

## Environmental and Social Data Sheet

### Overview

Project Name:	DEUTSCHE TELEKOM MOBILE NETWORK 5G
Project Number:	2018-0869
Country:	Germany
Project Description:	The project concerns the investments for coverage expansion and capacity increase of the promoter's very high speed mobile broadband network in Germany and its evolution towards 5G services in view of the currently auctioned new 5G spectrum. The project will result in an increased population coverage particularly due to specific measures along the rail tracks and the motorways. Also specific measures are included to prepare the launch of 5G services in 2019 such as deployments of 5G antenna systems as well as small cells and the installation of additional fibre connections to mobile towers.
EIA required:	No
Project included in Carbon Footprint Exercise <sup>1</sup> :	Yes
(details for projects included are provided in section:	"EIB Carbon Footprint Exercise")

### Environmental and Social Assessment

#### Environmental Assessment

The project concerns various different activities such as the modernisation and the expansion of existing access network sites of a mobile network, the erection of new sites in rural areas or alongside motorways and trains links, the installation of small cells in dense urban areas and the installation of underground fibre links as well as aerial backhaul transmission links. The project does not fall under the Annexes of the EU Directive 2014/52/EU amending the EIA Directive 2011/92/EU, and is therefore not subject to mandatory Environmental Impact Assessments.

Mobile telecommunications networks cause radiation emissions with potentially harmful effects to the environment. Most of the activities financed by this project require a construction approval issued by the local competent authorities and a site certificate in case of change or the installation of new radio equipment. Such operational certificates are issued by the federal Telecom agency (BNetzA). The certificate will assess the operational parameters under a "worst-case" scenario and specify the required safety distance. The sites will be checked by the agency through site inspections, which are complemented by regular radiation emission measurements.

<sup>1</sup> Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO<sub>2</sub>e/year absolute (gross) or 20,000 tonnes CO<sub>2</sub>e/year relative (net) – both increases and savings.

Through this operational permit, the regulator makes sure that a new sender together with existing senders do not create joint radiation emissions above the German radiation thresholds. The Germany exposure limits for such radiation emissions are stipulated in the related emission law (26. BImSchV), which is based on the EU recommendation (1999/519/EC / ICNIRP<sup>2</sup> principles).

The used 5G bands, the modulation schemes and the specific antenna technologies are relatively new for the sector and will require some more scientific analysis. New studies to better understand the specific impact of the emerging 5G technology on radiation emissions to the general public are under preparation, still the general assumption is, that the ICNIRP thresholds are also sufficient for 5G mobile networks.

The visual impact represents another residual environmental impact. However, the number of new sites in the project is limited compared the installed base. Also, the promoter is very experienced in mitigating the visual impact through specific measures or the use of site sharing possibilities.

### **EIB Carbon Footprint Exercise**

The estimated annual emissions of the project in a standard year of operation are:

- Absolute emissions: 156 kt CO<sub>2</sub>/year
- Relative emissions: -30.8 kt CO<sub>2</sub>/year.

The emissions are based on the network part financed by the Bank and include a partial network renewal as well as the installation of additional new equipment at existing and additional new sites. The savings due to the network renewal drives the negative relative emissions.

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.

### **Other Environmental and Social Aspects**

The promoter has a very well developed and comprehensive corporate social responsibility (CSR) policy with an annual reporting. These CSR principles and benchmarks are derived from the Sustainable Development Goals (SDG). At the same time, the promoter is also actively involved in various committees and work groups with direct SDG relevance such as UN Global Compact, GSMA, GeSi (Global e-Sustainability Initiative) and econsense.

The group wide Corporate Responsibility performance is monitored through 13 different environmental, social and governance KPIs. Those KPIs are measured and analysed by the controlling department on a group wide basis and are used to manage the company's CR performance.

## **Conclusions and Recommendations**

Considering the above, the project is acceptable for the Bank's financing in environmental and social terms.

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<sup>2</sup> International Commission on non-ionizing radiation protection