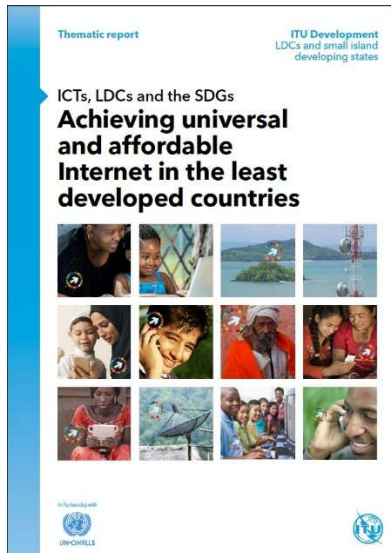**ICT ACCESS AND USE IN THE LDCS, LLDCS AND SIDS OPPORTUNITIES FOR SUSTAINABLE DEVELOPMENT AND TRADE**

**WSIS FORUM 2018**
**Monday, 19 March 2018, 11:00 - 13:00**

Thematic report

ITU Development
LDCs and small island developing states

ICTs, LDCs and the SDGs
**Achieving universal and affordable Internet in the least developed countries**

UN-OHRLLS

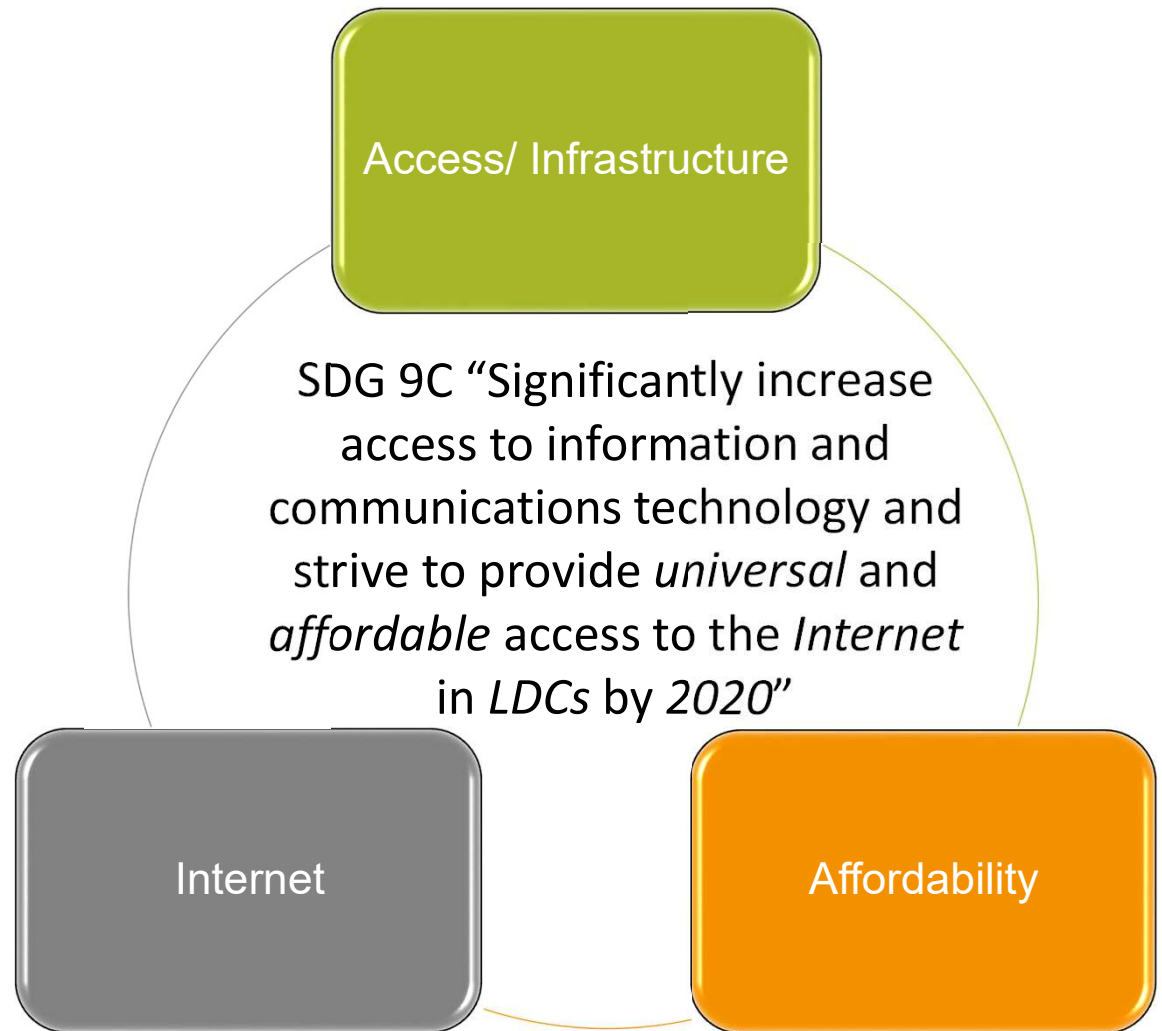**Achieving universal and affordable Internet in the LDCs**

