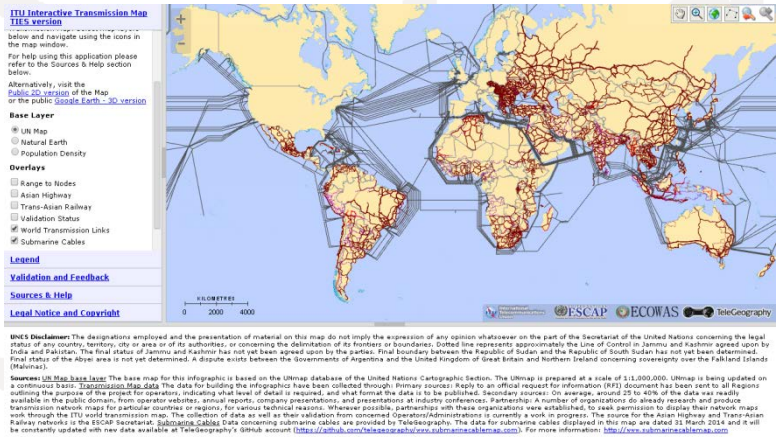
Mapa Interactivo de Transmisión Terrestre

UIT

Sergio Scarabino
Representante de la UIT para América del Sur

4 de Agosto de 2014
Asunción, Paraguay



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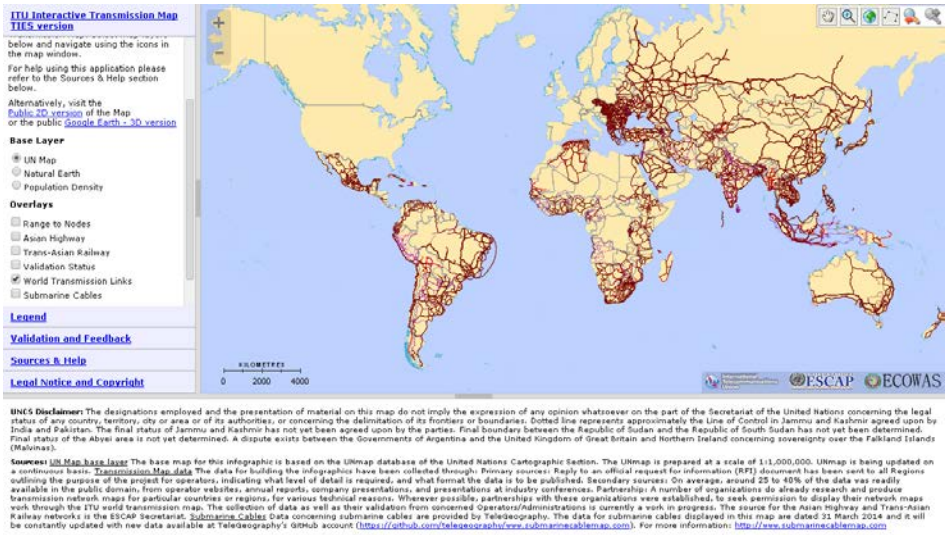
Introduction



1) Purpose: To quantify supply-side indicators for the reach of broadband networks.

2) Research: Desk research, primary research in conjunction with ITU Regional Offices, and working with partner organisations.

3) Validation: The map is validated by network operators and administrations through the ITU Regional Offices and recorded in the Validation Framework.

4) Outputs: Broadband Capacity Indicators.

http://www.itu.int/itu-d/tnd-map-public/

Broadband Transmission Capacity Indicators

Underneath the map is a database, containing records of each individual link. The following indicators are either compiled or calculated from this database:

Indicator 1: **Transmission network length (Route kilometres)**

Indicator 2: **Node locations**

Indicator 3: **Equipment type of terrestrial transmission network**

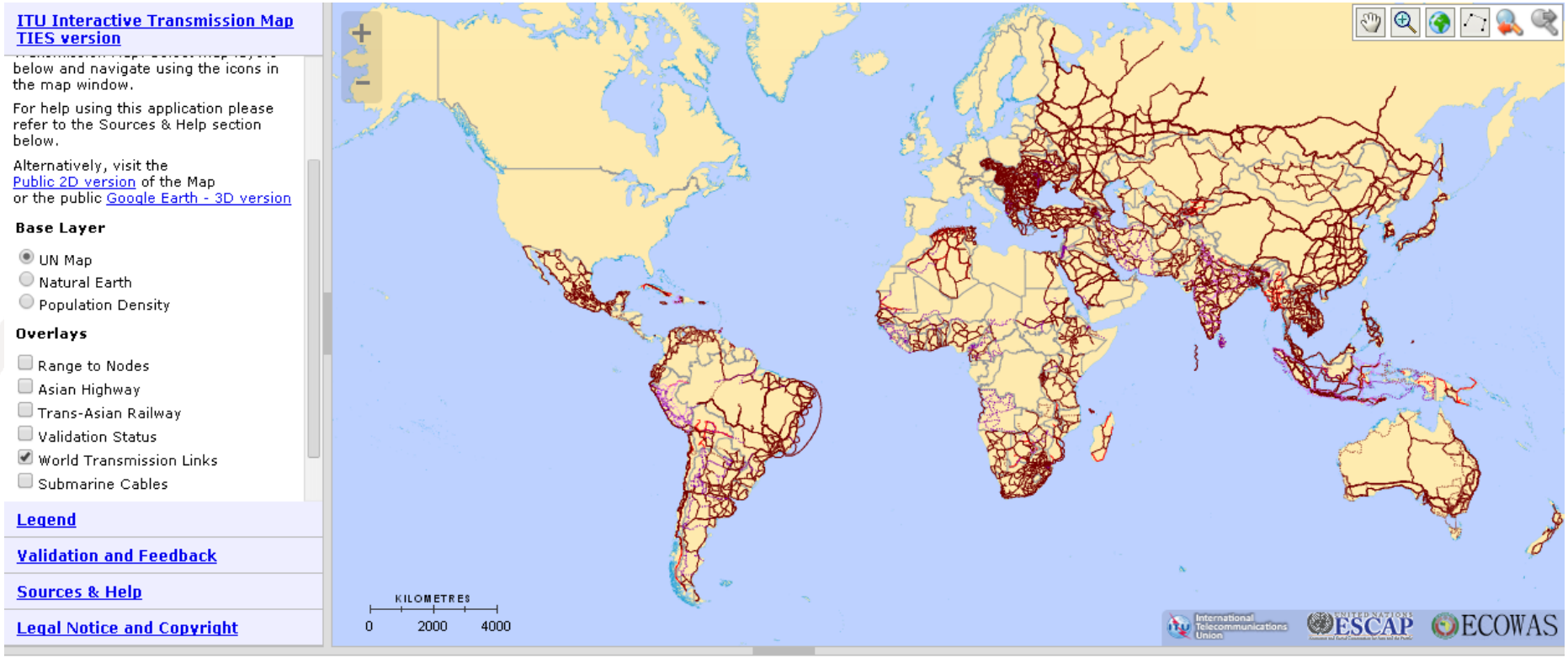
Indicator 4: **Network capacity (bit rate)**

