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مخبر التجديد في الأجهزة الجوّالة، المتواصلة والمتعاونة
Innovation of COMmunicant and COoperative Mobiles

Technology Threats for Climate Change

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TECH
WOMEN



Context

Tech Industry Effects for Climate Change

Initiatives Towards Green Tech

Climate Protection Initiatives In Tunisia

Final Remarks

Context

- ❑ Climate change depends on human behaviors : deforestation.
- ❑ After Covid-19 , increase of remote working due to increase of data centers requiring huge energy consumption.
- ❑ Greenhouse gases (GHGs) increase yields to climate change impacts : food security.
- ❑ ICT evolution increases carbon footprint.
- ❑ Example of climate risks : disaster, human life threat.
- ❑ Climate change has an impact in many sectors such as : agriculture, tourism, health, infrastructure.

Can Our Planet Survive Tech



Hidden Environmental Costs For Tech Solutions Deployment

- ❑ The continuous increase of new technology is accompanied with growing number of data centers requiring huge energy.
- ❑ Deep learning algorithms running require more energy.
- ❑ Generative AI (ChatGPT) requires huge energy consumption.
- ❑ Cryptocurrencies : requires huge energy consumption.

Transparency on the Environmental Impact of Tech :
Responsible Innovation



Environmental Technology Solutions

- ❑ 5G technology ensures optimization towards the consumed energy : huge transmitted data with low power.
- ❑ Exploiting sensors & drones to track carbon footprint : Data collection.
- ❑ Satellites data information for climate change management.
- ❑ Use of renewable energy for Generative AI (ChatGPT).
- ❑ Requirement of Encouraging excellence research and innovation centers in climate change (green skills).
- ❑ State of green policy and Laws and norms about carbon emission for each tech solution deployment
- ❑ Digital Twin based on virtual deployment and testing of each innovative technology solution.



Tech For Good



Environmental Technology Solutions

- ❑ Encouraging technologies with low carbon emission.
- ❑ Use AI/ML to predict the amount of carbon emission before deploying any technology solution.
- ❑ Focus on the most energy efficiency technology solution enabler.
- ❑ Encouraging E-waste & Recycling.
- ❑ Rise awareness starting from schools.
- ❑ Set a threshold of greenhouse Gases GHG emission for all ICT companies.
- ❑ Organize free trainings for Youth about green technology.
- ❑ Coalition requirement between different stakeholders.
- ❑ Follow a green strategy such as taxes charging in high carbon emission of industrial companies. : Emerging rules on "green" tech.



Road To Net Zero

- ❑ Control data centers energy consumption.
- ❑ Redirection of digital transformation into a green one.
- ❑ Digital twin solution : proactive actions to mitigate rise of carbon emission.
- ❑ Control companies' energy consumption.
- ❑ Global collaboration between different stakeholders operators, regulators, policymakers, academia & private sectors.
- ❑ Encouraging electric vehicles.
- ❑ Exploit greenhouse Gases to be energy source for other devices : case of data centers.
- ❑ Promoting online activities (e-commerce, exchange platforms).

ICT Redirection for Planet Benefit : Digital Reset



Initiatives Towards Green Tech

- ❑ ITU Group focusing in green tech.
- ❑ World Bank platform initiative : Climate Change Knowledge Portal : exchange platform to exchange ideas about climate change actions containing environment datasets.
- <https://climateknowledgeportal.worldbank.org/>
- ❑ China mobile : launch of Green 5G project.
- ❑ Energy consumption optimization in data centers : Google.
- ❑ Huawei : data centers with zero carbon emission



