 34, and discussed in greater detail in the *National Alliance Contracting Guidelines*, alliance contracting involves:

- risk and opportunity sharing. As outlined above, alliance contracting is generally characterised by the collective assumption of risk by the participants. By assigning responsibility for delivering the Works jointly to the Participants, the alliance contract implements a risk and opportunity-sharing approach, as opposed to the more conventional approach of risk allocation
- commitment to “no disputes”. Alliance contracts generally include a “no disputes” mechanism where the Participants agree not to litigate, except in limited circumstances, in order to avoid the adversarial culture of the traditional contract. It is important to note that this does not mean no disagreements. Healthy debate is a key feature of an effective management team and the success of the alliance depends on how effectively it addresses those disagreements
- best-for-project unanimous decision-making processes. A key feature of an alliance is the requirement for the Participants to make decisions which are “best-for-project” (i.e. in the interests of achieving the owner of the project’s desired outcomes, rather than their own interests)
- no fault—no blame culture. This involves a commitment from each of the Participants that, where there is an error, mistake or poor performance under the alliance contract, the Participants will not attempt to assign blame but will rather accept joint responsibility and its consequences and agree a remedy or solution which is best-for- project. If the Participants disagree, they must work together to resolve issues in a best-for-project manner



- operate according to good faith and integrity. This underlies each of the key features of alliancing and requires Participants to:
  - act in the interests of the project owner
  - comply with reasonable standards of conduct, having regard to the interests of the Participants, and
  - act fairly, including not deriving any commercial benefit at the expense of other Participants
- transparency expressed as open book documentation and reporting, and
- joint management structure. An alliance is a legal relationship between parties and has a well-defined governance structure similar to that of a company and generally comprises the following:
  - Owner and non-owner participant (NOP) corporations
  - Alliance Leadership Team (ALT)
  - Alliance Manager (AM)
  - Alliance Management Team (AMT), and
  - Alliance Project Team (APT).<sup>122</sup>

### 5.3 Overview of opportunities to improve Australia's Asia Pacific broadcasts

Australian broadcasters face increasing competition for their services in the Asia Pacific markets due to advances in technology that facilitate easier and cheaper creation and consumption of video and audio media by content creators close to those diverse markets in geographic, language and social terms.

However, these challenges also create opportunities for Australia to improve the actual reach and net benefits of its broadcasts to audiences in those markets.

In summary, Australia can improve the actual reach of its Asia Pacific broadcasts by:

- clarifying the objectives of Australia's broadcasting to audiences in Asia and the Pacific
- providing Australian broadcasters the opportunity to perform their role efficiently by selecting the content and platforms that provide the most effective way of reaching each of the target audiences in these diverse media markets, and
- improving the content of Australia's broadcasts, tailoring it to improve accessibility (language) and interest in each of the different target markets across this large and populous region.

In addition, Australia can improve the net benefits generated by its Asia Pacific broadcasts by:

- improving the evaluation of alternative public investments in international broadcasting
- leveraging Australia's multicultural resources and community to develop, market and distribute more relevant content for target Asia Pacific audiences, and
- facilitating the growth of innovative partnerships between the wide range of international broadcasters from public, commercial, community and individual broadcasters.

<sup>122</sup> Department of Infrastructure and Regional Development, *National Alliance Contracting Guidelines, Guide to Alliance Contracting*, September 2015





## Appendix 1: Terms of Reference



### Australian Government

## Review of Australian Broadcasting Services in the Asia Pacific—Terms of Reference

The Government is undertaking a review of Australian media services in the Asia Pacific, including the role of shortwave radio. The review is being conducted jointly by the Department of Communications and the Arts and the Department of Foreign Affairs and Trade.

### Purpose

The objective of the review is to assess the reach of Australia's media in the Asia Pacific region, including examining whether shortwave radio technology should be used.

### Scope

The review will analyse the:

- coverage and access of existing Australian media services in the Asia Pacific region, and
- use and value of Australian shortwave technology in the Asia Pacific region.

The review will cover:

- all media distribution platforms (i.e. television, radio and online)
- commercial, community and publicly funded services, and
- different types of technologies such as analogue, digital and satellite radio and television services and online services.

### Have your say

Interested stakeholders in Australia and overseas are encouraged to contribute to this review. Submissions on any aspect of the review should be uploaded to the review website by 3 August 2018.