Cosmas Zavazava
Chief, Projects and Knowledge Management Department
Telecommunication Development Bureau (BDT
International Telecommunication Union (ITU)

UN-OHRLLS

# LDCs & LLDCs SIDS

- LDCs: 47 countries highly vulnerable to economic and environmental shocks

- Includes 17 LLDCs and 9 SIDS

- LDCs, LLDCs and SIDS face related development challenges but are very different in terms of geography, population and level of economic development.

**Access/ Infrastructure**

SDG 9C "Significantly increase access to information and communications technology and strive to provide *universal* and *affordable* access to the *Internet* in *LDCs* by *2020*"

**Internet**

**Affordability**

# Highlights

- ICTs, in particular basic services and applications over 2G networks, have had a significant impact on development but promise from broadband is even greater

- LDCs are on track to achieve SDG 9C in terms of access & affordability

- Internet use expected to remain low and skills remain a key barrier

- It is possible to leapfrog: sharing experiences from LDCs

- Key recommendations:
  - Competition
  - Coverage obligations & universal service funds
  - Rationalize taxation
  - Focus on digital literacy and skills
  - Achieve gender parity
  - Institutional strengthening
  - Build core infrastructure
  - Better data

# Access/Infrastructure

Miles of networks:

1st: International

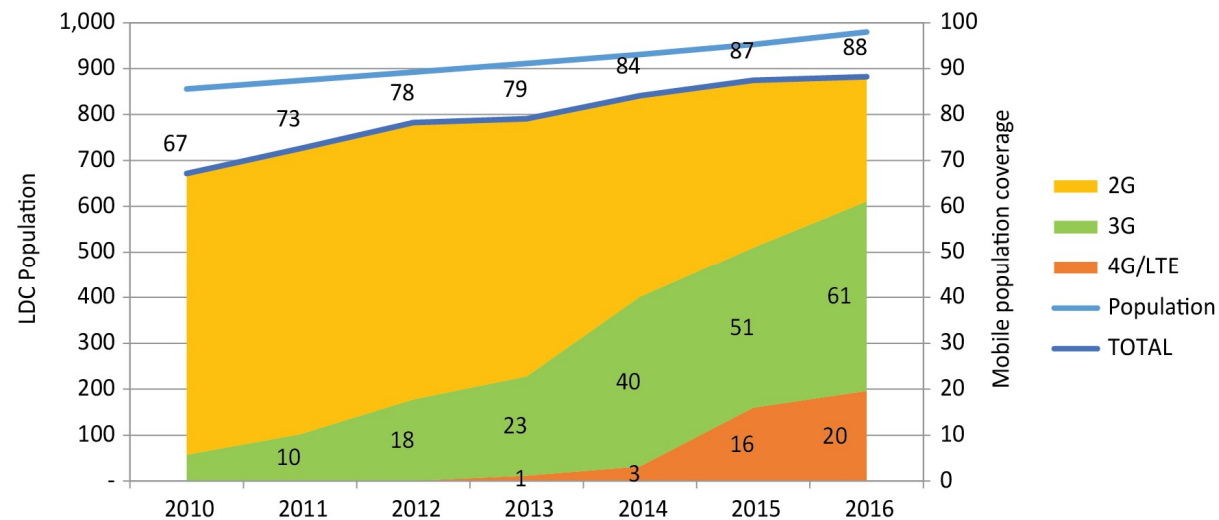2nd: National backbone

3rd: User access

Plus "Invisible mile"