Indicator 5: **Number of optical fibres within the cable**

Indicator 6: **Operational status of the transmission network**

Indicator 7a: **Percentage of population within reach of transmission networks**

Indicator 7b: **Percentage of area within reach of transmission networks**



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Sources: UN Map base layer The base map for this infographic is based on the UNmap database of the United Nations Cartographic Section. The UNmap is prepared at a scale of 1:1,000,000. UNmap is being updated on a continuous basis. Transmission Map data The data for building the infographics have been collected through: Primary sources: Reply to an official request for information (RFI) document has been sent to all Regions outlining the purpose of the project for operators, indicating what level of detail is required, and what format the data is to be published. Secondary sources: On average, around 25 to 40% of the data was readily available in the public domain, from operator websites, annual reports, company presentations, and presentations at industry conferences. Partnership: A number of organizations do already research and produce transmission network maps for particular countries or regions, for various technical reasons. Wherever possible, partnerships with these organizations were established, to seek permission to display their network maps work through the ITU world transmission map. The collection of data as well as their validation from concerned Operators/Administrations is currently a work in progress. The source for the Asian Highway and Trans-Asian Railway networks is the ESCAP Secretariat. Submarine Cables Data concerning submarine cables are provided by TeleGeography. The data for submarine cables displayed in this map are dated 31 March 2014 and it will be constantly updated with new data available at TeleGeography's GitHub account (https://github.com/telegeography/www.submarinecablemap.com). For more information: http://www.submarinecablemap.com

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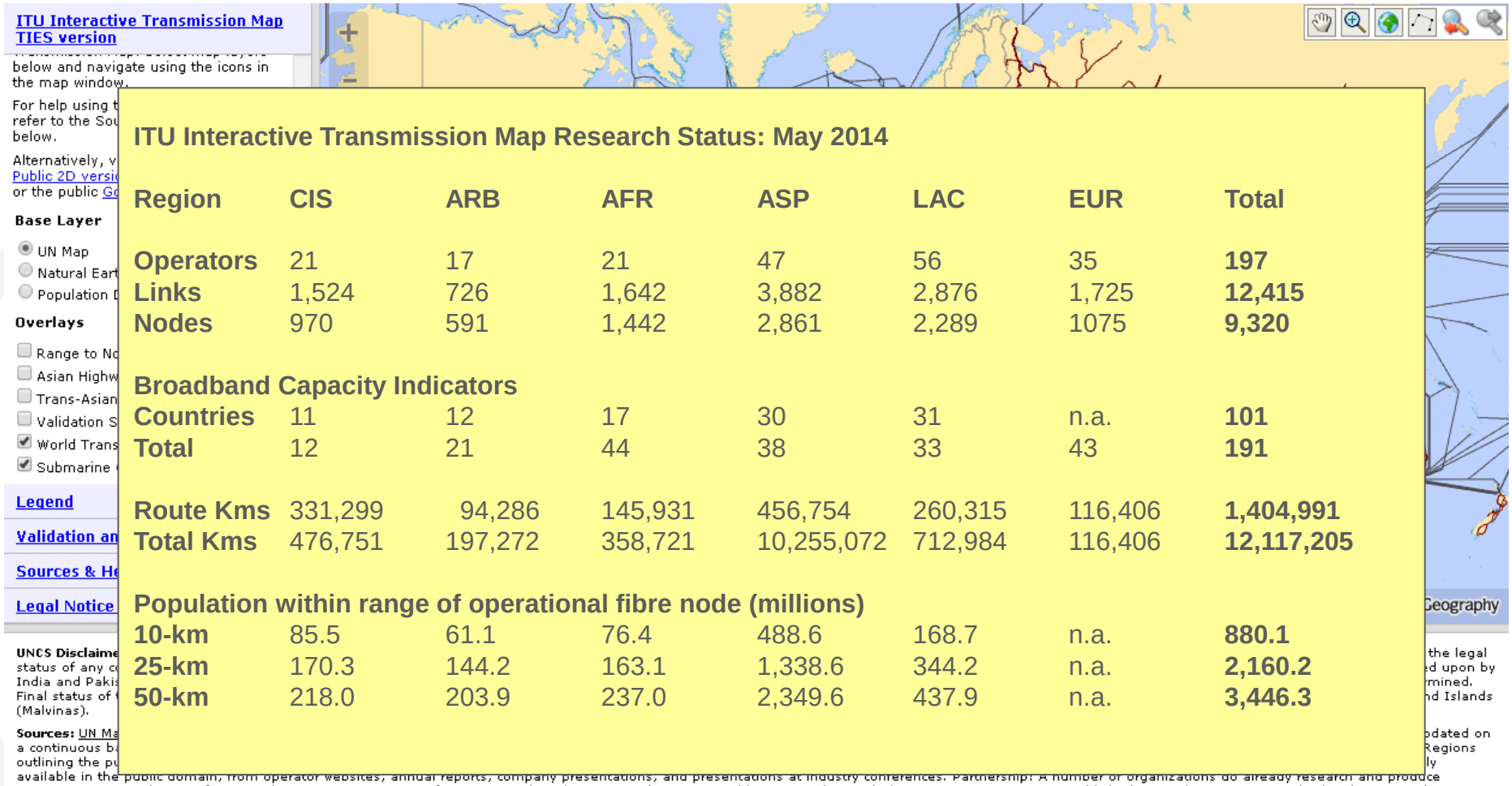

ITU Interactive Transmission Map Research Status: May 2014

Region	CIS	ARB	AFR	ASP	LAC	EUR	Total
Operators	21	17	21	47	56	35	**197**
Links	1,524	726	1,642	3,882	2,876	1,725	**12,415**
Nodes	970	591	1,442	2,861	2,289	1075	**9,320**
Broadband Capacity Indicators							
Countries	11	12	17	30	31	n.a.	**101**
Total	12	21	44	38	33	43	**191**
Route Kms	331,299	94,286	145,931	456,754	260,315	116,406	**1,404,991**
Total Kms	476,751	197,272	358,721	10,255,072	712,984	116,406	**12,117,205**
Population within range of operational fibre node (millions)							
10-km	85.5	61.1	76.4	488.6	168.7	n.a.	**880.1**
25-km	170.3	144.2	163.1	1,338.6	344.2	n.a.	**2,160.2**
50-km	218.0	203.9	237.0	2,349.6	437.9	n.a.	**3,446.3**

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ITU Interactive Transmission Map
3D version