### Timeframe

The review is expected to report to the Government in 2018.

### Background

In September 2017 the Government agreed to conduct a review of Asia Pacific Broadcasting Services as follows:

*“The Department of Communications and the Arts and the Department of Foreign Affairs and Trade will conduct a review into the reach of Australian broadcasting services in the Asia Pacific region, including examining whether shortwave radio technology should be used. The review will include public consultation and the report of the review will be made public.”*



## Appendix 2: Australian Broadcasting Corporation Act 1983

### Section 31AA Corporation or prescribed companies to be the only providers of Commonwealth-funded international broadcasting services

The Commonwealth must not enter into a contract or other arrangement with a person or body other than:

- a. the Corporation, or
- b. a prescribed company (within the meaning of section 25A)

if the contract or arrangement:

- c. is for the provision of international broadcasting services, and
- d. provides for the Commonwealth to make payments to the person or body.

### Section 3 Interpretation

**broadcasting service** means a service that delivers programs to persons having equipment appropriate for receiving that service, whether the delivery uses the radiofrequency spectrum, cable, optical fibre, satellite or any other means or a combination of those means, but does not include:

- a. a service (including a teletext service) that provides no more than data or no more than text (with or without associated still images), or
- b. a service that makes programs available on demand on a point-to-point basis, including a dial-up service, or
- c. a service, or a class of service, determined by the Minister under paragraph (c) of the definition of broadcasting service in subsection 6(1) of the Broadcasting Services Act 1992.

**program** means a radio program or a television program.<sup>123</sup>

### Section 3A Digital media service

- 1) For the purposes of this Act, digital media service means:
  - a) a service that delivers content to persons having equipment appropriate for receiving that content, where the delivery of the service is by means of digital electronic communications, or
  - b) a service that allows end-users to access content using digital electronic communications

but does not include:

- c) a broadcasting service, or
- d) a datacasting service.<sup>124</sup>

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<sup>123</sup> Note that together these interpretations are the same as the interpretation of a broadcasting service in the **Broadcasting Services Act 1992**.

<sup>124</sup> Note that a datacasting service refers to content “where the delivery of the service uses the broadcasting services bands.”, Broadcasting Services Act 1992 Section 6



- 2) For the purposes of this section, content means content:
- a) whether in the form of text, or
  - b) whether in the form of data, or
  - c) whether in the form of speech, music or other sounds, or
  - d) whether in the form of visual images (animated or otherwise), or
  - e) whether in any other form, or
  - f) whether in any combination of forms.



## Appendix 3: Summary of submissions received

A total of 433 submissions were received, 310 of which were pro forma submissions. Of the remainder, 123 were unique submissions (some submitters provided more than one document). Ninety two were from private individuals and 31 were from groups or organisations. Eighteen submissions were from people identifying as current or former ABC staff or contractors.

Submissions were received from people and organisations based across Australia and the Asia Pacific region, as well as other countries, including Germany, Indonesia, New Zealand, Palau, Papua New Guinea, Peru, Philippines, Samoa, Singapore, the United Kingdom, the United States and Vanuatu.

Most submissions focused on issues surrounding broadcasting to the Pacific, with seven explicitly discussing Asian markets. Those submissions discussing Asian markets were more likely to observe the diversity of markets, media and content and market trends away from broadcasting towards narrowcasting. Those discussing Pacific markets were more likely to focus on particular community needs and the role of shortwave broadcasting, particularly the ABC's cessation of shortwave broadcasting in the Pacific. There was little discussion of the cessation of shortwave broadcasting in the Asian markets.

### Themes from submissions

#### Markets in the Asia Pacific region are diverse

##### No single regional market

ABC's submission explained that there is no single media market in Asia and the Pacific. They describe the highly competitive nature of some markets in Asia, which are "already saturated with local providers", in radio, television and online services. ABC's focus in these markets is on "educated, affluent and influential individuals" through tailored content. In the less-developed markets in the Pacific and Mekong, there is scope to "reach a wider cross-section of the population", and in these markets the ABC aims to deliver programming of broader appeal.

Several submitters echoed the importance of broad reach. Geoff Heriot submitted that:

*In the changed international environment, it will be important to reach beyond cosmopolitan elites to a broader base of foreign citizens, whether in remote and under-served areas of Papua New Guinea or conflict-affected zones such as exist in Myanmar or the southern Philippines.*

The Supporters of Australian Broadcasting in Asia and the Pacific were among those who also noted the diversity of markets across the region, commenting that "media markets in Asia and the Pacific are very diverse and need a very different mix of technologies".

