Supported by

ITU-AIBD-ABU Pre-Summit Workshop

"Enhancing Digital Terrestrial Television Broadcasting Transition Experience"

Kuala Lumpur, Malaysia

25 May 2015

ASIA-PACIFIC INSTITUTE
FOR BROADCASTING DEVELOPMENT

Digital Broadcasting evolution

Converged world – cross delivery platforms

From the days of early radio - through the emergence of monochrome television, followed by color TV, satellite and the later digital TV (HD, UHD TV) – innovation has driven change; resulting in a richer and convergent multimedia world.

Terrestrial Television

Cable Television

Satellite Television

IPTV

Over The Top

Mobile Television

Connected Television

Standalone / Triple / Quad Play carriage network

Risks of not embracing the switchover

- ✓ **Increased costs for analogue broadcasters**
  - ❖ As technical digital standards continue to progress, maintaining, servicing and replacing obsolete analogue equipment becomes costly.
- ✓ **Loss of revenues for analogue broadcasters**
  - ❖ Consumers having more access to alternative media platforms and more affordable digital/HD devices can simply shift to competing media providers (e.g. satellite TV, online media, cable TV, triple-play broadband packages)
- ✓ **Broadcasters less able to compete with pay-TV**
- ✓ **Economic/ Social**
  - ❖ Loss of revenues from not benefiting from the introduction of new business models for digital content production and related applications.
  - ❖ Decreased opportunity of reducing the digital divide and implementing e-Gov initiatives.



The benefits are…

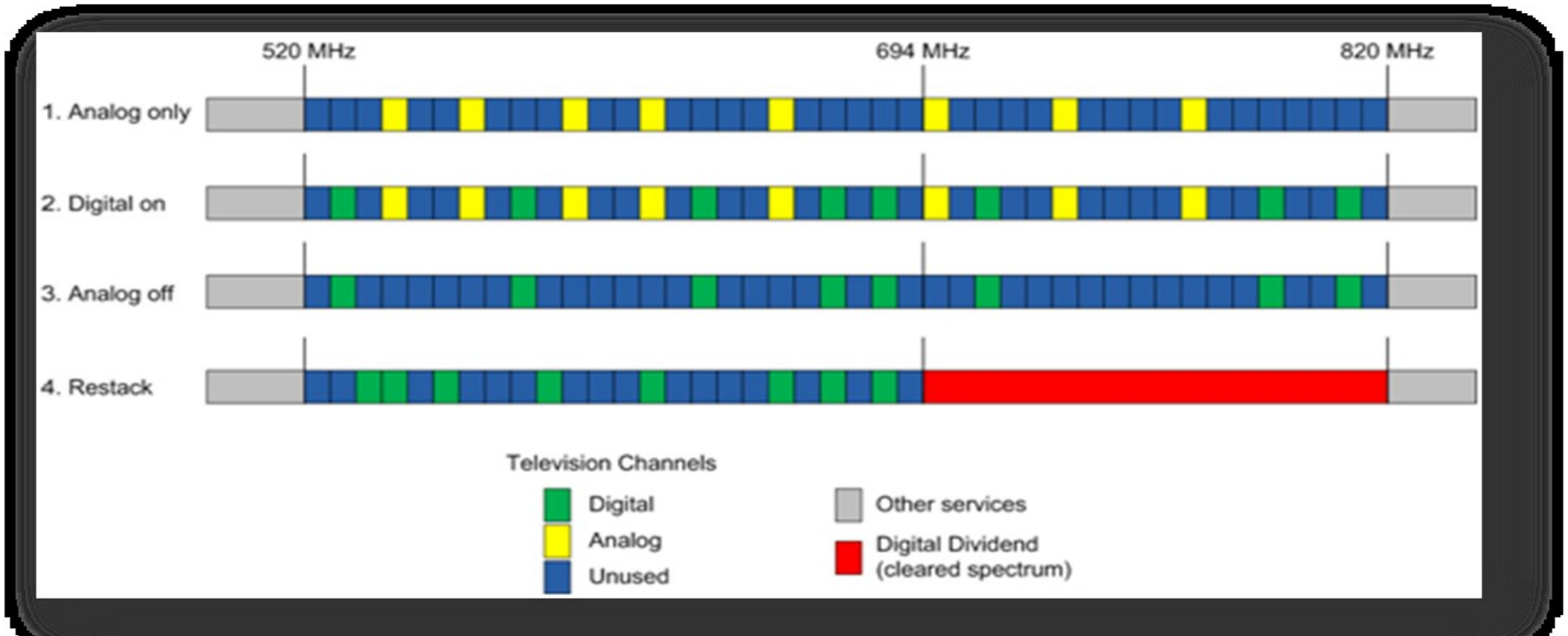
- ✓ **Efficiency gains**
  A digital multiplex allows multiple programs to be broadcast in a single frequency channel (between 4 and 18) - analogue TV can only broadcast one program per channel.
- ✓ **Better quality**
  Digital broadcasting is more resilient against interference, allowing improved coverage. Viewers can enjoy rich SDTV and HDTV conten**t.**
- ✓ **Lower power consumption**
  DTT transmitters need less power to provide the same coverage footprint.
- ✓ **Digital production**
  Content production equipment has also matured to incorporate digital processing.
- ✓ **Digital Dividend**