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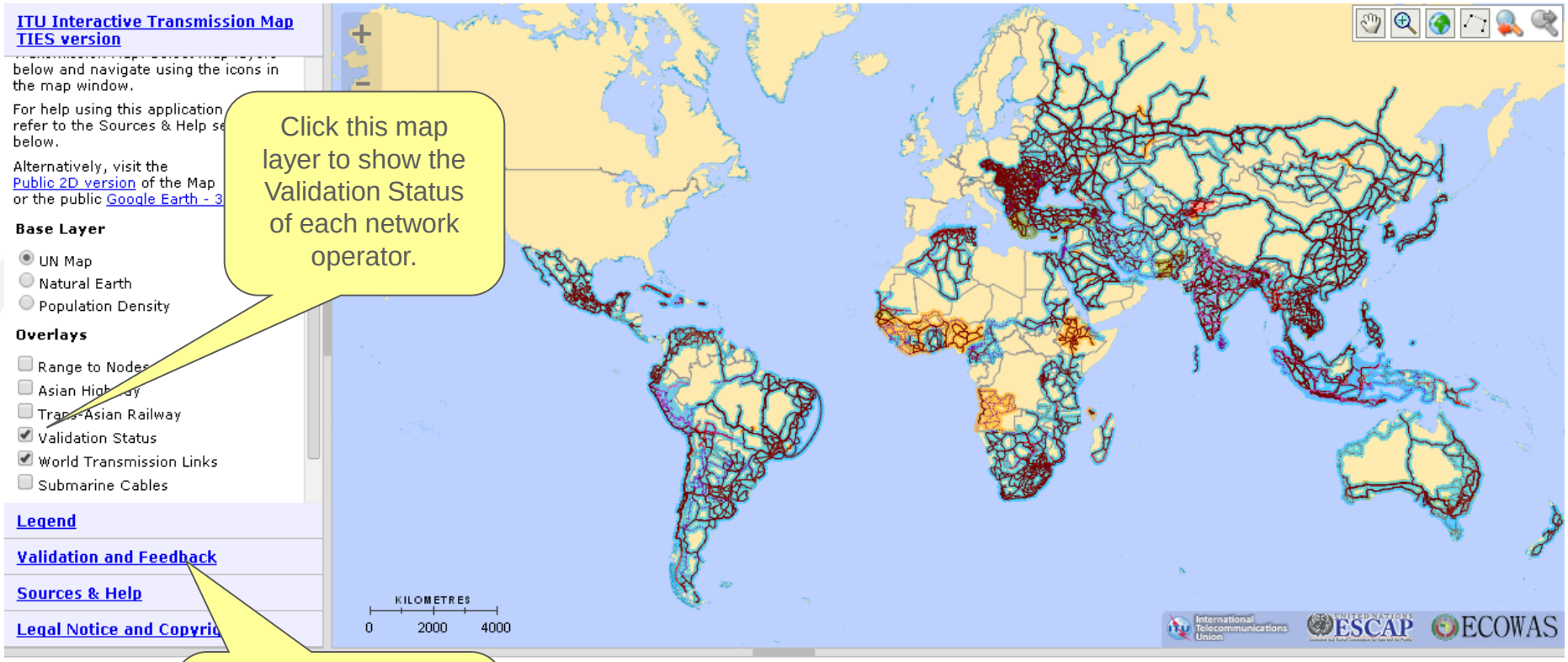

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ITU Interactive Transmission Map – Validation

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Type the name of operator or country into the search box

Search

Validation Procedure

A simple traffic light system is used to indicate the validation status of each piece of network infrastructure shown in the map. In order to see the current status of any line on the map, select the 'Validation Status' checkbox in the map layers panel. Each transmission line falls under one of the four categories: RED, AMBER, GREEN or PUBLIC. The objective of the validation exercise is to engage network operators and administrations to verify the accuracy and integrity of the data, whilst it remains visible (albeit protected) behind TIES. As th
status will progress from either RED, AMBER or GREEN through to lig
detailed description of this classification, please scroll to the bottom

Navigate by country

To change validation status

1. Check your network on the map. Go to the **ITU Interactive Transmission Map** and check the information shown for your network. The map layer called Validation Status indicates whether this network is classified as RED, AMBER, GREEN or PUBLIC (see below). If you hover your mouse over any line, a small image of the source material used to draw the map appears in the left hand side. Click this image to go through to the homepage for that network operator.

Navigate by Validation Status

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Or navigate by Region

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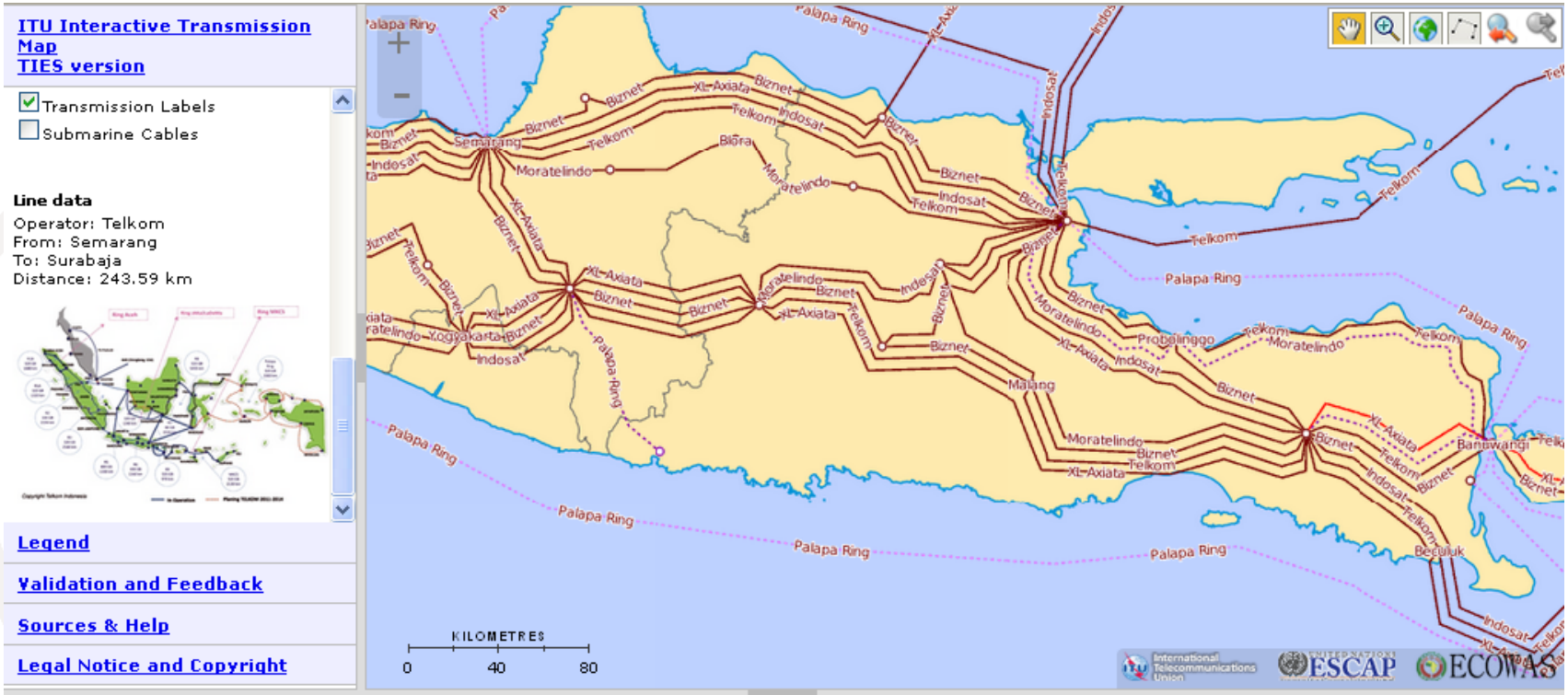

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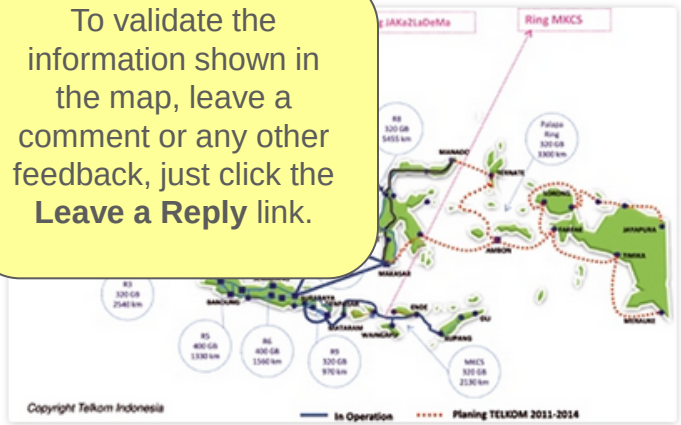
Indonesia: Telkom Indonesia

Leave a reply

Sourc[illegible] Telekomunikasi Indonesia (Telkom), 2011. http://www.telkom.co.id/download/File[illegible]n2011/Presentasi/Investor_Summit_2011_20111005_final.pdf

To validate the information shown in the map, leave a comment or any other feedback, just click the **Leave a Reply** link.