##### Multiple platforms may be required

While most submitters were in favour of restoring shortwave services, some of the view that a mixture of media platforms was required, or that ABC's broadcasting strategy should be technology agnostic. Several submitters commented that a flexible, market-specific approach is required using a mix of technology platforms (which may include shortwave) that is fit for purpose for each country. Professor Wanning Sun highlighted the high digitalisation of both rural and urban areas in the most populous Asian countries—India, Indonesia and China—dramatically changing historical patterns of media usage. Furthermore this is a social as well as technological change, as Australian immigrants now more frequently revisit their country of origin and introduce their social networks to Australian media.



### Significant investment in tailored content, in local languages, required in Asian and Pacific markets

For different reasons, many submissions concur with the view that “achieving maximum reach depends on compelling, culturally appropriate and tailor-made content” (Supporters of Australian Broadcasting in Asia and the Pacific).

Those submitters who commented on the Asian markets also noted that it is a crowded broadcasting space. Murray Green, former Director International at ABC, commented that gaining impact and engagement in these markets would require a “significant commitment to relevant content, effective distribution and marketing”. Professor Wanning Sun commented that making good use of the diasporic language media in Australia is an important tool of Australian public diplomacy.

Many submissions regarding the Pacific markets were of the view that locally-relevant and culturally resonant content is necessary to effectively engage with a broad cross-section of people in these countries. Several commented that programming in local languages was also important—citing Melanesian Pidgins such as Tok Pisin as having particularly broad reach and importance for national cohesion.

SBS noted the extent of its multilingual content production as Australia’s multicultural public broadcaster.

## Many advocate for revitalised services in the region

### Diminished international services attributed to budget cutbacks

Many submissions that were of the view that the cessation of ABC’s shortwave services is due to successive budget cuts being reflected in the diminution of its International Services more generally, and greater focus on domestic audience. This was reflected in the ABC’s submission, in which they stated that budget cuts in 2014 “significantly reduced the ABC’s ability to deliver optimal international services”.

### Concern at the decline in reach across the Pacific

Submitters expressed concern at the erosion of technical and journalistic expertise, “cultural intelligence” and regional networks. Several commented on the resulting decline in ABC’s reach across the region, noting that Radio Australia broadcasts are now unavailable in ten of the 18 Pacific Island Forum nations. Several submissions consider the implication of cessation of shortwave reception in some remote areas with the resourcing of reportage in those same areas, for whom the local audience is the primary audience. The Supporters of Australian Broadcasting in Asia and the Pacific were among a number of submitters who commented on the subsequent dilution of Radio Australia’s impact in the region:

*The combined effect of the end of shortwave and cuts to FM services in the Pacific along with little or no marketing of the remaining service has had a catastrophic effect on the role and standing of Radio Australia in the region.*

Some submitters noted the rapidly changing regional strategic and geopolitical environment, including challenges to democracy and stability. Many observed the rising influence of China in the region, through its expansion in broadcasting.



## Calls for a revitalisation of ABC's International Services in the Asia Pacific

Many submitters advocated for a revitalisation of ABC's International Services in the Asia Pacific, to restore Australia's reach and foreign policy influence in the region, retain a critical mass of expertise, and support regional stability through an independent media presence. A number of submitters, from both Australia and Pacific Island nations, were proponents of a partnership approach with local journalists and broadcasters to leverage resources (including local content creation) and support capacity building in the Pacific.

Some suggested alternative delivery models (such as the establishment of a separate entity) and/or were in favour of ring-fenced funding for International Services to ensure ABC meets its Charter obligations regarding provision of International Services. Several also referenced the recommendations in the Lowy Institute for International Policy's 2010 report regarding essential conditions for achieving soft power influence, in particular longevity, consistency and stability of funding.

## Majority of submitters in favour of restoring ABC's shortwave services

The majority of submitters advocated for restoration of ABC's shortwave services in the Pacific region.

## Radio Australia's broadcasts were valued and trusted in the Pacific

Several individual submitters described how Radio Australia's broadcasts were highly valued, respected and trusted by those living in the Pacific<sup>125</sup>. Sean Dorney, a former ABC correspondent in the Pacific, observed that in many places the broadcasts were regarded as "essential, trustworthy and reliable".