Digital Dividend

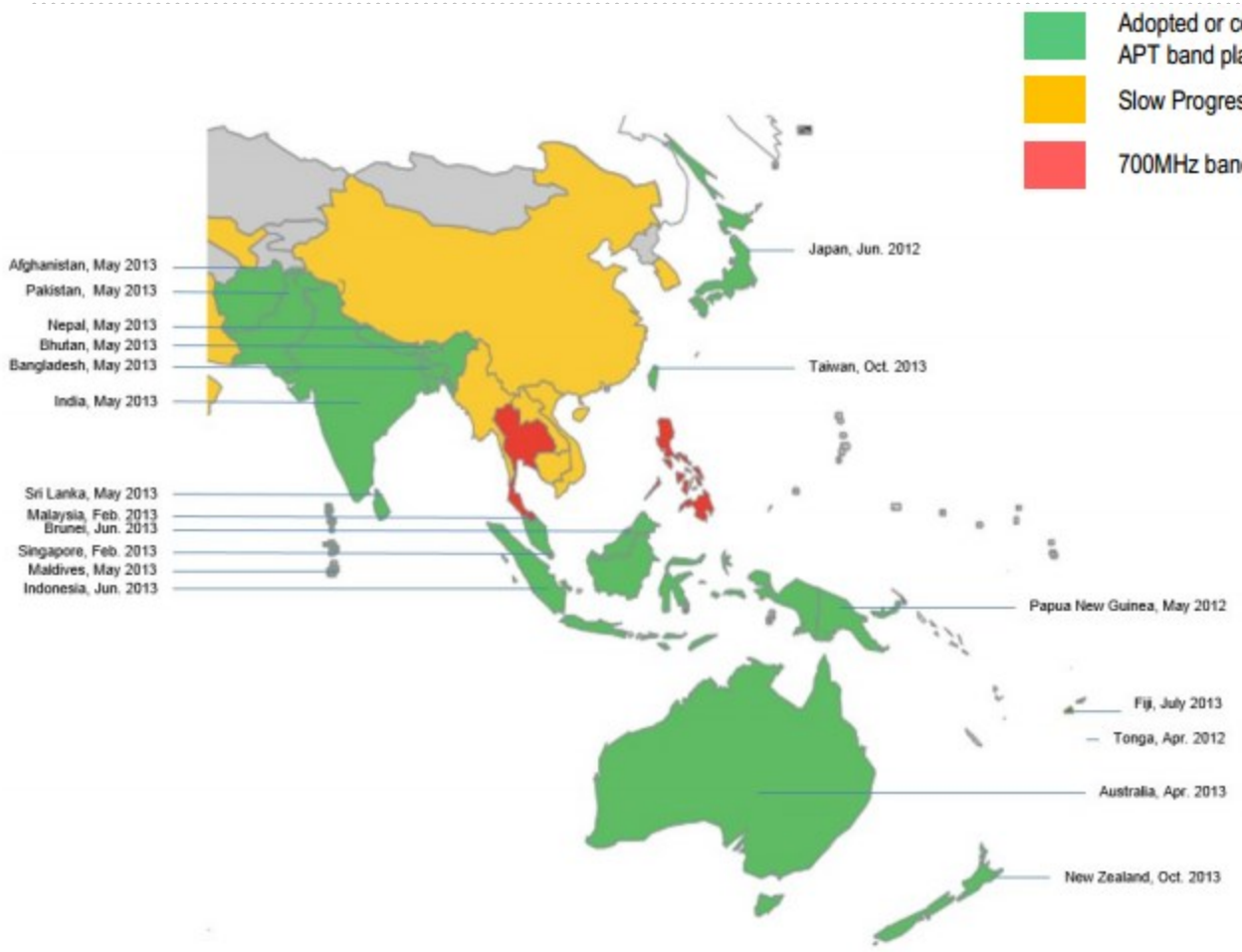
Digital Dividend

The term digital dividend is used to express the spectrum efficiency gain due to the switchover from analogue to digital terrestrial television services.

The digital dividend may be used by broadcasting services e.g. provision of more programmes, high definition, 3D or mobile television.



Harmonized adoption of APT 700 MHz band in Asia Pacific



Adopted or leaning towards APT 700MHZ band plan

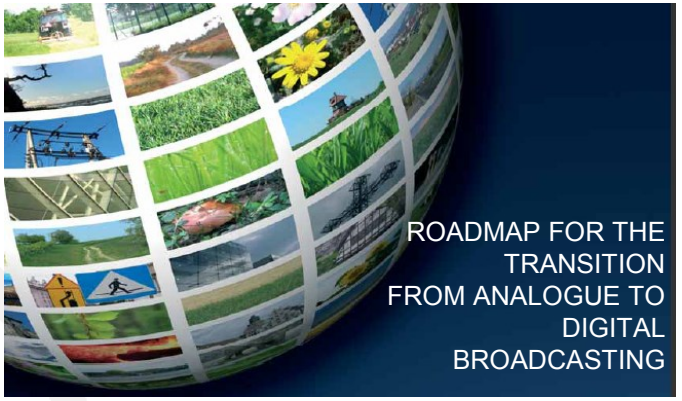
✓	Afghanistan	30M
✓	Australia	23M
✓	Bangladesh	161M
✓	Bhutan	0.7M
✓	Brunei	0.4M
✓	India	1,2Bn
✓	Indonesia	249M
✓	Japan	127M
✓	Malaysia	29M
✓	Maldives	0.4M
✓	Nepal	30M
✓	Pakistan	190M
✓	Papua New Guinea	7M
✓	Singapore	5M
✓	Sri Lanka	21M
✓	Tonga	0.1
✓	Taiwan	23M
✓	New Zealand	4M

TOTAL 2 Billion Pop

ITU's activities in Digital Broadcasting Asia-Pacific Region

ITU ASP Regional Initiative on Digital Broadcasting

To assist countries in Asia and the Pacific region in smooth transition from analogue to digital terrestrial television broadcasting with the followings:



