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## **COMITES CONSULTATIFS INTERAFRICAINS**

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### FROM IMAGES TO DIGITS: HOW THE DEVELOPMENT OF MOBILE COMMUNICATION SHOULD SHAPE ENERGY POLICY IN RURAL BENIN

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#### 1. RATIONALE

- The mobile phone is one of the most owned technological gadgets with over nine millions mobile lines in 2012 (ATRPT, 2012).
- The penetration of mobile telephony is reflected by its wide use by people of all statuses (Figure 2).
- The low rate of electrification (27%) is an hindrance to the mobile phones use with regard to powering them, and reduces its benefits.
- Hundreds of villages crossed by electric poles and cables without being supplied with energy while hosting GSM network antennas (Figure 1).
   How are the mobile phones used for effective communication in such a
- How are the mobile phones used for effective communication in such a context of no-electricity supply?



Figure 1. The paradox of the electrification policy

#### 2. LITERATURE

- Mobile telephony is a crucial and powerful tool for exchanging ideas and welfare enhancement in developing countries (James and Versteeg, 2007; Donner, 2008).
- Mobile phone technology improves market performance by reducing transaction costs and suppressing information asymmetry (Aker, 2008; Arinloye, 2013), and fosters rural livelihood systems (Donner, 2009).
- Higher levels of mobile phones penetration leads to a tremendous growth of GDP in Africa (Waverman et al., 2005).
- However, the use of mobile telephony raises the need of electricity, mainly in rural areas where the energy supply is still a luxurious service.
- Proven socio-economic benefits attached to rural electrification (World Bank, 2008; Byrne et al., 2011) can be nurtured by mobile telephony.
- Lack of articulation between the electrification and mobile telephony in the large body of existing literature.

Table 1. Electrification vs. Mobile telephony penetration in Benin

	Electricity	Mobile telephony in 2011
Area (% of	38.7 (projection for	90.26
dwellings)	2011)	90.20
People (% of population)	48.2 (2009)	99.55

Source: SBEE and ATRPT (Compilation by the author)



#### 6. CONCLUSION

- ① Promoting renewable energy such as solar energy in rural areas to improve the access to energy and electricity to all.
- Opening the energy supply sector to private actors to foster the competitiveness and efficiency of the sector.
- ③ Add the access to energy as an additional Millennium Development Goal to improve the energy governance in developing countries.

#### 3. OBJECTIVES

- Understand the values attributed to the mobile phone and the social statutes attached to owning it by rural people.
- Pind out the strategies used by rural users to tackle the constraint of powering their mobile phones.
- ③ Determine how an effective partnership can be built between the State and private actors to improve the governance of energy supply in rural areas.

#### 4. MATERIALS AND METHODS

- Desk studies.
- Observation of the mobile use in rural areas.
- Informal discussions with mobile phone users in rural settings.
- Focus-group discussions and in-depth interviews (Unfinished).
- Surveys (Not conducted yet).



Figure 2. Mobile phones are used by everybody from anywhere

#### 5. PRELIMINARY RESULTS (Research on-going)

- O Neither mobile phone nor electricity is no more a luxurious need, but a basic need of human well-being with high welfare outcomes (Figure 2).
- <sup>2</sup> The forms of communication have been radically changing from images
- to digits, even for illiterate people (Figure 3).
  Mobile numbers have been replacing images and proverbs above doorways of houses and rooms (Figure 3).
- ④ An individual without a mobile phone (number) is like an individual without identity.
- ⑤ Powering mobile phones for money is evolving in rural Benin as an incomes-generating activity (Figure 4).

Figure 3. Evolution of modes of human communication



#### 7. SUMMARY

The expansion of mobile telephony has been impacting everyday life in rural Benin. Mobile phone numbers are progressively replacing drawings and paintings of yore above doorways, as a mode of communicating identities and social status. However, rural users face a critical lack of electricity to power their mobile phones. Indeed, electric grid is still expanded in only profitable cities. This led to the emergence of a new economic activity that consists of powering mobile phones. Electricity has therefore become a basic need that needs a public-private partnership for an efficient and equitable supply.