A number of submitters who currently or have previously lived in Pacific Island Countries, described the value of the broadcasts in their daily and community life. Elizabeth Cox, an Australian who lived and worked in PNG for 40 years, described how Radio Australia's shortwave programs are qualitatively different to local radio. They provide a vital window on the wider Pacific and Asia-Pacific regions and the world'.

## Radio Australia's services helped support regional democracy and stability

Many submitters, including the pro forma submissions, also spoke of the wider regional benefits of Radio Australia's services, including the promotion of democracy, stability and security, and good governance. The Vanuatu Daily Post commented that:

*Access to Australian media in the islands improves our understanding and makes it easier to defend such basic ideas as democracy, commerce and individual rights.*

Several submissions, including those from the International Broadcasting Research Group, Transparency International, Supporters of Australian Broadcasting in Asia and the Pacific, the Development Policy Centre and the Media, Entertainment & Arts Alliance (MEAA) discussed the particular importance of these services in countries with restricted press freedom. Submitters referred to sources such as the Reporters Without Borders' 2018 Media Freedom Index, which indicates that several countries in the region are facing increased challenges to press freedom through editorial pressure from their governments.

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<sup>125</sup> This includes one listener in Philippines.





A couple of individual submitters mentioned that Radio Australia's broadcasts stimulated local broadcasters to publish their own works. Daniel Clift commented that:

*Radio Australia stories often give small broadcasters and publishers in island nations cause to publish their own works to supplant the information supplied by Radio Australia. This can have dramatic influence on the democratic nature of island nations in the region, improving quality of life for their inhabitants, in simply knowing what is happening in other parts of the world.*

### Most submitters dispute the claim that shortwave is an out-dated technology

Submitters who were in favour of restoring shortwave services disputed the ABC's claims (including those in their submission to the Senate Environment and Communications Legislation Committee) regarding that the technology has "limited and diminishing audiences" and disproportionately high costs.<sup>126</sup>

### Shortwave considered essential for reaching large proportions of the Pacific population

Several expressed concern with the audience statistics cited by the ABC, in particular those relating to audiences in PNG (including that the listenership surveyed was not reflective of census data), and assumptions around access to alternative platforms, particularly in Pacific Island Countries. Some submitters who had lived and worked in the Pacific commented that FM broadcasts are unavailable to people living outside the main urban centres, which in some countries such as PNG accounts for a large majority of the population. Some also explained the limited affordability and availability of satellite and internet communication services for large proportions of the population in the Pacific. The Secretary General of the Pacific Islands Forum Secretariat, Dame Meg Taylor, submitted that:

*In time, the necessity of shortwave technology may fade, however it should only do so once suitable alternatives are accessible to all in the Pacific. Too many of our people rely on shortwave technology, and I stress the need for Australia to strongly consider restoring the services for those that depend on it during times of both normality and crisis.*

### Declining reach attributed partly to problems with signal accessibility

Some submitters acknowledged that shortwave and FM audiences have been declining, but countered this by stating that this has been partly due to problems with signal accessibility. Geoff Heriot, former ABC correspondent and senior executive, submitted that declining household access in PNG to media overall was partly due to declining signal reliability of local services. Other individual submitters, Graeme Dobell (former ABC reporter and currently Journalist Fellow with the Strategic Policy Institute) and Peter Marks (former ABC technology editor), commented that ABC's signal strength was too low-powered, meaning broadcasts were inaudible to listeners. Marks also submitted that the broadcasts were on frequencies that could not be received by most car radios in the Pacific.

### Shortwave has advantages over other technology platforms

Submitters in favour of reinstating shortwave services cited its advantages over other platforms, such as wide coverage (including in rural and remote areas, and at sea), affordability (receivers being cheap and accessible) and ability to run off battery power (as opposed to mains power). There was frequent mention of how shortwave transmissions are less vulnerable to jamming, and to political disruption

<sup>126</sup> Australian Broadcasting Corporation, *Submission to the Senate Environment and Communications Legislation Committee, Inquiry into the Australian Broadcasting Corporation Amendment (Restoring Shortwave Radio) Bill 2017*, May 2017



(transmissions being switched off by local administrations, for example during domestic political turmoil such as the 2009 Fiji coup).