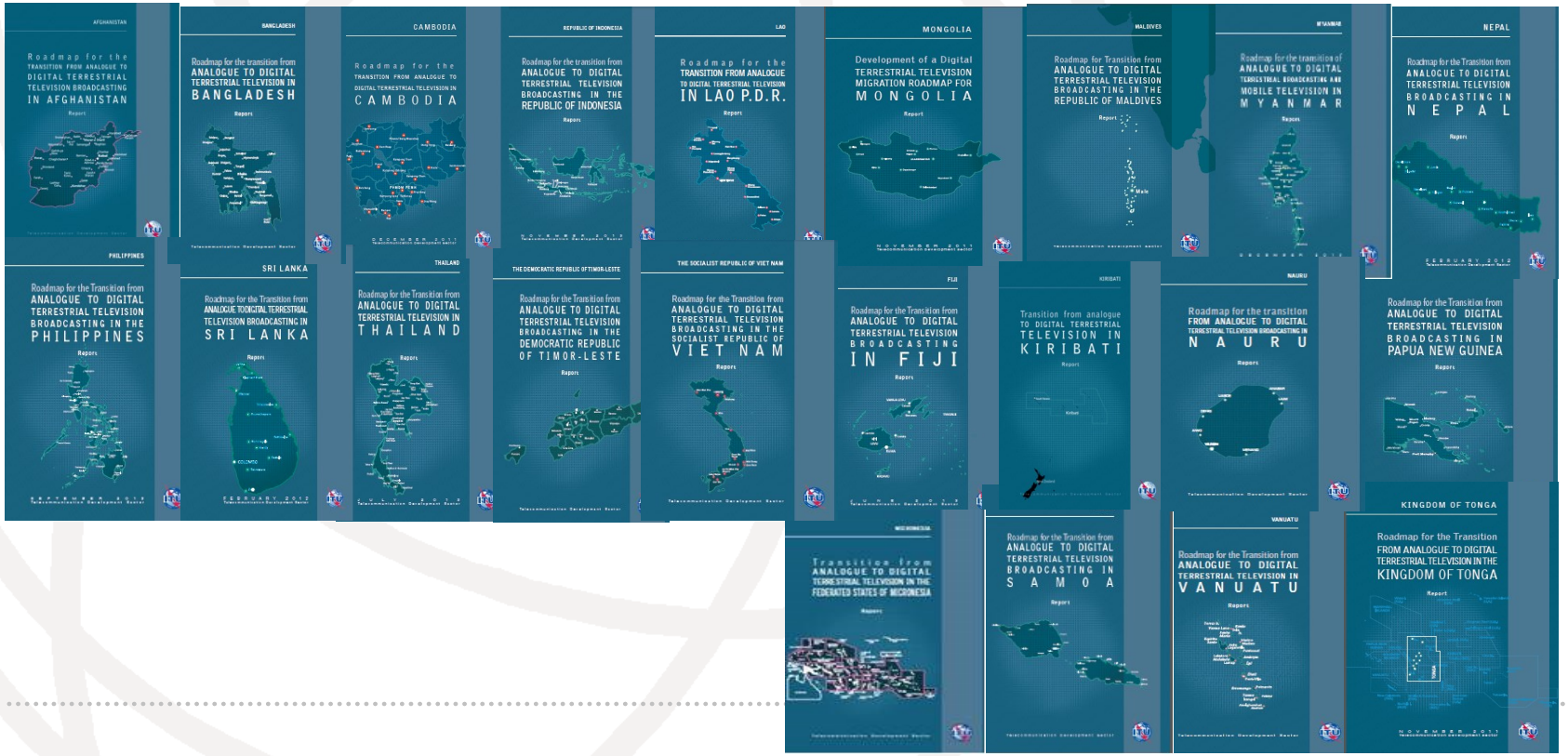
- **Policy and regulatory framework** for digital terrestrial television broadcasting through adaptation of comprehensive guideline for the transition from analogue to digital broadcasting.
- **Digital Broadcasting roadmap** for transition from analogue to digital terrestrial television broadcasting;
- **Enhanced skills** of concerned experts on the Digital Broadcasting Master Plan for the transition and technologies including interactive multimedia services, Mobile TV, Cable TV, Satellite TV and IPTV.