# Mobile population coverage

- Narrowband Internet coverage high with remaining gaps almost all in rural areas

- 61% of population covered by 3G mobile broadband network
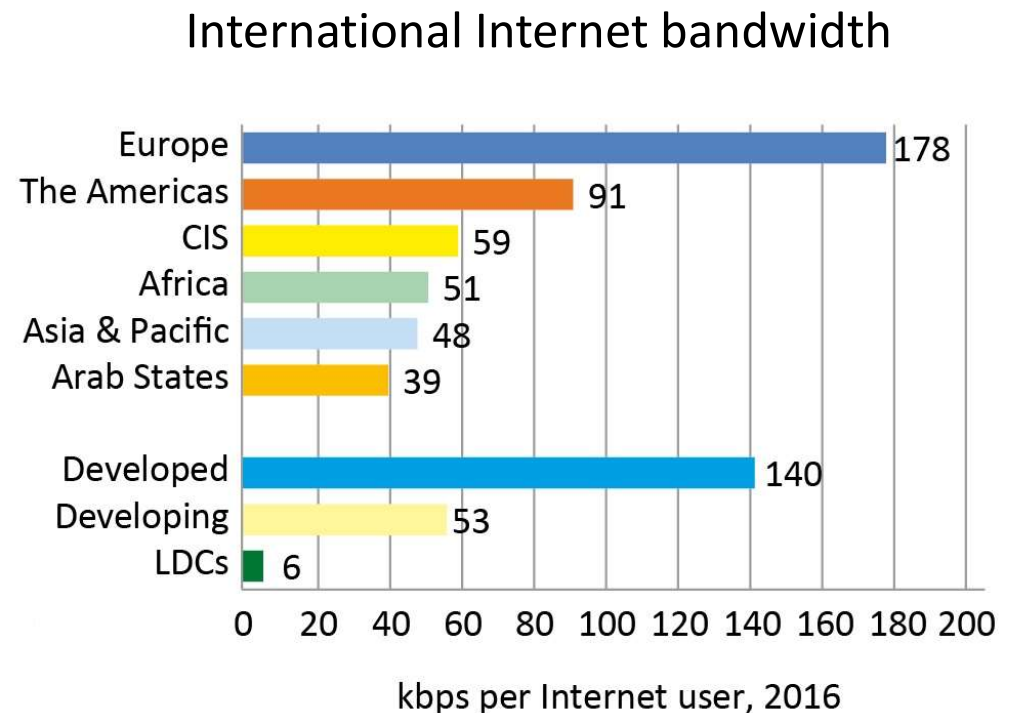
- 26 LDCs have launched 4G