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Dear Mr. Lang,

Thank you for providing us the opportunity to review the map.

Please consider our comments in the attached file.

I have also added the diagram that we provided initially for ease of comparison.

Kind regards,

Gerardo Angelo

Director – Engineering and Operations, Timor Telecom

This information for this network is correct.

We therefore have no objection if it is included in the public version of the ITU interactive Transmission Map. Please change the validation status from amber to public.

Yongseon Jang

Executive Principal Researcher

Network-Based Initiative Service Department

Smart Network Division

Tel. 82-2-2131-0221

Fax. 82-2-2131-0209

St. Vincent and the Grenadines Sudan Swaziland Syria Tajikistan Tanzania TFYR Macedonia Thailand Timor-Leste Togo Trinidad & Tobago Tunisia Turkey Turkmenistan Uganda Ukraine United Arab Emirates Uruguay Uzbekistan Venezuela Viet Nam Zambia Zimbabwe

CATEGORIES

1. Data collected not yet processed
2. Validation Status: Red
3. Validation Status: Amber
4. Validation Status: Green
5. Validation Status: Public

RECENT POSTS

Cambodia: Telcotech

Pakistan: Ministry of IT

Bulgaria: Neterra

Turkey: Turkcell

Hungary: Level 3

RECENT COMMENTS

Chris Emberson on Timor-Leste: Timor

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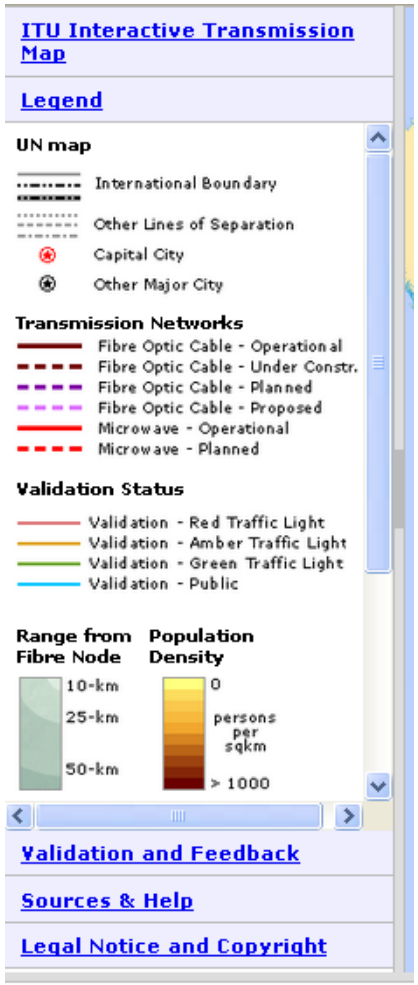
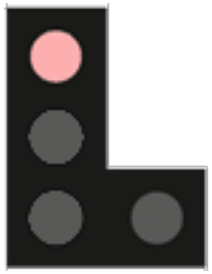
Each link in the map is given a validation status.

We use a simple traffic light system:

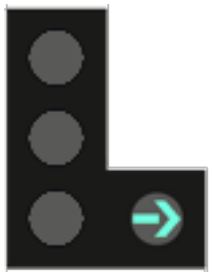




Red: Information was sourced from a restricted document (for example on TIES), a potentially unreliable publicly available source (such as a third party), may contain information which is confidential or regarded as sensitive by the network operator, and/or is very old and could be out of date (if it is more than 3-5 years old). Information must be validated by network operator or stakeholder to provide clearance that the information is correct, up-to-date, and is not confidential.

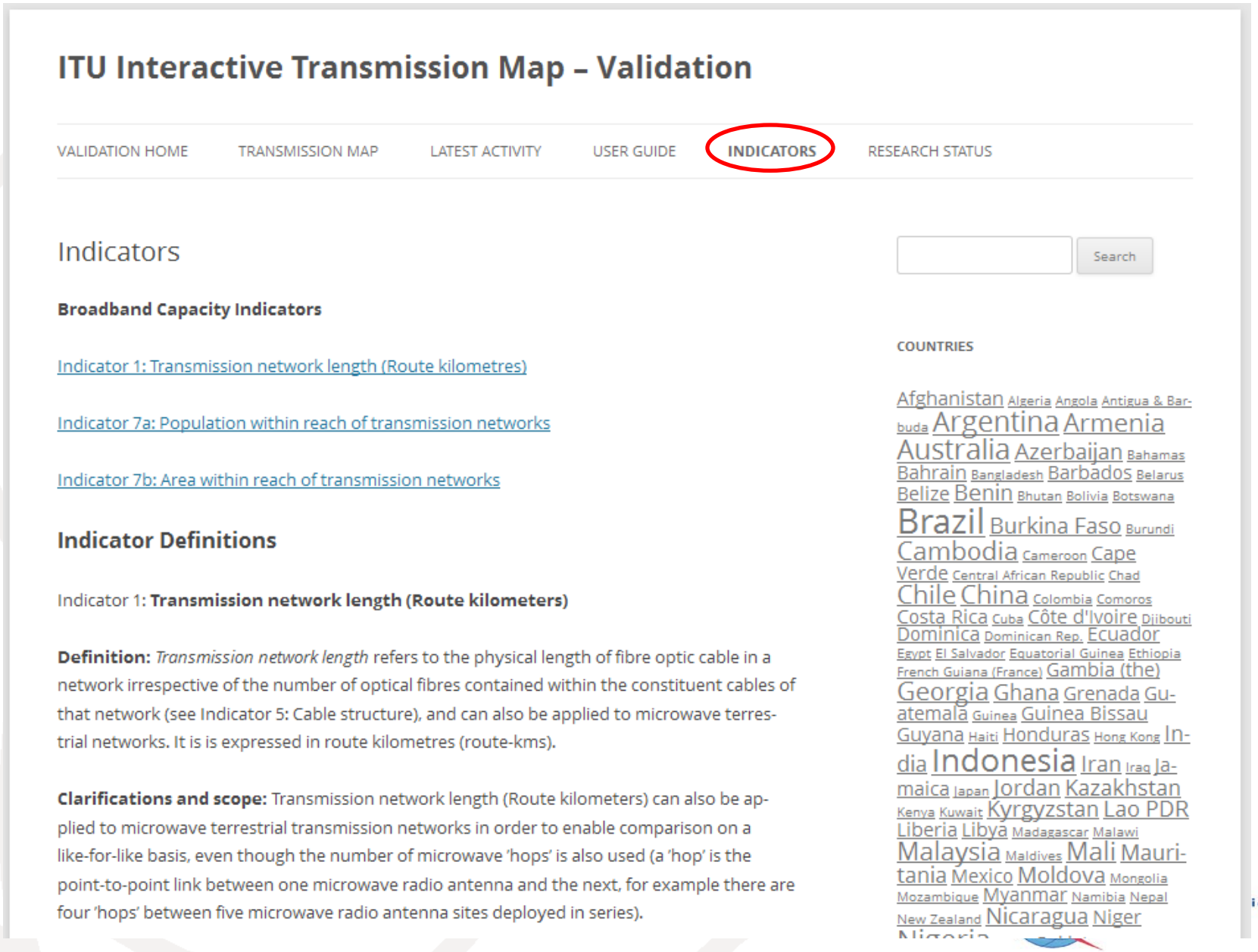
Amber: Information was not taken from a publicly available source, may be unreliable because of difficulties reading or interpreting the source material, and/or may be old and out of date. Operator is asked to provide clearance that the information is correct, up-to-date, and is not confidential.