ITU Broadcasting Projects

- **ITU-MIC (Japan)** : Transition from Analogue to Digital Broadcasting in Africa and Asia-Pacific
- **ITU-KCC-MSIP (RO Korea)** : Roadmap for Transition from Analogue to Digital Terrestrial Television Broadcasting in Asia and the Pacific, Africa, and Americas
- **ITU-NBTC (Thailand)** : Roadmaps for Transition from Analogue to Digital Terrestrial Television Broadcasting & Digital Radio Deployment in Thailand
- **COMMS Australia** : Supports to ITU ASP Digital Broadcasting Initiative

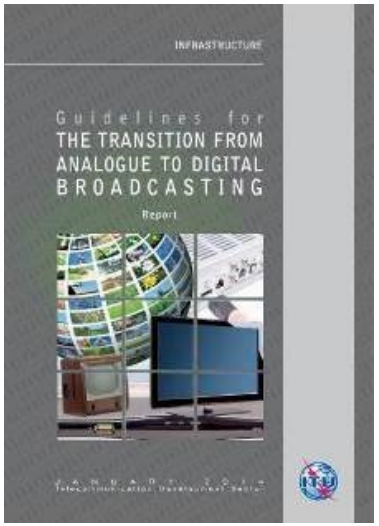
National Roadmaps

- National Roadmaps for Transition from Analogue to Digital Terrestrial Television Broadcasting (24 countries in the region)
  http://www.itu.int/en/ITU-D/Technology/Pages/ProjectonthedigitalbroadcastingtransitionroadmapinAsiaPacificCountriesRoadmaps.aspx
- **Asia (15)**: Afghanistan, Bangladesh, Bhutan, Cambodia, Indonesia, Lao PDR, Mongolia, Maldives, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Timor-Leste, Vietnam
- **Pacific: (9)** Fiji, Kiribati, Micronesia, Nauru, Papua New Guinea, Samoa, Solomon Islands, Vanuatu, Tonga

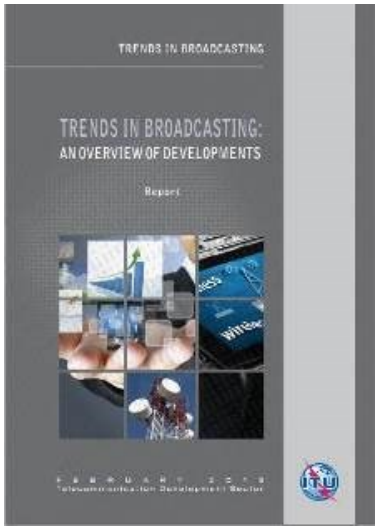


Publications

- **Guidelines for The Transition from Analogue to Digital Broadcasting** (January 2014)
  http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Guidelines%20final.pdf



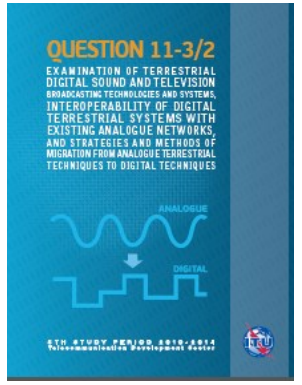
- **Trends in Broadcasting: An Overview of Developments** (February 2013)
  http://www.itu.int/en/ITU-D/Technology/Documents/Broadcasting/TrendsinBroadcasting.pdf



