

Photo credits - ISOC



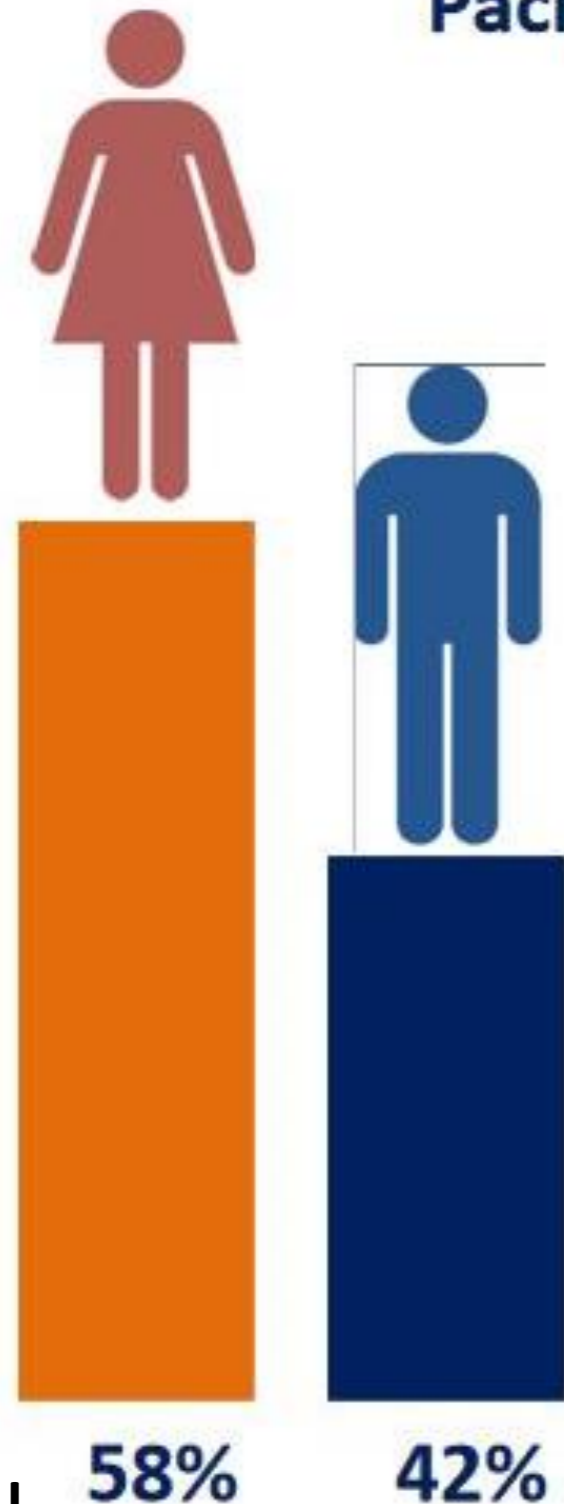
How the Unconnected are Connecting Themselves

