

On digital technologies, climate change and sustainability



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Chairholder, UNESCO Chair in ICT4D
28th January 2020 at Ramada Hotel,
Islamabad



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INIT
INTER ISLAMIC NETWORK
ON INFORMATION TECHNOLOGY

Workshop following on from 2016 and 2017



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Outline



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- The Sustainable Development Goals
- “Climate Change” is not the problem; we are!
- Digital technologies and sustainability



We are in an unprecedented time of human-caused environmental change



But climate change is not the cause; we are...

And, much is caused by our use of digital technologies



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The UN Sustainable Development Goals and Agenda 2030



A failed enterprise



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The context of the Sustainable Development Goals



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SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



The rhetoric and the reality



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 **ITU Secretary-General**  @ITUsecGen · 8h

We have less than 10 years to achieve the #GlobalGoals for Sustainable Development, and digital technologies hold great promise. In this Decade of Action, let's transform the digital revolution into a development revolution and use these technologies
#ForPeopleForPlanet



The rhetoric and the reality



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Tim Unwin @TimUnwin · 8h



I have great respect for the work of many ITU staff, but it is time that the wise (and the UN) agree that the SDGs have long-since failed. I wrote about this in 2015 and 2018 unwin.wordpress.com/2018/04/23/ict... We need a new agenda through which ICTs can be used to reduce inequalities.

Climate change



<https://www.dawn.com/news/1161895>

Must be understood as a
result not a cause...



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Climate change is not the problem – we are

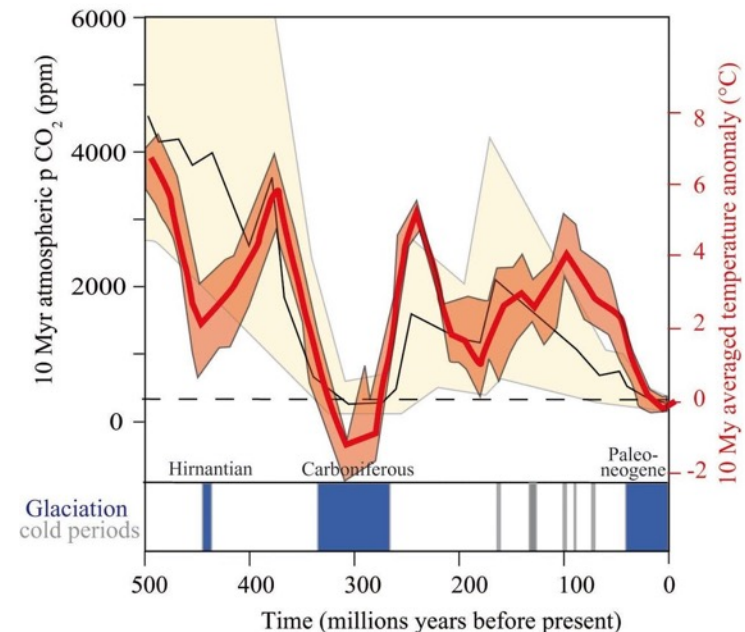


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- “Climate Change” *per se* causes nothing
 - It is an expression of many processes
- Climate has always changed
 - Must emphasise human-induced change
- Humans want to be in control
 - Both in causing and reversing



<https://theconversation.com/co-levels-and-climate-change-is-there-really-a-controversy-119268>

Climate change is not the problem – we are



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- Climate must be seen as an integral part of the environment
 - Not a factor damaging the environment
- A carbon fetish
 - Focus on CO₂ can cause other environmental damage
- Must also consider the positive aspects of changes to climate



Digital technologies and environmental sustainability: Four themes



1. Redundancy and unsustainability
2. Increased electricity demand
3. Exploitation of the environment
4. Direct impact on the environment



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Digital technologies and sustainability



Redundancy and unsustainability



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Redundancy and un-sustainability



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- Digital sector driven on basis of replacement and not repair
 - [Restart](#) campaigning for change
- Hardware-software developing cycle enforces redundancy
- E-Waste is increasing