Publications

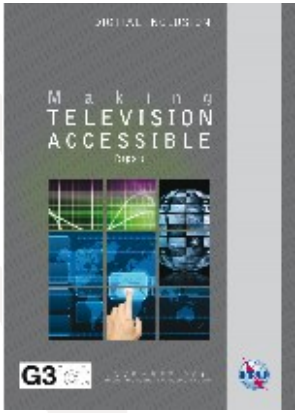
- **Q11-3/2 Report**

  http://www.itu.int/dms_pub/itu-d/opb/stg/D-STG-SG02.11.3-2014-PDF-E.pdf



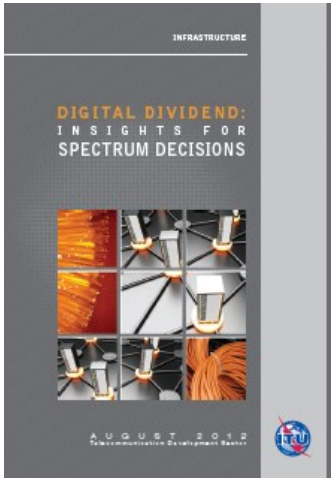
- **Making Television Accessible**

  http://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/Persons-with-Disabilities.aspx



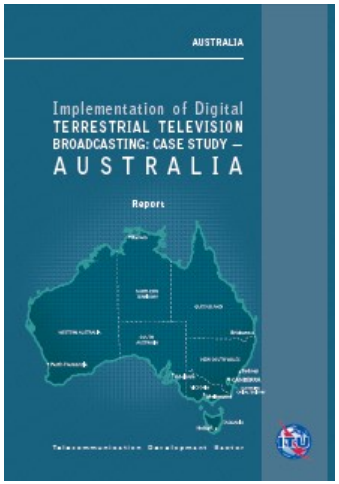
- **Digital Dividend: Insights for spectrum decisions** (August 2012)

  http://www.itu.int/ITU-D/tech/digital_broadcasting/Reports/DigitalDividend.pdf

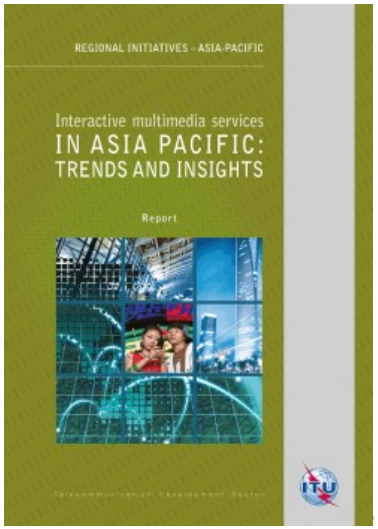


Publications – available by 3Q 2015

- **Countries case study on DTTB implementation**
  - **Australia**
  - **Japan**
  - **Thailand**



- **Interactive Multimedia Services for Asia and the Pacific:** Trends & Insights



