

Linking Information and Communication Technologies with the Cancun Agreement: Lessons from Ghana



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What to know about Ghana?

- Sub-sahara democratic African state with stable political regime.
- Located at the West Coast of Africa with common borders with Burkina Faso to the North, Ivory Coast to the west and Benin to the East.
- Estimated 25million people.
- Growing economy (GDP growth around 6-7%)
- Agriculture is mainstay of the economy (employing nearly 60% of the working population). Small holder farmers, rain-fed irrigation.
- Economy is expanding – statistically achieved middle-income status in 2008. Oil exporting country.
- Contribution of the service sector, including ICT, to the economy is around 7% or more

Climate-related information (1 of 1)

- Total GHG emission is estimated to be 24MtCO₂e. Equivalent of 1tCO₂e per capita.
- Energy, Agriculture and Land use change and forestry are the sources of GHG.
- Energy production, consumption and transport constitute key source of emissions. Oil exploitation is expected to impact on the emission growth in future.
- CO₂ and CH₄ are the major important GHG gases.
- Evidence of climate change is abound in Ghana. Temperature has increased by between 0.6°C and 0.8°C since 1960. Projected to increased more between 1.1°C and 1.7°C between 2020 and 2080.

Climate-related information (2 of 1)

- Across the country, rainfall levels are generally projected to decrease with the same time horizons (2020 to 2080).
- Manifestations of extreme weather events (drought, flooding etc) and sea level rise impacts are evident in Ghana.
- Impacts of climate change has been identified as additional threat to the economy of Ghana. Sectors are climate sensitive (particularly, agriculture, water, infrastructure etc).
- Vulnerability spread defined by: poverty, geographical spread, livelihoods sources, infrastructural resilience, access to risk information, gender etc.

ICT Sector in Ghana (3 of 1)

- Widespread availability of efficient and reliable telecommunication services in Ghana.
- Growing and highly competitive market. 6 international market players (as service providers) with independent government regulation. Potential to grow????
- Aggregated energy or GHG intensity is high. Could potentially increase with large footprints (large due to expansion of coverage).
- High climate risk to, and impacts on telecommunication infrastructure. (In Ghana, they are largely installed as single units preferably on high grounds) – effects on quality of service to customers.

Affordable ICT Options in Ghana

- **Telecommunication** - high penetration (households, urban, sub-urban areas, some transit communities, limited in rural areas), advance technologies for messaging (text and image), internet connection, fiber optic connectivity.
- **Internet connectivity** - wide use (cafes, offices, homes, schools and limited in sub-urban and rural areas). Generally poor speed, application areas may include broadly: business, telecom, social media, emailing, search engines.
- **Access to computers and application:** increasing use and access, for commercial, private and official purposes, special form for application use (weather forecasting, banking, telecommunication, geographical position systems), limited use in rural and sub-urban areas.
- **Radio and TV** – proliferated use. Great deal of access (wide coverage – urban to rural areas). Efficient mode of information dissemination.

Opportunities for ICT in Climate Change in Ghana

- **Green ICT service delivery** - opportunities for low GHG footprint interventions – eg. Solar powered mast units, energy efficiency practices. (requires government incentive for scale up)
- ICT industry offers wide ranging opportunities for developing and deploying climate change early warning services. Cheap, wide coverage, reliable platform of disseminating climate risk information to targeted vulnerable groups. **Opportunity exist in Ghana greatly.**
- There is need to ensure “**common platform connectivity**” in order to reach the geographically excluded vulnerable groups.
- Platform for awareness creation. Cheap and wide coverage.
- Corporate Responsibility agenda – could be good avenue to leverage local private sector finance to support national climate change activities.

Lessons from Vodafone-EPA Partnership in Ghana

- As part of an ITU project, EPA (Ghana) and Vodafone Ghana Limited are partnering to implement the first ICT climate change project in Ghana.
- The project is aimed at demonstrating possibilities of developing early warning platform at the local government level. Individual cell phone units are intended as the medium of dissemination of information.
- The challenge has been access to “reliable connectivity”
- Project is seeking to assess the operational GHG footprint of Vodafone Ghana.
- Project also seeks to contribute to setting industry standards as part of regulation.
- Awareness creation component

Awareness component at District : case of Fanteakwa, Eastern Region of Ghana

- Initial plan was to use individual cell units as platforms for early warning information dissemination (text messaging technology).
- Connectivity is a problem at the district level.
- The project had to be refocused on awareness creation activities.
- A durbar has been organised for the communities in the Fanteakwa District to create awareness on climate change impacts and opportunities.

Major challenges

- Lack of industry best practices.
- Connectivity problems in sub-urban towns and rural areas.
- General lack of awareness and capacity in the industry.
- Lack of incentive for early action or pioneering and innovation.
- Regulation is generally focused on bandwidth allocation and service delivery. Industry standard setting is delimited.



Thank you