Many submitters cited the benefits of Radio Australia's shortwave services in emergency preparedness and response in Pacific Island nations, particularly in relation to weather events such as cyclones. They explained that having transmitters located offshore meant important information could still be broadcast and received, even if local radio transmitters were damaged.

#### **Other international broadcasters continue to see value in shortwave**

Several submitters commented that other international broadcasters continue to see value in shortwave, with the BBC, Radio New Zealand Pacific and China Radio International expanding their services. Submitters noted that both the BBC and Radio New Zealand have upgraded their shortwave services through the use of Digital Radio Mondiale (DRM). Other submitters also commented on the potential for DRM in the future, with some noting it is currently an emergent technology. The ABC Friends National Inc. submitted that "until there is good internet everywhere shortwave transmission using Digital Radio Mondiale (DRM) remains a good option".



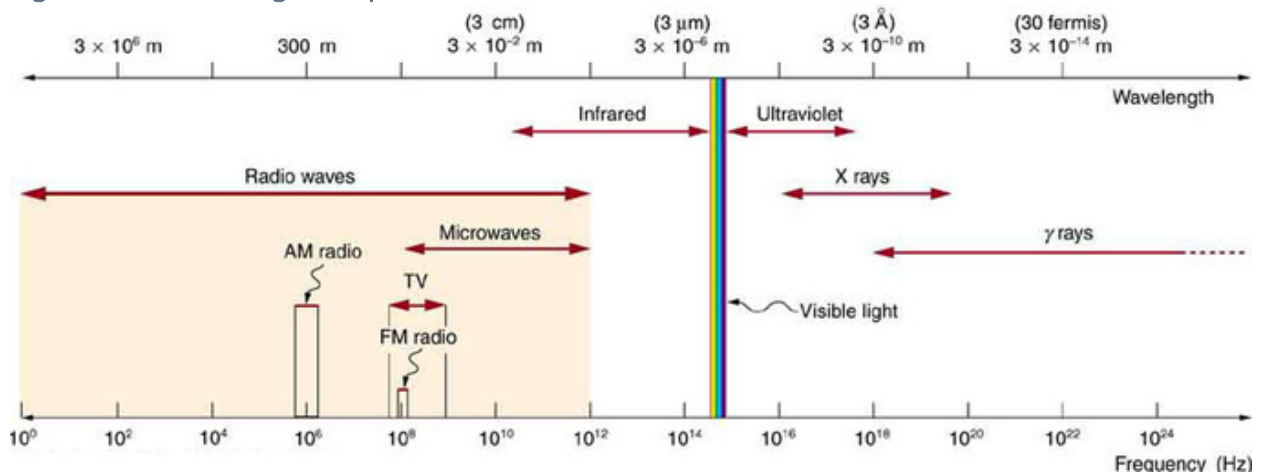
## Appendix 4: Technical tables

### Electromagnetic spectrum and the reach of broadcast radio frequencies

Figure 35 depicts the electromagnetic spectrum, indicating the major bands of wavelength/frequency. These bands may be distinct or overlap, e.g. the high frequency portion of the radio band incorporates microwaves, both originating from an electric source, whereas microwaves overlap with infrared waves originating from a thermal source. The use of electromagnetic waves for communications is determined their physical properties:

- the energy required is proportional to frequency
- infrared and ultraviolet bands are absorbed or scattered by the atmosphere, whereas the radio and light bands are transmitted, and
- electromagnetic radiation travels in straight lines, but can be reflected including creating a “wave guide” and hence a “narrow beam” transmission (e.g. laser), and
- the signal strength of broad beams falls with the square of distance travelled.

Figure 35: Electromagnetic spectrum



Source: <https://courses.lumenlearning.com/boundless-physics/chapter/the-electromagnetic-spectrum/>

Hence, most generally, the reception of radio signals is limited to “line of sight” of a transmitter, a distance ultimately limited to the distance to the horizon by the earth’s curvature, or between 50 and 65 km for a transmission antenna at 200-300 metre altitude. Longer distance “line of sight” transmissions are achieved by elevating the altitude of the transmitter, e.g. satellite transmitters.