Josephine Miliza – KICTANET
APC-LOCNET Project

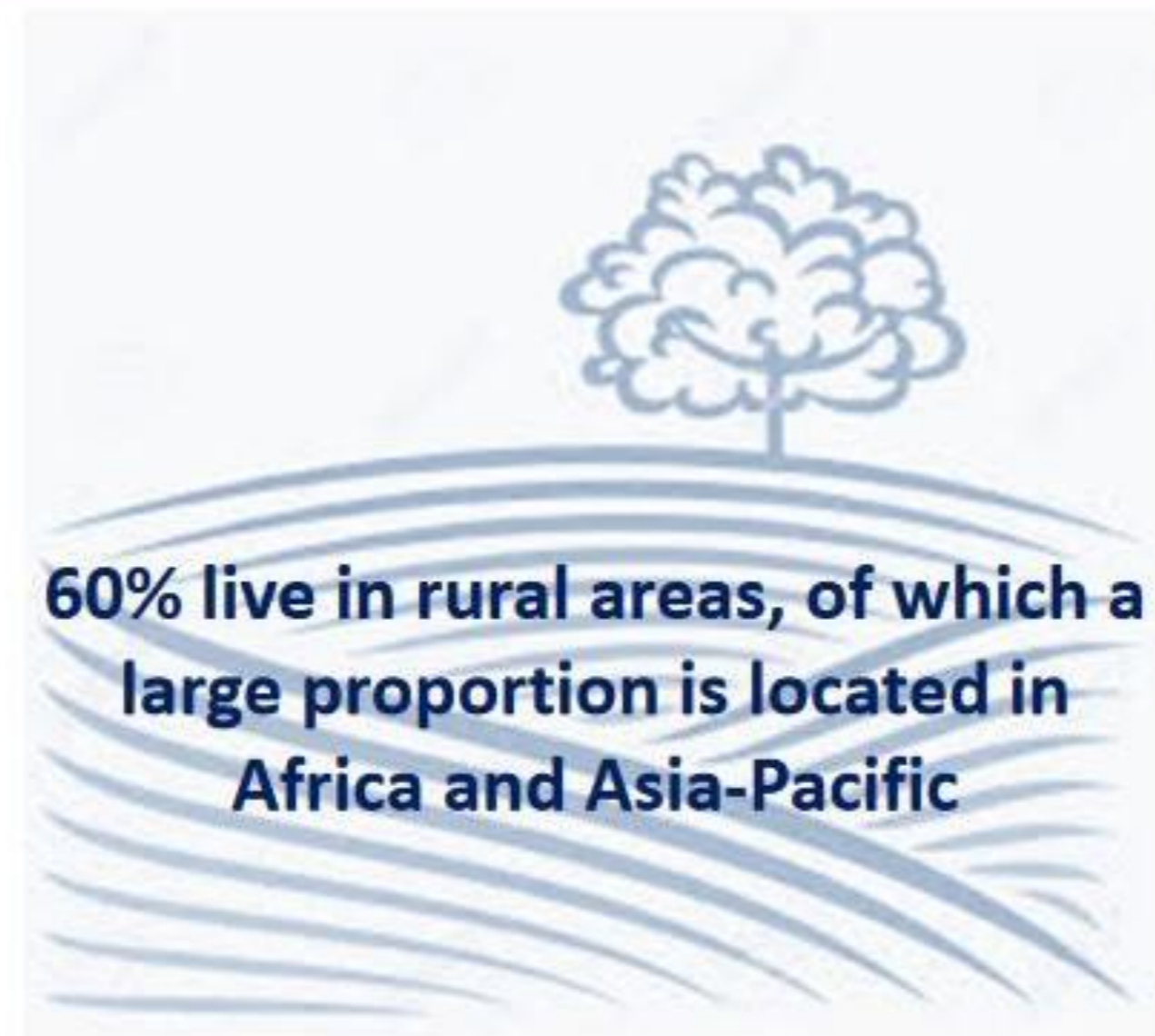


Who are the Unconnected?

The Gender Gap is most pronounced in Africa, the Arab States and Asia-Pacific



Half have a GNI/capita of < US\$ (PPP) 6,500, a large proportion of which are located in Africa and Asia-Pacific



The elderly have much lower Internet penetration levels than the overall population across all regions



Individuals with low educational attainment often remain unconnected across all regions



