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Water and electricity for the "bottom billion"

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Bonn, 24 March 2014. World Water Day 2014: Water and Energy, took place on 22 March, and focused on water and energy provision for those referred to by Paul Collier as the world's "bottom billion".

Improvements in water supply

UNICEF and the WHO made the spectacular announcement in 2012 that the Millennium Development Goal on access to safe drinking water had already been achieved in 2010. This milestone saw two billion more people accessing this resource than in 1990, and that five years ahead of schedule. Nonetheless, there are still 780 million people who have to get by without clean drinking water, while some 2.5 billion people lack basic sanitation facilities. With regard to the latter, we will fall far short of achieving the Millennium Development Goal. Consequently, the *Sustainable Development Goals* (SDGs) must focus in particular on basic sanitation provision.

What about energy provision?

Although 1.4 billion people have no access to electricity, energy provision was not a Millennium Development Goal. While the exact figures may be disputed, the true extent of the problem is not. In Africa alone, around half a billion people have no electricity. Connection rates vary greatly, reaching almost 100 percent in North African countries and in South Africa, lying at around 3.5 percent in Chad, and ranging between 50 and 60 percent in Senegal, Ghana and the Ivory Coast, to mention just a few.

The *Sustainable Energy for All* (SE4All) initiative, launched by UN Secretary-General Ban Ki-moon in 2011, addressed this lack in supply and set three global objectives: (1) enable universal access to modern, clean energy services; (2) double energy efficiency; (3) double the share of renewable energy in the global energy mix from 18 percent (2010) to 36 percent (2030). SE4All is working to see urban and rural electrification and the expansion of national energy grids and non-network-dependent, decentralised solutions. This would involve estimated annual investment costs of USD 600 billion to USD 800 billion more than the current USD 400 billion (2010).

Africa-EU Energy Partnership

Owing to the ability of hydroelectric plants to strategically complement other renewable forms of energy by only producing electricity at peak times and otherwise storing it (in pumped-storage plants, for example), hydro-power is being promoted by the Africa-EU Energy Partnership (AEEP) alongside wind power and solar energy as a building block in the process of transforming countries into low-carbon economies: *"They [hydro-power] remain by far the most important renewable technology on the continent and there is huge potential left to exploit…"*. According to the latest status report from the AEEP, most of the renewable energy projects in 15 sub-Saharan African countries are hydro-power projects. Nine large hydroelectric plants already registered with the African Union's infrastructure development programme (PIDA) are expected to deliver a significant increase in hydro-power. The AEEP agreed to install an additional 10,000 megawatts of capacity as part of the Africa-EU cooperation programme, being sure to underscore the need to observe social and environmental standards.

However, that is where the problem lies, and it is also doubtful whether these mega hydroelectric plants will serve to electrify rural areas. In plain terms, the project will involve interfering with river ecosystems, often with irreversible consequences for the fishing industry and other resources used by local communities. At the same time, there are also issues of forced relocation, land confiscation, inadequate compensation or failure to pay compensation, and resettlement plans that have so far not been worthy of the title. It is unacceptable for one group within society to bear all the costs of climate-change-mitigation and electrification programmes. Investment in hydro-power cannot be allowed to plunge this group into poverty, yet that is the risk.

Efforts must be made to share the benefits of the project fairly by balancing economic goals (energy provision, climate-change mitigation) with the interests of the local population. Just as companies respond to incentives and demand guarantees against risk, the affected population groups also require incentives and safeguards. These include fair compensation payments as well as benefit-sharing concepts such as setting up development funds to promote local people and business in the long term using revenue from electricity sales, ensuring that the affected local population groups are connected to the electricity grid, and granting preferential rates to the local population and local businesses.

Environmental impact assessments, environmental management plans, fair compensation payments and benefit-sharing concepts must become standard international practice, something the Africa-EU Energy Partnership should work towards achieving.