Alternatively longer distance transmission may be achieved by:

- “ground wave” propagation in the Medium Frequency/Amplitude Modulation (AM) band makes a wave guide of the earth’s surface by inducing currents in the earth that curve the wavefront towards the surface, extending the propagation over the horizon. Reach is greatest over higher conductivity surfaces such as smooth sea surfaces and for lower frequencies, and
- “sky wave” propagation in the high frequency/shortwave (SW) radio band, where the signal is reflected back to earth from the high altitude, electrically charged ionosphere. Actual reach (i.e. the maximum usable frequency between two locations) depends on ionospheric conditions that vary with time of day, season, location, solar UV and x-ray radiation and the 11 year solar cycle.

As broad beam transmissions, both ground wave and sky wave propagation require very high power transmitters to deliver a detectable signal over long distances.



Conversely wave guides can enable long distance propagation with limited attenuation of signal strength, requiring lower power transmitters:

- coaxial cable guiding television band radio waves (e.g. cable television)
- narrow beam microwaves providing point to point communications (e.g. satellite uplinks), and
- light in an optical fibre (e.g. intercontinental, undersea cables for internet communications).

## Status of Digital Terrestrial Television

The International Telecommunication Union has identifies the status of DTT transition as completed in just Japan and Mongolia amongst the 40 Asia-Pacific countries considered in the Review.

Table 16: Status of Digital Terrestrial Television

Country	ASO Date	TV Standard	Compression Format	Status
Bangladesh	2016	DVB-T2	MPEG-4	Not Started
Bangladesh	2016	DVB-T2	MPEG-4	Not Started
Bhutan	2020	DVB-T2		
Brunei Darussalam	2015	DVB-T		
Cambodia	2020	DVB-T, DVB-T2, DTMB	MPEG-4	Ongoing
China	2018	DTMB		
Fiji	2018	DVB-T2	MPEG-4	Ongoing
India	2015	DVB-T, DVB-T2		Ongoing
Indonesia	2018	DVB-T2	MPEG-4	Ongoing
Japan	2011	ISDB-T	MPEG-2, MPEG-4	Completed
Kiribati	2017	ND		
Korea (Rep. of)	2012	ATSC	MPEG-2	Completed
Lao P.D.R.	2020	DVB-T, DTMB		
Malaysia	2018	DVB-T2		Not Started
Maldives	2020	DVB-T2, ISDB-T		
Micronesia		ND		
Myanmar	2020	DVB-T2	MPEG-4	Ongoing
Nauru		ND		
Nepal (Republic of)	2017	DVB-T2		
Papua New Guinea	2017	DVB-T2	MPEG-4	Ongoing
Philippines	2018	ISDB-T		
Samoa	2017	DVB-T2	MPEG-4	Ongoing
Singapore	2015	DVB-T, DVB-T2		
Solomon Islands		ND		
Sri Lanka	2017	DVB-T2, ISDB-T		
Thailand	2020	DVB-T2	MPEG-4	Ongoing
Timor-Leste	2024	ND		
Tonga	15/06/2014	DVB-T2		
Vanuatu	2017	DVB-T2		
Viet Nam	31/12/2020	DVB-T, DVB-T2	MPEG-2, MPEG-4	Ongoing

Source: <https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/dashboard.aspx>

## Methods of signal modulation

Table 17 describes the detailed methods of modulating signals for radio frequency transmission of content applied in communications systems.



Table 17: The shift from analog to digital modulation modes

Type of Modulation	Application
<b>Analog modulation:</b>	
• Amplitude modulation (AM)	
• Double sideband, with carrier (DSB-WC)	Used by longwave, mediumwave and shortwave commercial radio broadcasts
• Double sideband, reduced carrier (DSB-RC)	Used by some commercial shortwave broadcasters
• Double sideband, suppressed carrier (DSB-SC)	Used to reduce the power required by normal AM radio transmissions
• Single sideband, suppressed carrier (SSB-SC)	Used extensively for amateur radio communications
• Quadrature amplitude modulation (QAM)	Uses two analog signals to modulate the amplitudes of two carrier waves. Now used extensively in digital communication and broadcasting systems (see below).
• Angle modulation:	
• Frequency modulation (FM)	Encodes information into deviations in the frequency of the carrier. Used by analog FM radio and TV broadcasts.
• Phase modulation (PM)	Encodes the content into deviations in the phase of the carrier frequency. Used in Wi-Fi, satellite and GSM mobile phone transmissions
<b>Digital modulation:</b>	
• Amplitude modulated:	
• Amplitude shift keying (ASK): On-off keying (OOK)	Used by Morse code transmissions over telegraph wire and radio frequency
• Pulse modulation:	
• Pulse-amplitude modulation (PAM)	Largely replaced by PCM and PPM
• Pulse-code modulation (PCM)	Widely used in digital audio applications (e.g. computer audio, compact discs and digital telephony)
• Pulse-width modulation (PWM)	Primarily used to control the speed of DC motors
• Pulse-position modulation (PPM)	Can be used in narrow band RF communications, but primarily used in optical communications systems.
• Angle modulated:	
• Frequency shift keying (FSK)	Digital information is transmitted through discrete changes in the carrier frequency. Used in communication systems such as amateur radio, caller ID and emergency broadcasts
• Multiple FSK (MFSK)	Form of FSK that uses more than two frequencies
• Minimum-shift keying (MSK)	More spectrally efficient form of FSK
• Gaussian minimum shift keying (GMSK)	Used in GSM mobile phones.
• Binary phase-shift keying (BPSK or PSK)	A two phase modulation scheme, where the 0s and 1s in a binary message are represented by two different phase states in the carrier signal