Green: Information was sourced from an authentic, reliable publicly available source (such as a company website, annual report, presentation, or other publication), and has been deliberately put into the public domain by the network operator or administration (it is therefore not confidential). The information is current and correct, and there is no reason why a public version could not be put into the public domain.



Public: Information has been actively checked and validated by stakeholder through the TIES interactive web map platform, specifically granting permission for this information to be put into the public domain.

Indicators



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Indicators

Broadband Capacity Indicators

Indicator 1: Transmission network length (Route kilometres)

Indicator 7a: Population within reach of transmission networks

Indicator 7b: Area within reach of transmission networks

Indicator Definitions

Indicator 1: **Transmission network length (Route kilometers)**

Definition: *Transmission network length* refers to the physical length of fibre optic cable in a network irrespective of the number of optical fibres contained within the constituent cables of that network (see Indicator 5: Cable structure), and can also be applied to microwave terrestrial networks. It is is expressed in route kilometres (route-kms).

Clarifications and scope: Transmission network length (Route kilometers) can also be applied to microwave terrestrial transmission networks in order to enable comparison on a like-for-like basis, even though the number of microwave 'hops' is also used (a 'hop' is the point-to-point link between one microwave radio antenna and the next, for example there are four 'hops' between five microwave radio antenna sites deployed in series).

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Indicator 1: Route Kilometres

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Indicator 1: Transmission network length (Route kilometres)

Show 25 entries Search:

COUNTRY	REGION	ROUTE KMS	OPERATORS
Angola	AFR	7,000	Angola Cables
Benin	AFR	1,694	Benin Telecom SA, Phase 3 Telecom
Botswana	AFR	5,000	Botswana Telecom
Burkina Faso	AFR	1,300	ONATEL
Burundi	AFR	417	Burundi Backbone System
Cameroon	AFR	5,141	CAMTEL
Cape Verde	AFR	1,500	Cape Verde Telecom
Central African Rep.	AFR	287	Socatel
Chad	AFR	830	SITCOM-CHAD

COUNTRIES

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Indicators

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Indicator 7a: Population within reach of transmission networks

Show 10 entries Search:

COUNTRY	REGION	10-KM	25-KM	50-KM	10-KM	25-KM	50-KM
Honduras	AMS	1.43	3.8	20.46	115,703	307,447	1,657,067
Jamaica	AMS	46.88	98.94	100	1,305,141	2,754,459	2,783,888
Mexico	AMS	42.11	87.56	96.62	51,514,216	107,111,682	118,201,654
Nicaragua	AMS	36.51	67.54	82.31	2,220,022	4,106,596	5,005,044
Panama	AMS	16.32	39.6	53.76	630,700	1,530,232	2,077,326
Paraguay	AMS	45.66	72.79	86.73	3,105,673	4,951,254	5,899,691
Peru	AMS	36.71	56.51	64.29	11,152,145	17,164,099	19,527,857
St. Kitts and Nevis	AMS	47.55	95.33	100	25,767	51,659	54,191
St. Lucia	AMS	38.12	89.63	100	69,477	163,370	182,273

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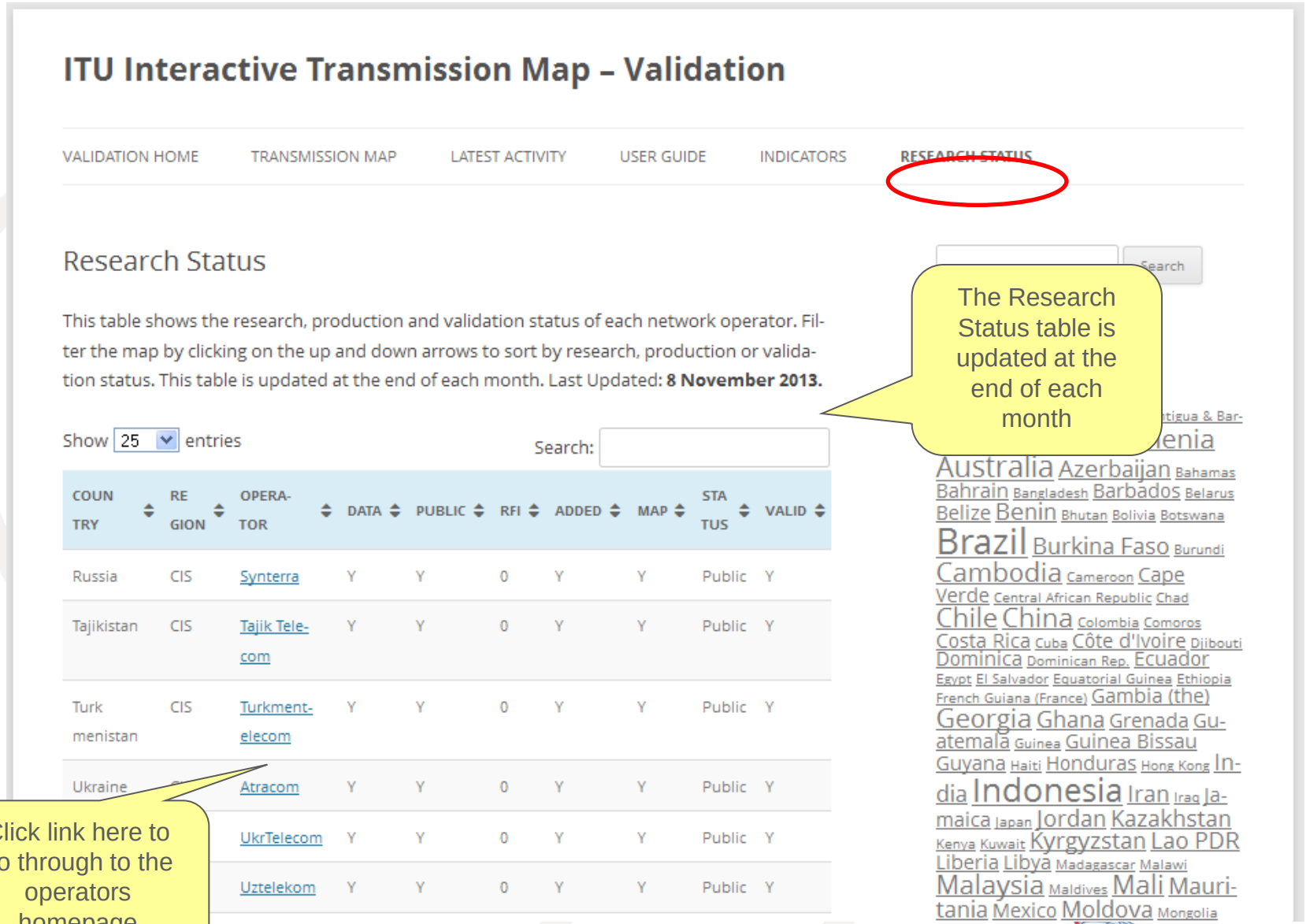
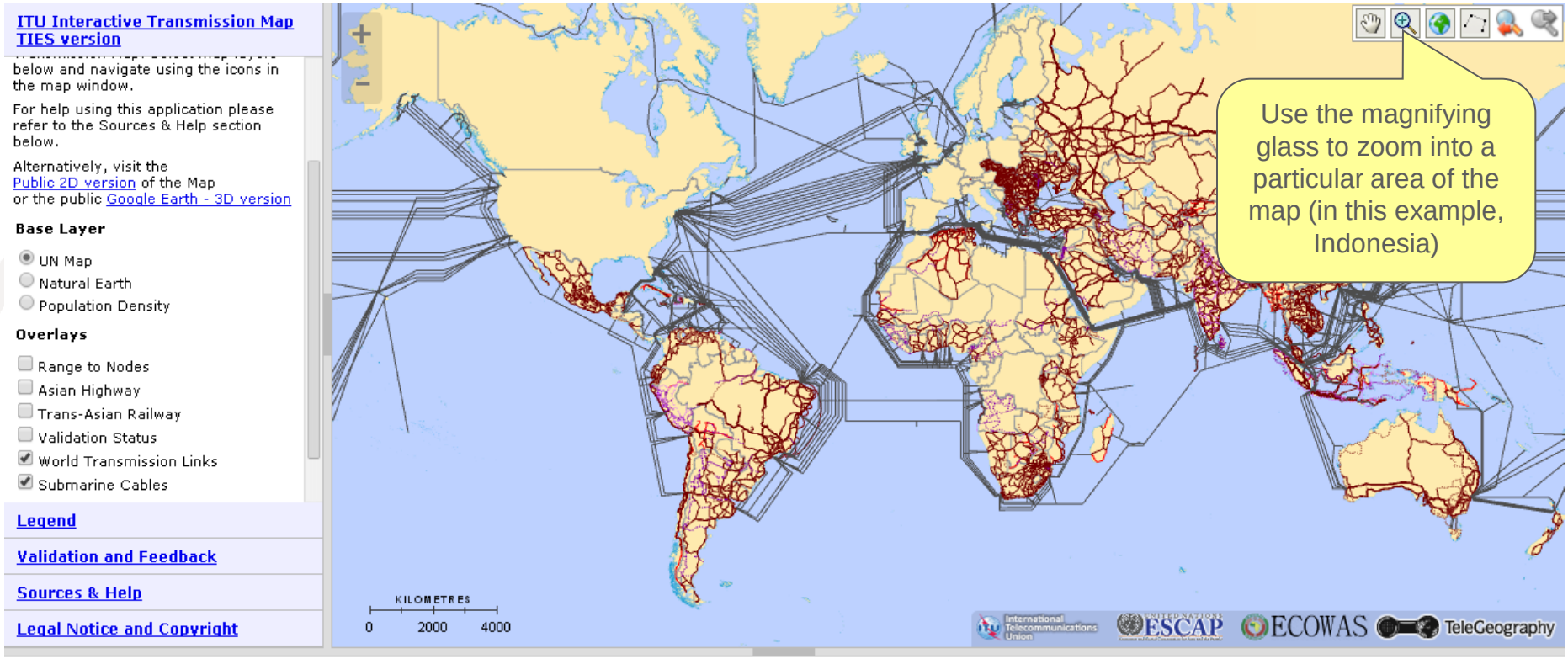
Indicators