## Mobile population coverage in LDCs

# Explosive growth in access to submarine cables and national backbone infrastructure
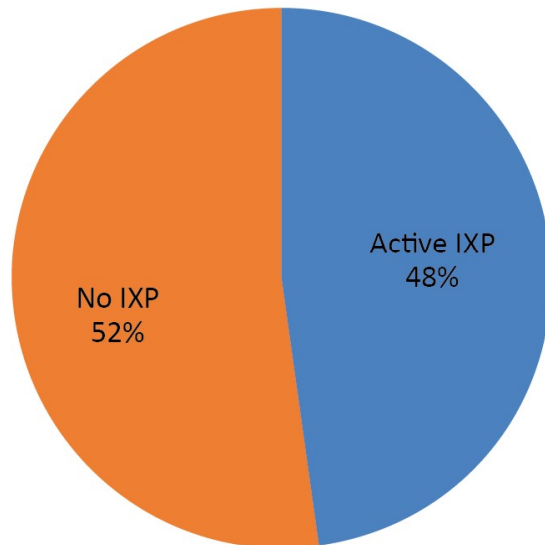
- All but 6 (out of 30) sea-facing LDCs have landing stations
- Almost all LLDCs have fiber optic cable cross-border terrestrial links
- Regional economic communities for policy on cost-based & open access to submarine cables
- Unconnected SIDS are planning access to submarine cables
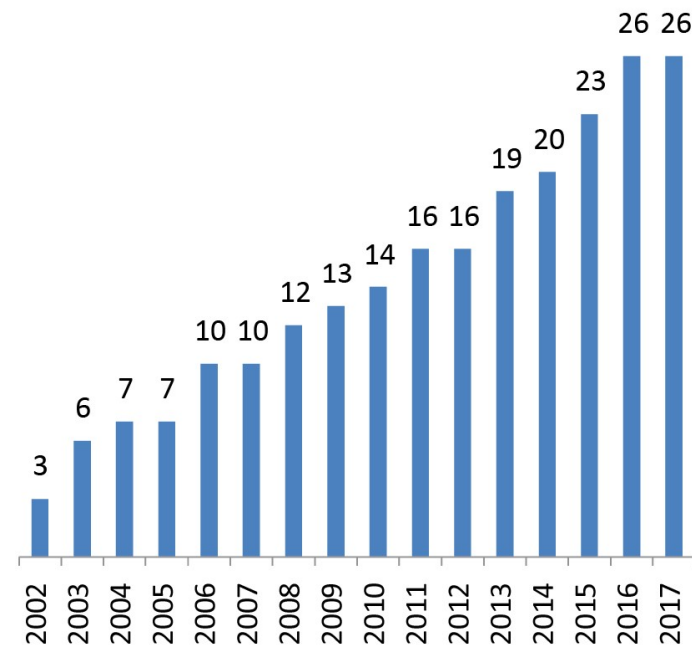- But international Internet bandwidth still lagging behind in LDCs

International Internet bandwidth

| Region | kbps |
|--------|------|
| Europe | 178 |
| The Americas | 91 |
| CIS | 59 |
| Africa | 51 |
| Asia & Pacific | 48 |
| Arab States | 39 |
| Developed | 140 |
| Developing | 53 |
| LDCs | 6 |