Type of Modulation	Application
<ul style="list-style-type: none"> <li>Quadrature amplitude modulation (QAM)</li> </ul>	Uses two analog message signals, or two digital bit streams, to modulate the amplitudes of two carrier waves.
<ul style="list-style-type: none"> <li>2 QAM</li> </ul>	Equivalent to BPSK
<ul style="list-style-type: none"> <li>Quadrature phase-shift keying (QPSK or 4 QAM)</li> </ul>	This is a form of Phase Shift Keying in which two bits are modulated at once, selecting one of four possible carrier phase shifts (0, 90, 180, or 270 degrees). QPSK allows the signal to carry twice as much information as ordinary PSK using the same bandwidth
<ul style="list-style-type: none"> <li>16 QAM, 32 QAM, 64 QAM, 128 QAM, 256 QAM</li> </ul>	64 QAM and 256 QAM are often used in digital cable television and cable modem applications.
<ul style="list-style-type: none"> <li>Offset QPSK (OQPSK)</li> </ul>	Limits the maximum phase change possible in QPSK.
<ul style="list-style-type: none"> <li>PI over 4 differential QPSK (</li> </ul>	
<ul style="list-style-type: none"> <li>Spread spectrum:</li> </ul>	Signal multiplexing techniques that are used to reduce interference to signals (either intentional or unintentional) and provide communications services to multiple users in a single-bandwidth wired or wireless medium
<ul style="list-style-type: none"> <li>Frequency hopping spread spectrum (FHSS)</li> </ul>	Originally used by military in WWII to prevent signal jamming. Still used by cordless phones. Bluetooth also uses an adaptive form of frequency-hopping spread spectrum to communicate with Bluetooth devices.
<ul style="list-style-type: none"> <li>Direct sequence spread spectrum (DSSS)</li> </ul>	Reduces overall signal interference by spreading the signal over a multiple individual channels making the resulting wideband channel more noisy, allowing for greater resistance to unintentional and intentional interference
<ul style="list-style-type: none"> <li>Code division multiple access (CDMA)</li> </ul>	Takes the digitized version of an analog signal and spreads it out over a wider bandwidth at a lower power level. Used in Wi-Fi networks
<ul style="list-style-type: none"> <li>Frequency division multiple access (FDMA)</li> </ul>	Divides one channel or bandwidth into multiple individual bands, each for use by a single user
<ul style="list-style-type: none"> <li>Time division multiple access (TDMA)</li> </ul>	Divides a single channel or band into time slots. Each time slot is used to transmit one byte or another digital segment of each signal in sequential serial data format. This technique works well with slow voice data signals, but it's also useful for compressed video and other high-speed data.
<ul style="list-style-type: none"> <li>Spatial division multiple access (SDMA)</li> </ul>	Increases the capacity of the system and transmission quality by focusing the signal into narrow transmission beams. Through the use of smart antennas with beams pointed at the direction of the mobile station, SDMA serves different users within the same region.