The Research Status table is updated at the end of each month

Click link here to go through to the operators homepage



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http://www.itu.int/itu-d/tnd-map-public/

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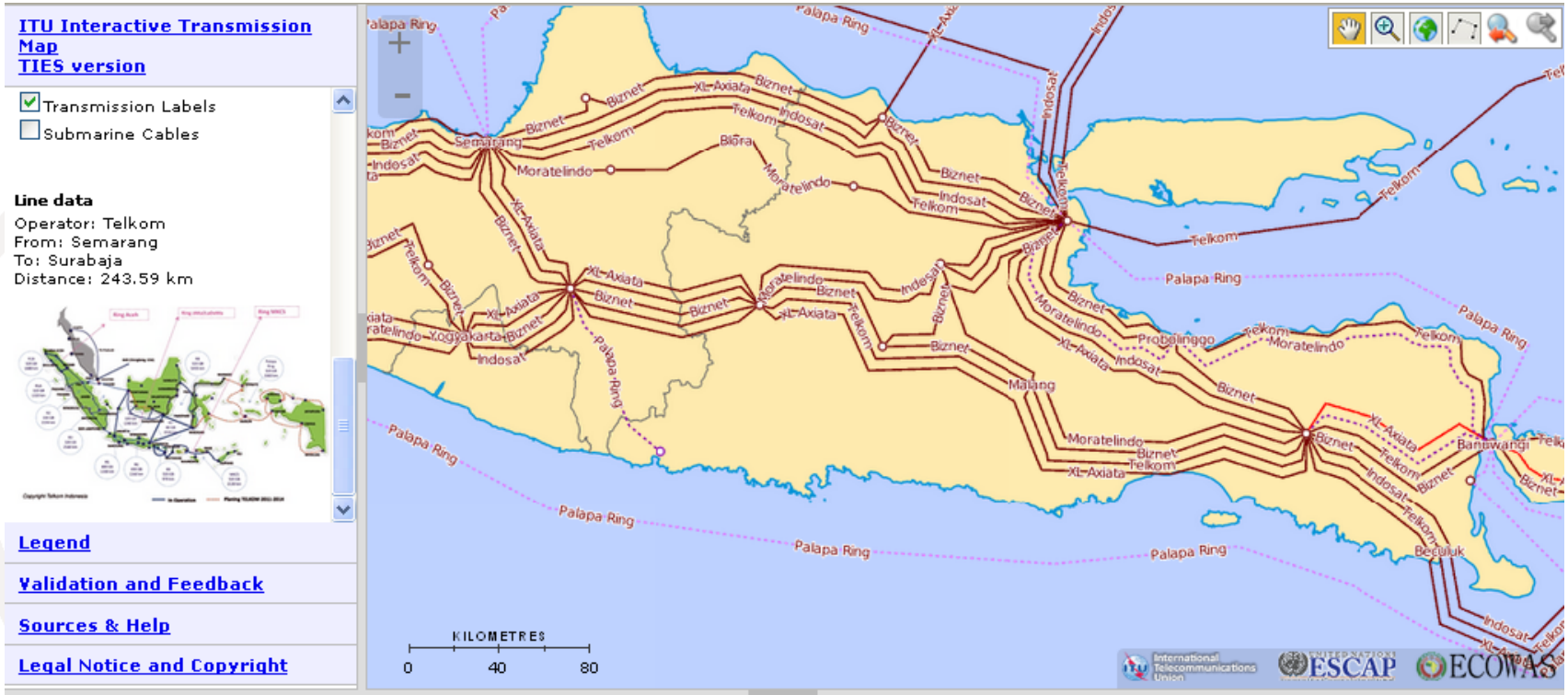

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ITU Interactive Transmission Map – Validation

VALIDATION HOME | TRANSMISSION MAP | LATEST ACTIVITY | USER GUIDE | INDICATORS | RESEARCH STATUS

Indonesia: Telkom Indonesia

Leave a reply

Source: **PT Telekomunikasi Indonesia (Telkom)**, 2011. http://www.telkom.co.id/download/File/UHI/Tahun2011/Presentasi/Investor_Summit_2011_20111005_final.pdf