PAKISTAN TODAY

15 NEW ARTICLES TODAY

HEADLINES	NATIONAL	CITY	BUSINESS	FOREIGN	ENTERTAINMENT	SPORTS	COMMENT	FEATURES
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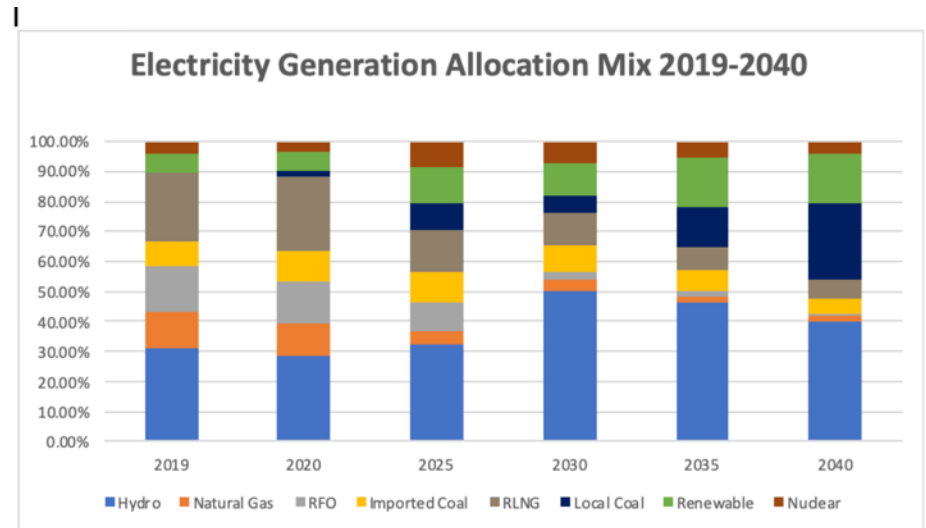
TRENDING LHC grants bail to Fawad Hassan Fawad in illegal assets case - 19 mins ago

UN warns of increasing e-waste

BY AGENCIES , (LAST UPDATED DECEMBER 14, 2017)



Digital technologies and sustainability



Pakistan's Electricity production, 2019-40

<https://www.weforum.org/agenda/2019/09/a-new-dawn-approaches-for-pakistans-troubled-energy-sector/>

Digital technology is driving increased electricity demand – much supplied by fossil fuel



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Rising electricity demand



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- Much more electricity used in production rather than use of digital tech
- Digital tech causing rapidly growing electricity demand
 - 10% by 2020; 20% by 2025
- New digital tech
 - Bitcoin alone has carbon footprint > Denmark
- Future technologies very electricity intensive



Digital technologies and sustainability



<https://www.theguardian.com/environment/2012/aug/07/china-rare-earth-village-pollution>

Exploitation of the environment



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Environmental exploitation



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- Rare minerals becoming increasingly scarce
- Mining damage
 - Environment
 - Child exploitation



<https://www.theguardian.com/global-development/2016/jan/19/children-as-young-as-seven-mining-cobalt-for-use-in-smartphones-says-amnesty>

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Direct impact on the environment



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Direct impact on the environment



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- Carbon impact
 - More than airline sector
- Negative unintended consequences of renewable sector
- Cell Tower impact
- Satellites in space
 - Usually ignored



What can we do about it?



<https://www.ttnworldwide.com/Article/286208/-M%C3%B6venpick-makes-Pakistan-debut->

Begin just by keeping your mobile phone for twice as long



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What can we do about it?



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- Holistic approach to the environment
 - Not just “Climate Change”
- Assessments must balance positive and negative impacts of technology
- Businesses must be forced to change anti-sustainability models
- Innovation in theorizing about digital environmental impact
- Significant new data requirements
- Open and informed public debate
- Government action and international agreements



<https://therestartproject.org/>

Relevance to today's discussions: the most marginalised are usually most impacted by environmental change



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What are you going to do differently?