kbps per Internet user, 2016

# Building core Internet infrastructure

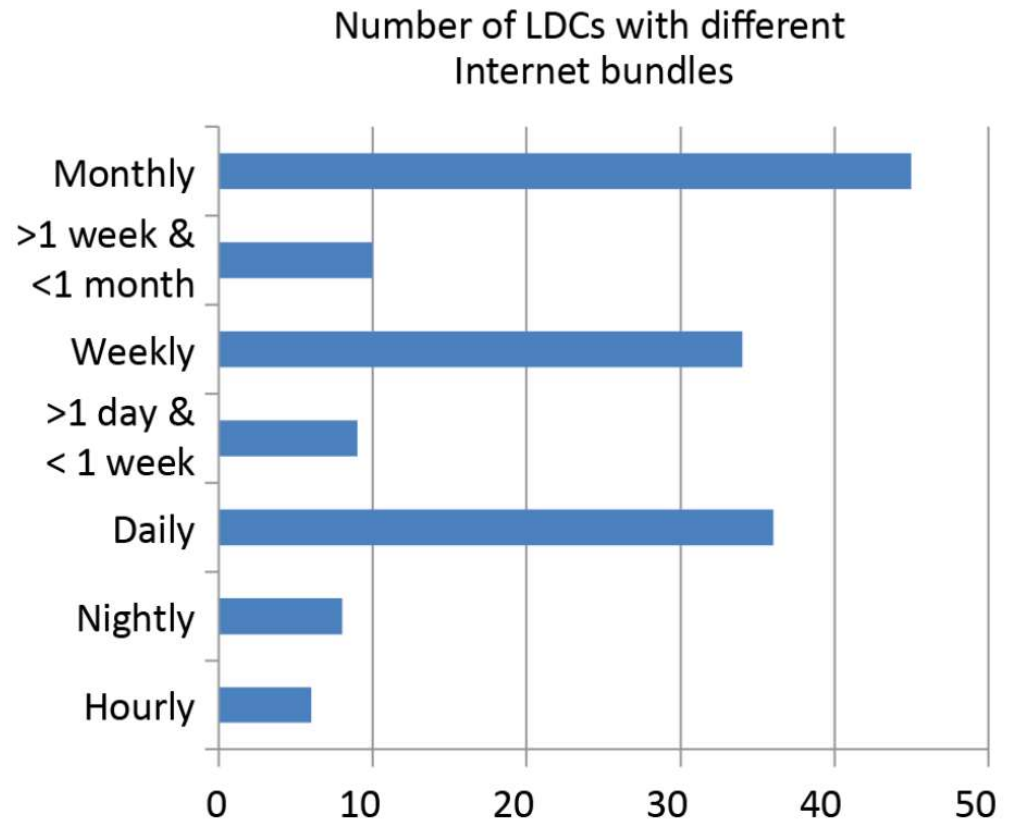Percent of LDCs with active IXP, 2017

Number of IXPs in LDCs

# Affordability

# Understanding affordability

- Despite price drops, international comparison (ITU price basket) show that broadband remains unaffordable to many

- Handset remains key barrier to entry

- Governments can help bring down prices by driving competition and limiting taxes

- Not everybody uses Internet every day for a month so flexible tariffs help with affordability:

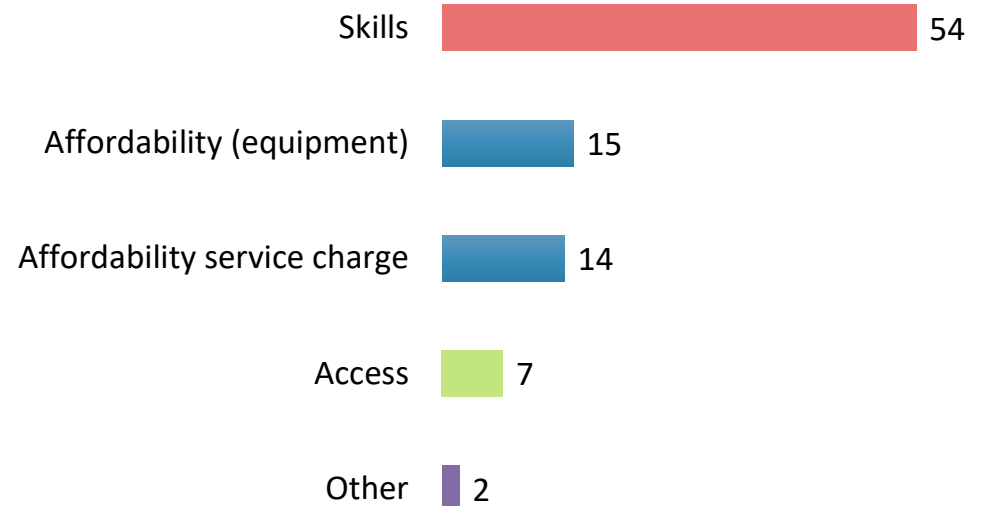- Operators have adapted to low-income users and offer a wide variety of different plans

Number of LDCs with different Internet bundles

| Bundle | Number |
| --- | --- |
| Monthly | ~46 |
| >1 week & <1 month | ~10 |
| Weekly | ~35 |
| >1 day & < 1 week | ~9 |
| Daily | ~37 |
| Nightly | ~8 |
| Hourly | ~6 |

# Skills

# Skills emerging as leading barrier

- Lack of digital literacy emerging as a leading barrier to Internet use in many LDCs

- Digital skills are closely linked to educational attainment

- Secondary school enrolment in LDCs (43%) lies well below world average (76%)

- Strategic ICT sector plans need to highlight the role of, and make link to educational policies