Internet Adoption Barriers by Region



In Developed Countries, the top Internet Adoption Barrier is Affordability

Internet Adoption Barriers



Infrastructure



Capability



Relevance



Affordability



In Developing Countries, the top Internet Adoption Barrier is Relevance

Key Regional Internet Adoption Barriers

Africa



Arab States



Asia-Pacific



CIS



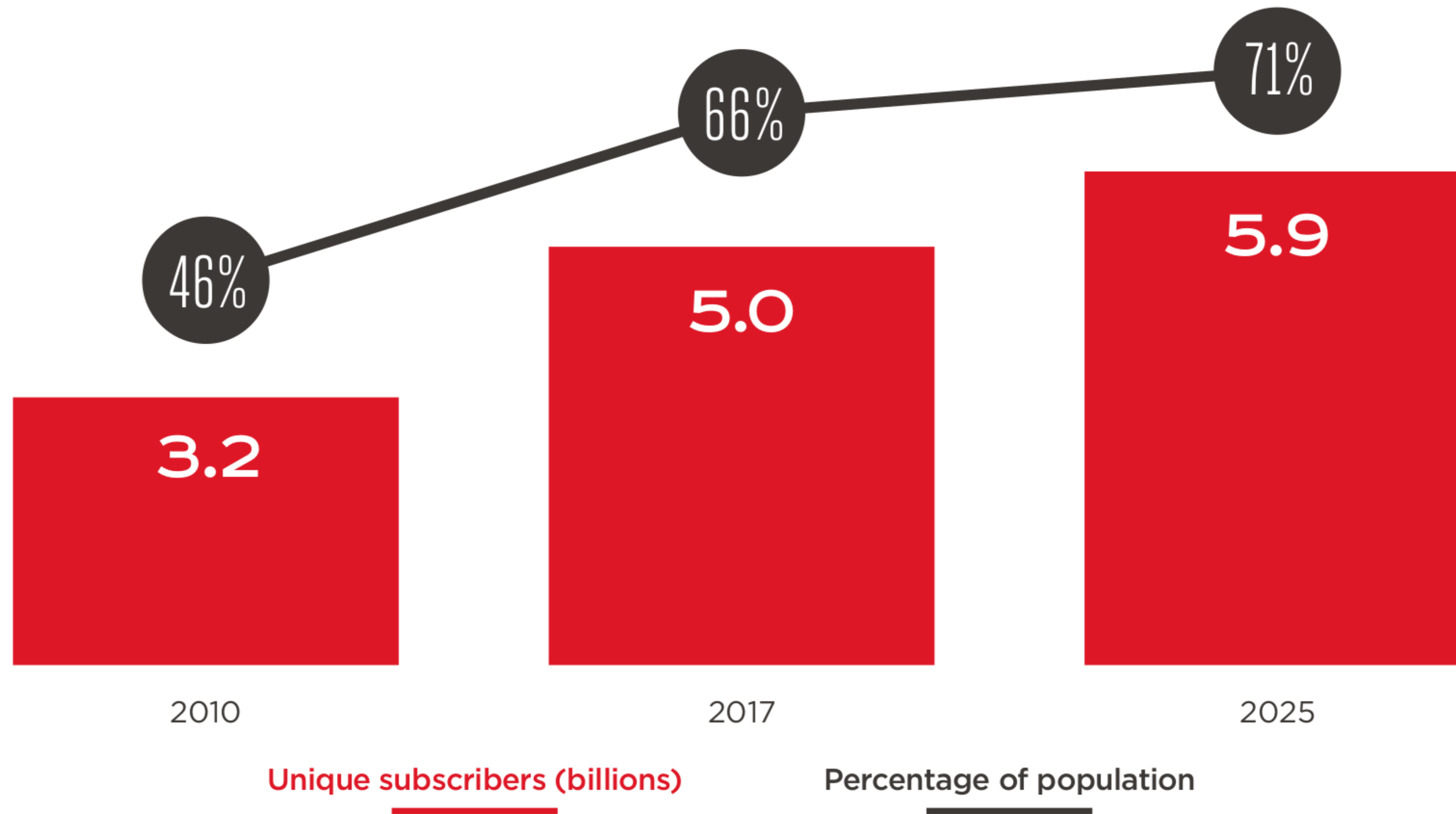
Europe



The Americas



Subscriber Growth is Slowing



We've Connected the Easy Half

Billions of People on Earth	Average Annual Income	Affordable Monthly Communication Spend
1 st Billion	\$29,206	\$205
2 nd Billion	\$12,702	\$53
3 rd Billion	\$5,540	\$23
4 th Billion	\$2,987	\$12
5 th Billion	\$1,771	\$7
6 th Billion	\$1,065	\$4.4
7 th Billion	\$540	\$2.25



**The RISE of
the bottom**

Community Networks in Africa



- Holistic approach
- Bottom-up models started by local communities to address connectivity gaps
- Human –centered – built with, for and by the community.
- Peer to peer
- Non commercialized
- Catalyze local economies and drive adoption of technology

CNs in Africa -12 African countries. 25 are considered active

Community Networks in Africa

Zenzeleni
Eastern Cape, South Africa



TunapandaNET
Kibera, Nairobi Kenya



BOSCO
Uganda



Macha Works
Zambia



Community Ownership

Certificate issued by the Commissioner of Companies & Intellectual Property Commission on Monday, March 17, 2014 at 13:43