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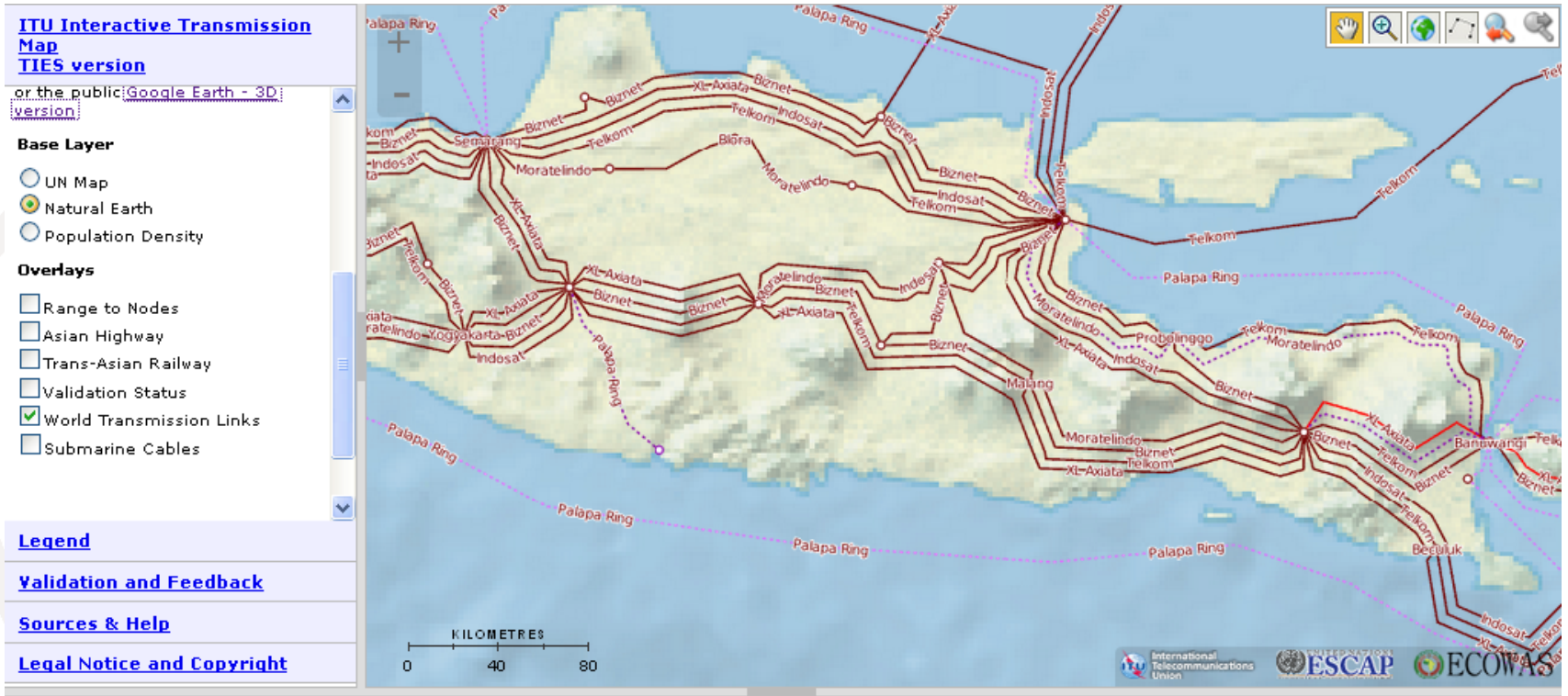

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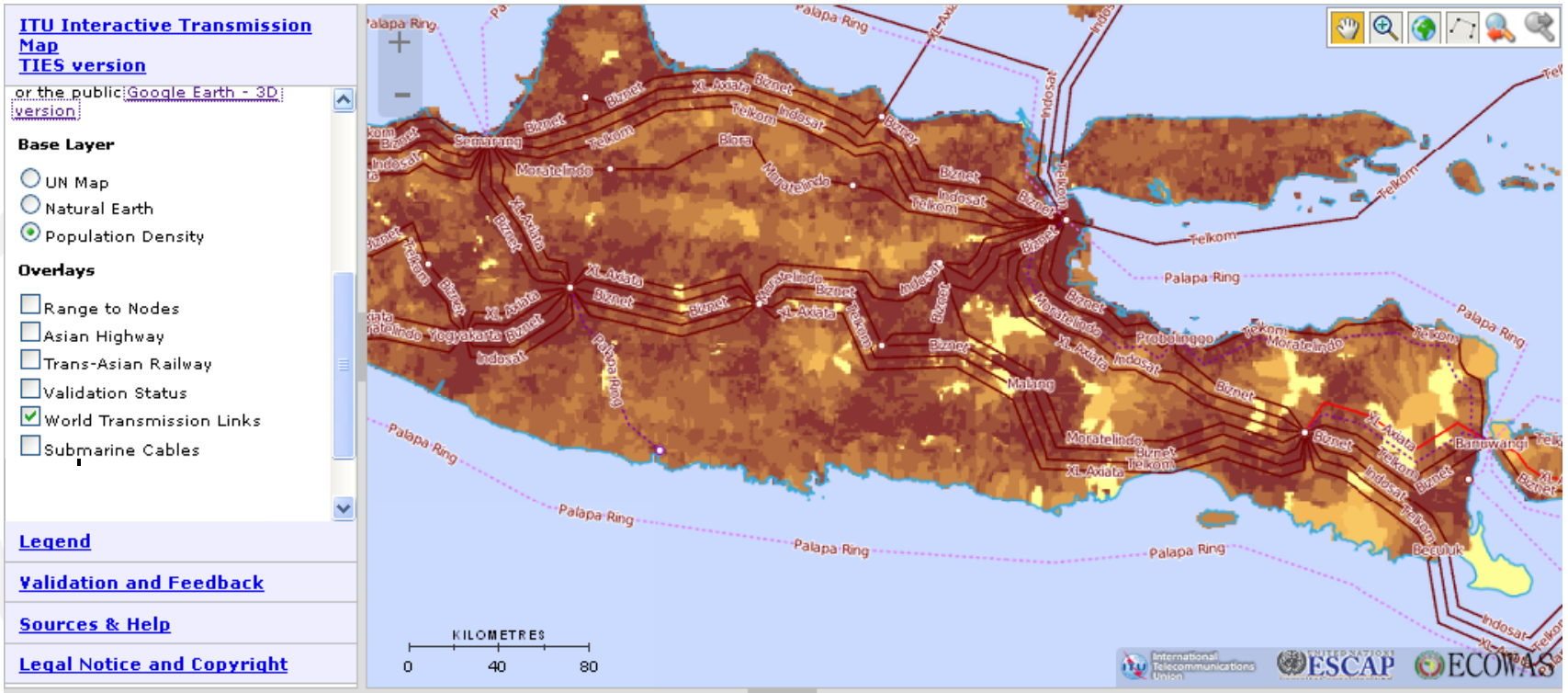

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ITU Interactive Transmission Map
TIES version

or the public Google Earth - 3D version

Base Layer

- (•) UN Map
- ( ) Natural Earth
- ( ) Population Density

Overlays

- [x] Range to Nodes
- [ ] Asian Highway
- [ ] Trans-Asian Railway
- [ ] Validation Status
- [x] World Transmission Links
- [ ] Submarine Cables