- Gender digital divide must be addressed to ensure universality aspect of SDG 9C
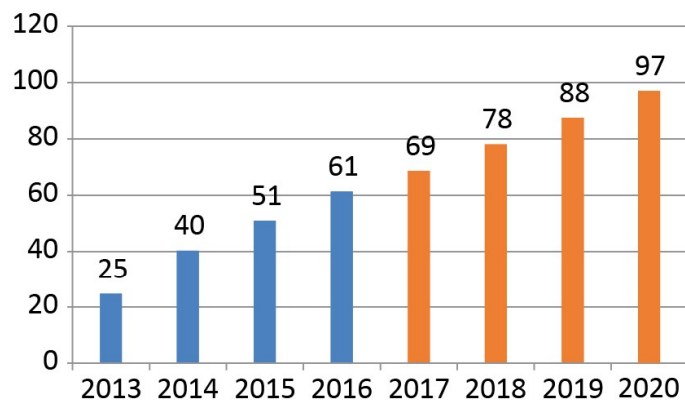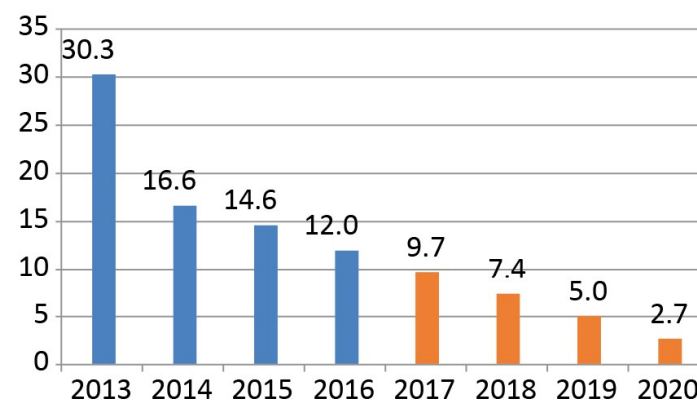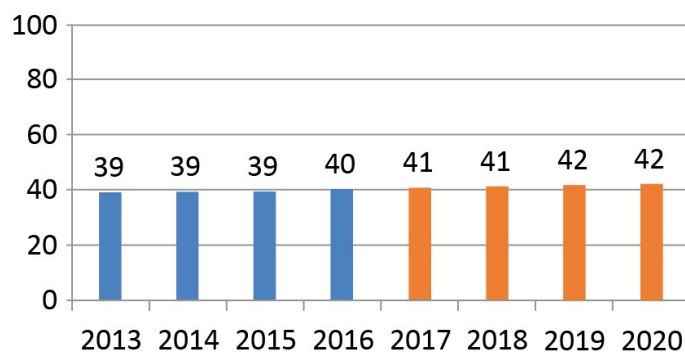
**Zambia, Barriers to Internet use, 2015**

| Barrier | Value |
|---|---|
| Skills | 54 |
| Affordability (equipment) | 15 |
| Affordability service charge | 14 |
| Access | 7 |
| Other | 2 |

# Target 9.c in 2020

### 3G coverage (% of population)



Values by year: 2013: 25, 2014: 40, 2015: 51, 2016: 61, 2017: 69, 2018: 78, 2019: 88, 2020: 97

### Mobile broadband 500 MB (% GNI)



Values by year: 2013: 30.3, 2014: 16.6, 2015: 14.6, 2016: 12.0, 2017: 9.7, 2018: 7.4, 2019: 5.0, 2020: 2.7

### Gross secondary school enrolment (% of age group)



Values by year: 2013: 39, 2014: 39, 2015: 39, 2016: 40, 2017: 41, 2018: 41, 2019: 42, 2020: 42

### Internet use (% of population)



Values by year: 2013: 8, 2014: 10, 2015: 13, 2016: 16, 2017: 18, 2018: 19, 2019: 21, 2020: 23
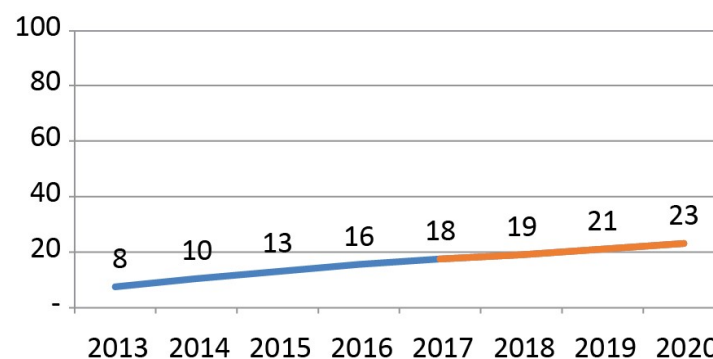
# It is possible to leapfrog