Ongoing Activities - 2015

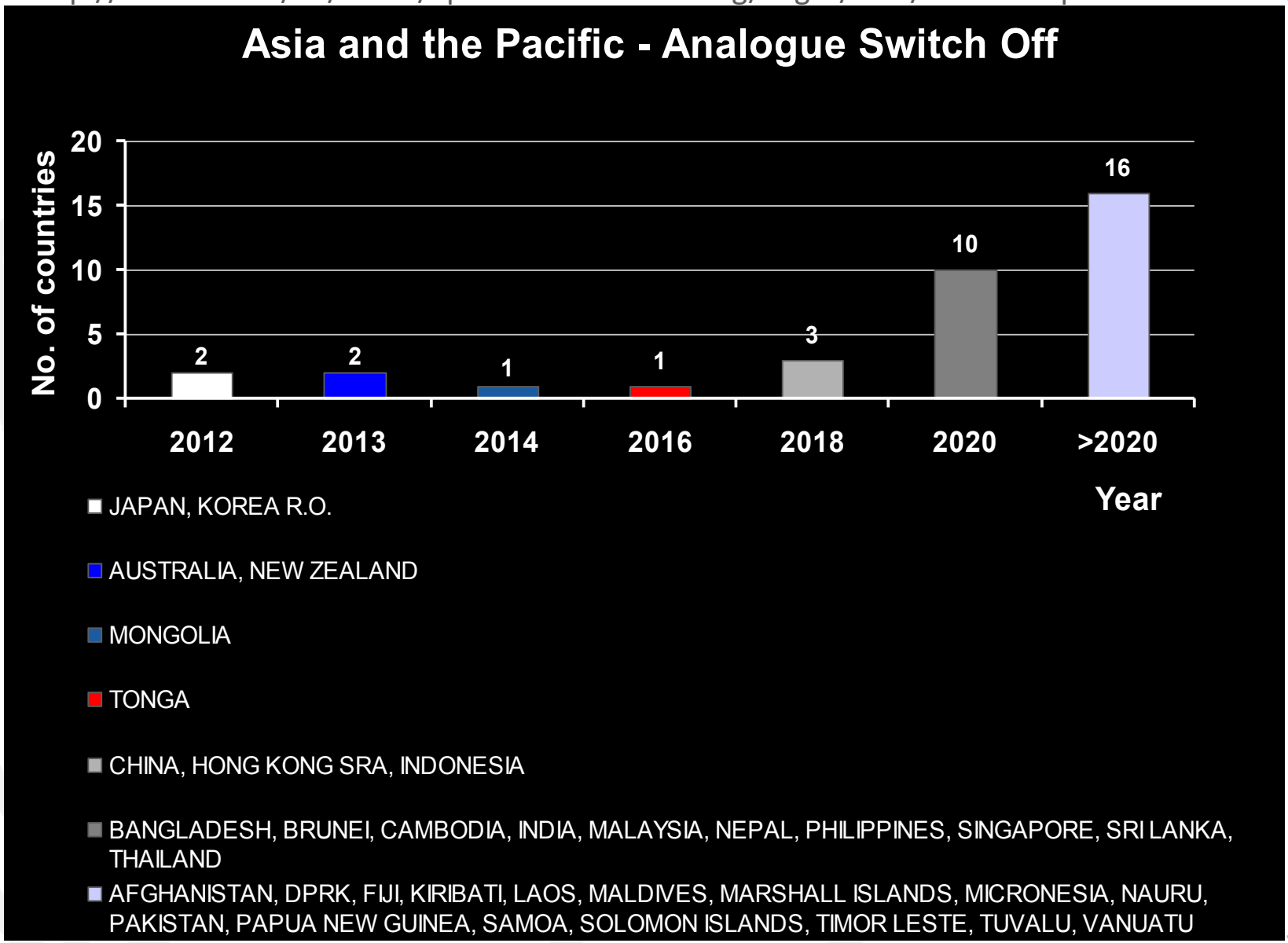
- **Digital Terrestrial Television Broadcasting Transition Implementation:**
  - ✓ **Bhutan**
  - ❖ **Maldives**
  - ❖ **Philippines**
  - ❖ **Sri Lanka**
  - ✓ **Tonga**

- **ITU-AIBD-ABU Pre-Summit Workshop on Enhancing Digital Terrestrial Television Broadcasting Experience** in Kuala Lumpur, Malaysia, 25 May 2015

- **ITU-ABU Pacific Media Partnership Conference 2015: Partnering for Broadcasting** in Apia, Samoa, 25-27 August 2015

DSO Database

http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx



Sources: Questionnaires responded in 2010 & Wikipedia as of May 2015

Conclusions

- **Transition to DTTB services** is a complex process – yet necessary for broadcasters to remain in business in the longer term
- **Late DSO transition** leads to increased costs and loss of revenues
- **A successful transition to DTTB** requires:
  - ✓ Strong leadership of government
  - ✓ Firm decision of analogue TV switch-off date
  - ✓ Close cooperation between Regulator and industry
  - ✓ Clear and timely developed regulatory framework
  - ✓ Adequate information and assistance to the public