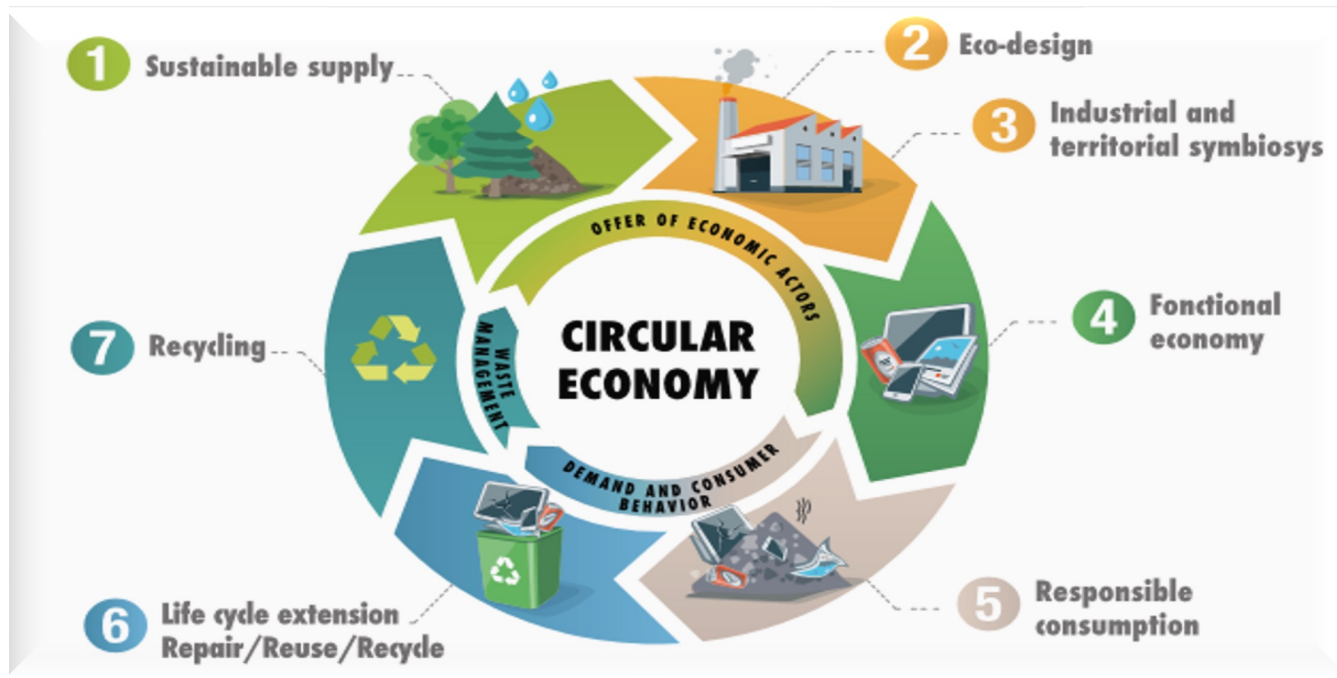
Climate Protection Initiatives In Tunisia

- ❑ Collaboration between Tunisian government, United Nation and World Bank to optimize carbon emission.
- ❑ Climate change strategy adaptation in different Tunisian regions.
- ❑ Another project **REFAT** “Renewable Energies for Agricultural and Rural Development in Tunisia” : international collaboration to overcome carbon emission.



Climate Protection Initiatives In Tunisia

- Climate Protection model based on circular economy.
- Recycling : Transformation of waste into an exploitable resource in charge of the Federal Ministry for Economic Cooperation and Development (BMZ).



Climate Protection Initiatives In Tunisia

- ❑ Climat change trainings under some energy transition projects.
- ❑ Tunisia has a tool to measure & track carbon emission : Greenhouse gas Abatement Cost Model (GACMO).
- ❑ National policies related to deforestation minimization.

➤ Towards Paris Agreement implementation.



Conclusion

- ❑ Digitalization risks for Climate Change.
- ❑ Climate change as a threat : Decarbonization requirement.
- ❑ Climate Tech (Sustainability of Technical solutions) : AI/ML helps in identifying the efficiency of a digital solution.
- ❑ Climate Change policy : Tech for Good.
- ❑ Climate Protection Initiatives in Tunisia.

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Thank you !