### 3D coverage (%population)

Bangladesh
Myanmar

### 500 MB (% of GNI per capital)

Tanzania
Vanuatu
World

### Gross secondary school enrolment

S. Tomé & Principe
Bhutan
World
LDCs
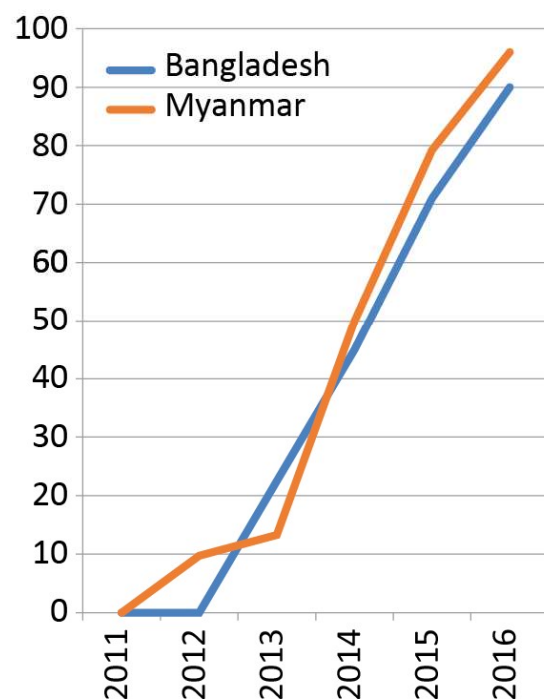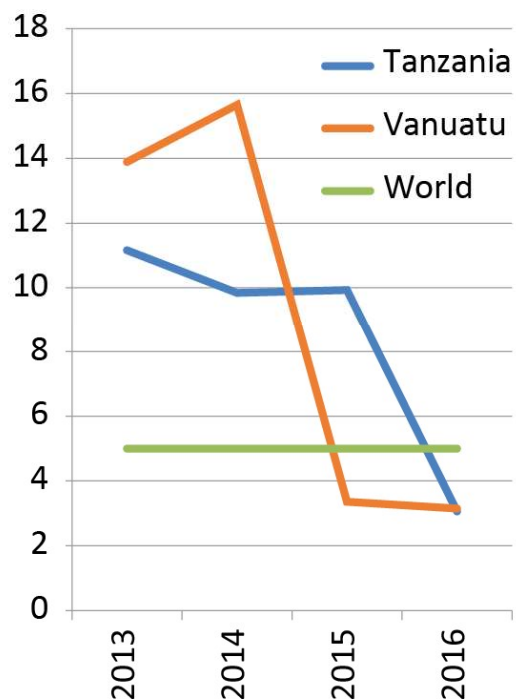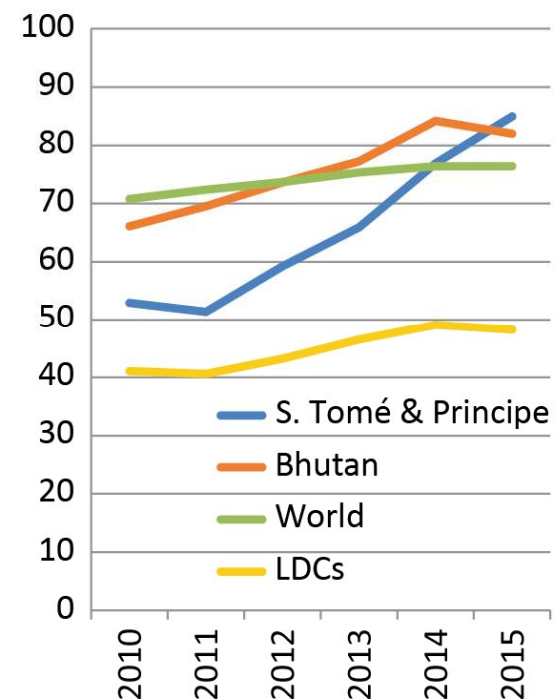
# 3 dimensional framework to guide policy makers



- Access
- Affordability
- Skills

Main challenge: Affordability

Nepal

Main challenge: Access/Skills

Bhutan

Rwanda

Main challenge: Skills

Sudan

Main challenge: Skills/Access