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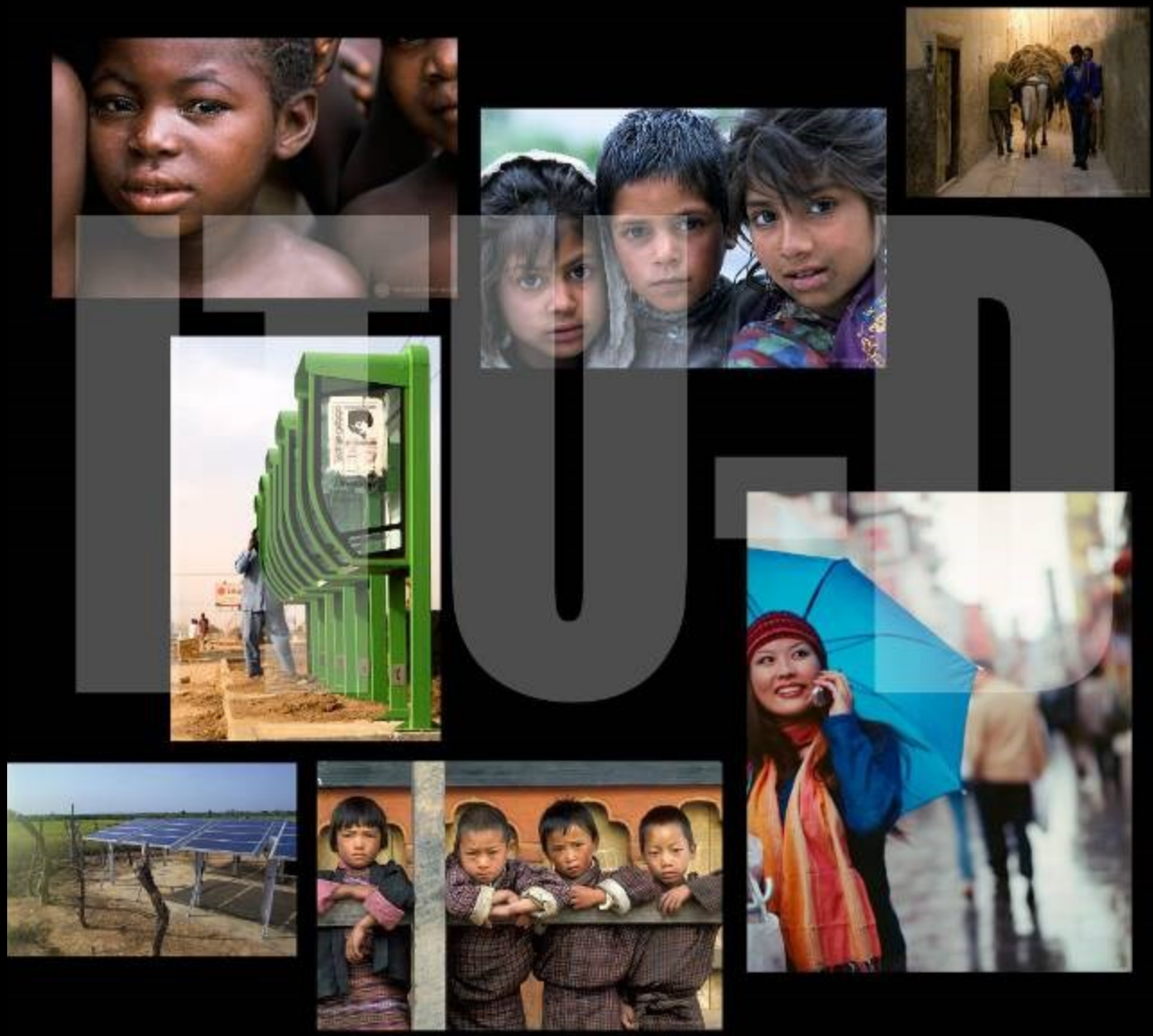

ITU : http://www.itu.int

ITU Asia Pacific : http://www.itu.int/ITU-D/asp/CMS/index.asp