Legend

Validation and Feedback

Sources & Help

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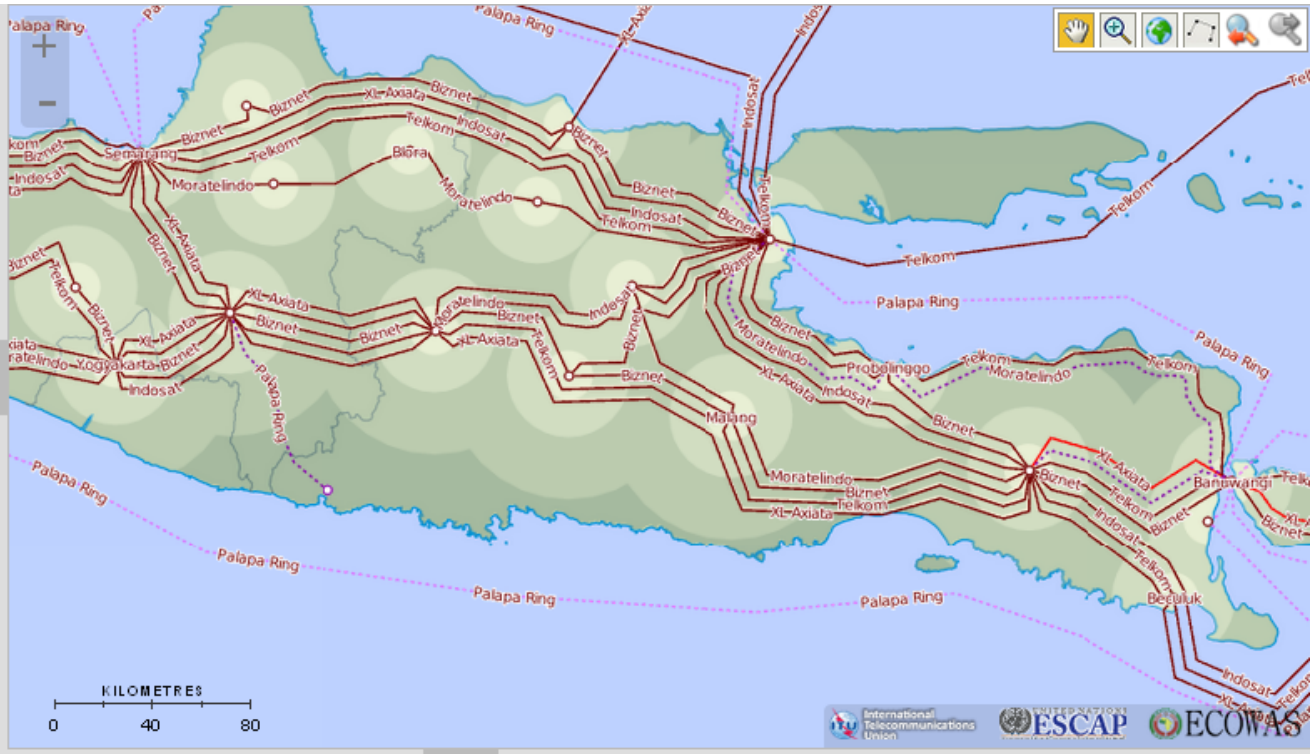

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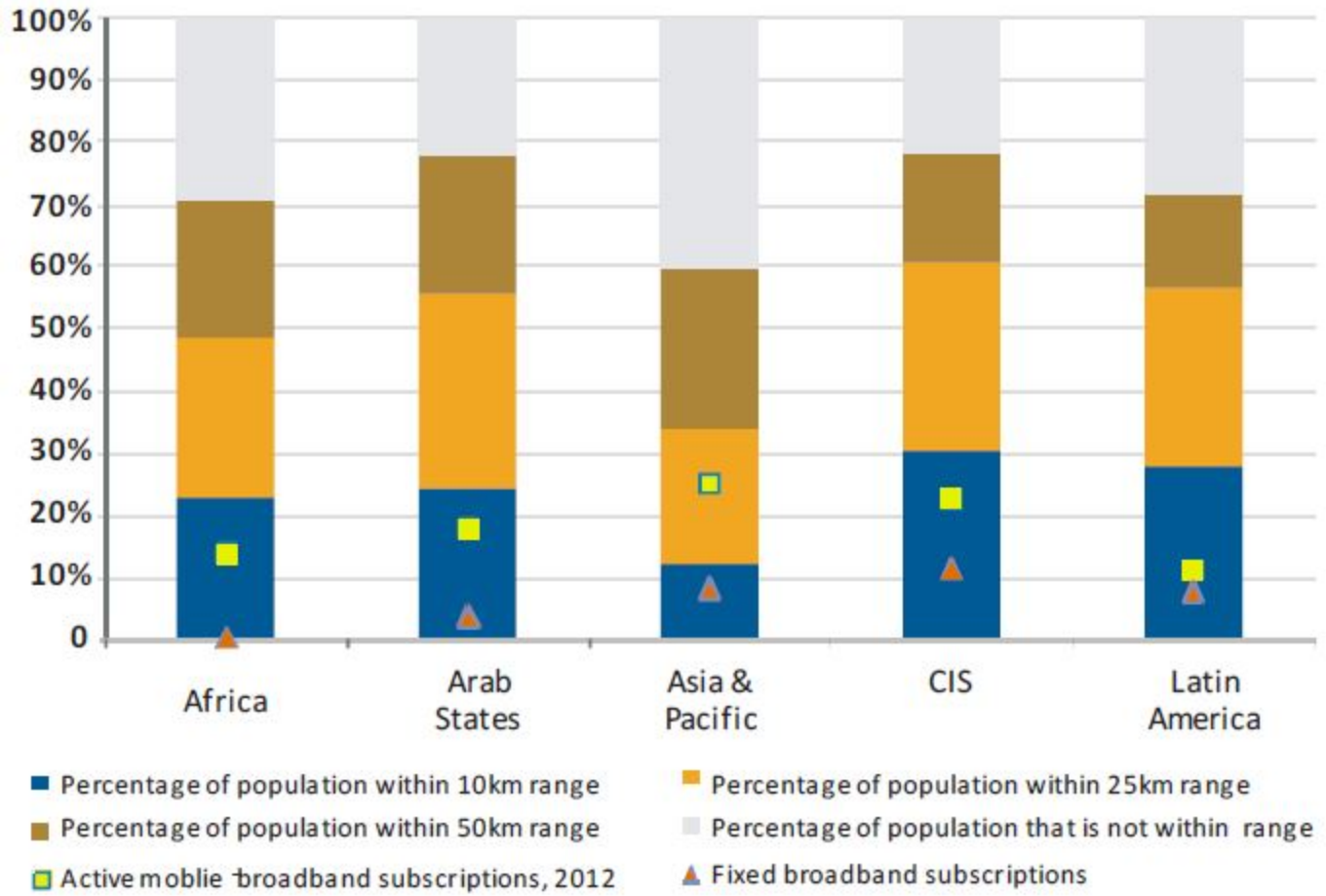
Chart: Status of backbone connectivity and take up of data services, selected services, 2013



Muchas Gracias!

Sergio Scarabino
sergio.scarabino@itu.int

Valoramos sus comentarios y contribuciones. Por favor, inicie sesión con su nombre de usuario y contraseña TIES de la UIT, a presentar observaciones, comentarios y validar la información que se muestra en el mapa a través del Marco de validación..

Página Web del Proyecto
http://www.itu.int/en/ITU-D/Technology/Pages/InteractiveTransmissionMaps.aspx

ITU Interactive Terrestrial Transmission Map
https://www.itu.int/itu-d/tnd-map-public/

ITU TIES Interactive Terrestrial Transmission Map
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ITU TIES Validation Framework
https://www.itu.int/itu-d/tnd-map/validation/

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