Type of Modulation	Application
<ul style="list-style-type: none"><li>Orthogonal frequency-division multiplexing (OFDM)</li></ul>	Used extensively in wired communication systems (e.g. ADSL and VDSL modems used for internet access over telephone lines). Also used extensively for wireless communications, including Used for digital radio broadcasts, including Digital Audio Broadcasts (DAB) and Digital Radio Mondiale (DRM), as well as Digital Video Broadcasts—Terrestrial (DVB-T) broadcasts (i.e. digital TV broadcasts) and Digital Video Broadcasts—Satellite (DVB-S) broadcasts (i.e. satellite TV broadcasts). DAB, DVB-T and DVB-S all use Moving Pictures Export Group (MPEG) codecs to compress and decompress the digital data
<ul style="list-style-type: none"><li>Multi-carrier spread spectrum modulation (MCSSM)</li></ul>	Used in cognitive radio networks



## Appendix 5: Infrastructure decision-making principles

Figure 36: Infrastructure Decision-Making Principles



### 1. Governments should quantify infrastructure problems and opportunities as part of long-term planning processes.

Plans should include analysis of the performance and service levels of existing networks under a range of future scenarios. Plans should also account for interdependencies with other infrastructure, changes in technology, market and regulatory developments that are likely to impact infrastructure services over the coming decades.



### 2. Proponents should identify potential infrastructure needs in response to quantified infrastructure problems.

These infrastructure needs should be framed as broad potential responses that are likely to be required under several future scenarios. Governments should publicly release information on strategic planning processes to explain clearly to the community what the problem is, the cost of the problem, and proposed solutions.



### 3. Proponents should invest in development studies to scope potential responses.

These development studies should seek to identify risks to the viability and delivery of these potential responses. As part of these development studies, proponents should consider a range of options, including those that make better use of existing infrastructure, or pursue reform of regulatory and pricing settings. Investment in development studies should be proportional to the scale of the problem.



### 4. Where an infrastructure need is identified, governments should take steps to ensure potential responses can be delivered efficiently and affordably.

Governments should look to protect sites and corridors for likely future infrastructure investments, and ensure infrastructure needs are appropriately integrated into long-term land use plans.



### 5. Governments should undertake detailed analysis of a potential project through a full business case and should not announce a preferred option or cost profile before undertaking detailed analysis involving multiple options.

Business cases should include rigorous examination of the potential project's benefits relative to its costs, show the project to be resilient to change under a range of future scenarios, and show the split between public and private benefits.



### 6. Proponents should assess the viability of alternative funding sources for each potential project.

Proponents should look to minimise the call on public funds through consideration of a range of funding options, and determine a fair funding split between taxpayers, users and other beneficiaries.





**7. Project proposals should be independently assessed by an appropriate third party organisation.**

For all nationally significant projects, proposals should be submitted to Infrastructure Australia and align with the *Assessment Framework*. For smaller projects or programs of investment, proposals should be independently assessed through structured and transparent review processes in each jurisdiction.



**8. Governments and proponents should undertake meaningful stakeholder engagement at each stage, from problem identification and option development to project delivery.**

This engagement should seek early input and feedback from a range of stakeholders, including local communities, businesses and industry groups, infrastructure users, private infrastructure owners and operators, and, where public funding is required, taxpayers.



**9. Governments and proponents should publicly release all information supporting their infrastructure decisions.**

This should include all analysis underpinning long-term plans, option development and assessment, through to full business cases once they have been independently assessed. Governments' and proponents' protection of information should be genuine and justifiable. In particular, commercial-in-confidence protections should only be used where a material commercial risk exists. Where risks are time-limited, governments and proponents should release information in full once risks are no longer relevant.



**10. Governments should commit to, develop and release post-completion reviews.**

Delivery dates for staged reviews should be confirmed at the outset of a project, and released at set intervals following project delivery, including several years after commissioning. Reviews should focus on:

- measuring whether the economic case for a project established in its business case is realised over time through performance measures
- whether the project was delivered on time and on budget
- whether unforeseen risks emerged and how they were managed
- extracting lessons to feed into future infrastructure development and delivery processes.



**11. Where projects are funded as part of a broader program, the corresponding decision-making processes should be robust, transparent and prioritise value for money.**

The objective, scope, scale and expected benefits of a funding program should be defined and reported openly against clear assessment criteria and objectives. Funding programs should be routinely assessed and reviewed to ensure investments are delivering against these objectives.

Source: Infrastructure Australia, *Infrastructure Decision-making Principles*, July 2018.

[https://infrastructureaustralia.gov.au/policy-publications/publications/files/Infrastructure\\_Decision-Making\\_Principles.pdf](https://infrastructureaustralia.gov.au/policy-publications/publications/files/Infrastructure_Decision-Making_Principles.pdf)

