Luxembourg, 17.09.2013

Environmental and Social Data Sheet

Overview

Project Name:	Orange Poland 4G Rollout
Project Number:	2012 0593
Country:	Poland
Project Description:	The project concerns the promoter's investments in Poland to increase the availability and quality of high speed mobile broadband services based on 3G/UMTS and 4G/LTE technology.

EIA required:	No
Project included in Carbon Footprint Exercise[1]:	Yes

(further details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project activities do not fall under Annexes I and II of the EU Directive 2011/92/EC, and are therefore not subject to mandatory Environmental Impact Assessments (EIA). Generally, mobile networks based on UMTS/LTE technology have limited environmental effects.

The impact during implementation will be limited as the vast majority of new equipment will be put on existing sites and replace old and less efficient equipment. The main impact during operation, such as the radiation emissions or the visual detraction, will be mitigated by appropriate construction and operation measures within the national regulations.

Potential health risks from electromagnetic radiation during operation are still being studied at an international level, but WHO classified them in 2011 as being possibly carcinogenic to humans based on a review of recent studies. Therefore, more research on the link between cell phones and the cancer risk is proposed and users are asked to handle the cell phone more carefully particularly in the case of high usage. Still, the ICNIRP[2] thresholds are considered in Europe as appropriate. Poland has implemented the EU recommendations (1999/519/EC), which are based on the ICNIRP principles, but has lowered the effective emission thresholds by more than 10 times below the EU recommendation.

The project is classified as acceptable, i.e. with minor negative residual impacts and it is therefore eligible for the Bank's financing.

[1] Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO_2e/year absolute (gross) or 20,000 tons CO_2e/year relative (net) – both increases and savings.

[2] The International Commission on Non-Ionizing Radiation Protection

Environmental and Social Assessment

Environmental Assessment

The impact during the project implementation is limited as only a small amount of new sites will be required. In the majority of cases, existing sites will be refurbished and more efficient new equipment will be installed. As it is a shared network the overall site number will be reduced for the promoter. The erection of new sites requires a building permit, which is typically combined with environmental assessments by the competent authorities. Today 200 sites are located in nature conservation areas. A significant further increase is not expected.

The renewal of the electronic equipment by latest technologies will provide a much better power efficiency. In this case the new nodes will have about double the capacity compared to the old equipment but will only consume about 20 – 30% more power.

According to the latest EU implementation report prepared by BiPro in May 2008, the EU recommendation (1999/519/EC) on exposure limits (based on the ICNIRP[3] principles) has been transposed in 2003 into national law. The Polish legislation has set even more stringent radiation emission thresholds, which are more than 10 times below the levels specified in the above EU recommendation. Poland has together with Belgium, Italy and Luxembourg set the emission levels below the ones required in the EU recommendation.

During the implementation and operation of mobile networks the promoter checks various environment issues such as the fulfilment of the formal conditions required for the realisation of the sites, measures the EMF radiation around existing sites, compiles the results and prepares reports as well as notification of the EMF levels to the relevant authorities.

The promoter makes use of the following management systems:

- Quality management system in line with ISO 9001
- Environmental management system in line with ISO 14001
- Security management system in line with ISO 27001

EIB Carbon Footprint Exercise

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

The estimated annual emissions of the project[4] after the implementation will be:

absolute (gross):	157.2	kt CO_2e/year
relative (net):	30.3	kt CO_2e/year

The absolute CO_2 emissions of this mobile Telecom network are in this case particularly high as the Polish conversion factor is a high one due to the type of electricity generation and the network is also a shared one, i.e. the capacity of the nodes is rather high in order to accommodate for the traffic of the two mobile operators. As usual the installed new equipment has a much lower specific power consumption compared to the replaced nodes which means in this case, that the new nodes consume just 20 to 30% more power but provide double the capacity including additional new services. Still the relative emissions of the new shared network are 30.3 kt CO_2 despite a saving of many nodes due to the higher traffic capacity of the new nodes. During the operational phase further fine tuning will be done and this should result in a lowering of the CO_2 emissions in future.

[3] The International Commission on Non-Ionizing Radiation Protection

[4] The Carbon footprint calculation comprises the entire shared network while the EIB project is defined as only the promoter's part of it.