Companies and Intellectual Property Commission
a member of the dti group

Certificate of Registration

CR10

Registration Number: 2014 / 002051 / 24
Enterprise Name: ZENZELENI TELECOMMUNICATIONS NETWORK PRIMARY CO-OPERATIVE LIMITED

**REPUBLIC OF SOUTH AFRICA
CO-OPERATIVES ACT, 2005**

**CERTIFICATE OF REGISTRATION
OF A CO-OPERATIVE
(SECTION 7)**

I hereby certify that

ZENZELENI TELECOMMUNICATIONS NETWORK PRIMARY CO-OPERATIVE LIMITED

was registered on

5/2/2014

under Section 7 of the Co-Operatives Act, 2005 (Act 14 of 2005),
with registration number

2014 / 002051 / 24

as a Primary Co-Operative with a limited liability.
Its constitution was also registered on the same date.

I further certify that

ZENZELENI TELECOMMUNICATIONS NETWORK PRIMARY CO-OPERATIVE LIMITED

is with effect from **5/2/2014** entitled to commence business.

REGISTRAR OF CO-OPERATIVES





Zenzeleni

Promote the growth of local businesses e.g. Lubanzi backpackers guests stay longer because of reliable internet
Investment in the local economy

- \$100,000 investments in the OPEX
- \$36,000 in CAPEX
- \$54,000 revenue generation

Non tangible such as digital literacy and other businesses born as a result of connectivity.



Community
Driven

Idjwi
community
members



CNs Deploy Low-Cost Infrastructure



CNs providing supporting Infrastructure



Battery Operated System for Community Outreach(BOSCO-Uganda)



BOSCO Uganda

- Connecting community ICT centers that are run by the local youth
- Building solar mini grids for local businesses e.g. hair dressing, phone charging, barber shops that enable businesses to run longer hours
- Provide solar mini grid to schools replacing use of diesel
- Local youth are also trained in maintenance of the solar equipment thus which becomes a source of employment for them



 ENSEMBLE
POUR LA DIFFÉRENCE



 ENSEMBLE
POUR LA DIFFÉRENCE



Delivering Meaningful
Access

Salama Application

CNs Driving Digital Inclusion





TunapandaNET

Skilling the local youth with skills that enable them find work or give them pathways to becoming entrepreneurs

- User centered research
- Tech entrepreneurship
- Freelancing

75% of organization is sustained by revenue generated from client work
Through local and international client work

63% of graduates from the training have been able to find employment

It takes the WHOLE Village



RECOMMENDATION ITU-D 19

Telecommunications for rural and remote areas

Final Report

**World
Telecommunication Development
Conference (WTDC-17)**

Buenos Aires, Argentina, 9-20 October 2017



3 that community access to ICT facilities and services is particularly important in rural and remote areas: business models which can achieve financial and operational sustainability can be operated by local entrepreneurs supported by a variety of initiatives, and these facilities, where necessary, should also be supported by universal service funds as an essential component of rural communications;

6 that enhancing local technical expertise and adoption are important for successful implementation of ICT services and applications in rural and remote areas, and attention should thus be paid to training, exchange of information and sharing of maintenance facilities in order to achieve sustainability and viability;

10 that it is important to consider small and non-profit community operators, through appropriate regulatory measures that allow them to access basic infrastructure on fair terms, in order to provide broadband connectivity to users in rural and remote areas, taking advantage of technological advances;

11 that it is also important that administrations, in their radio-spectrum planning and licensing activities, consider mechanisms to facilitate the deployment of broadband services in rural and remote areas by small and non-profit community operators;

Resources on Community Networks

- <https://www.apc.org/en/tags/community-networks>
 - <https://www.internetsociety.org/issues/community-networks/>
 - <https://communitynetworks.group/>
 - <https://manypossibilities.net>
 - <https://detroitcommunitytech.org/communitywireless>
 - <https://nextcenturycities.org/becoming-broadband-ready/>
 - <https://commotionwireless.net/>
-

Resources on Community Networks

Videos

Zenzeleni - <https://www.youtube.com/watch?v=R9u-hfxAeBo&t=>

MachaWorks -

<https://www.youtube.com/watch?v=fDVAXJLVFOE>

Tunapanda -

<https://www.youtube.com/watch?v=vKcdLC48fzo>

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