Purpose of the project

- Following ERM’s successful support for the Jubilee FPSO Development, which was Ghana’s ‘First Oil’ project, ERM supported TGL in its second major offshore development in Ghana, the Tweneboa Enyenra Ntomme (TEN) Development.

- ERM was commissioned to undertake an ESIA and Safety Case studies for the TEN Development in 2011 in accordance with the Ghana EIA Regulations. The installation and commissioning permit was granted in 2013 following the submission and acceptance of the ESIA and Design Safety Case by the Ghanaian Environmental Protection Agency (EPA). The operations permit was granted in June 2016 following submission of the Environmental Management Plans and the Operations Safety Case. First oil was delivered in August 2016.

- The ESIA covered both environmental and social impacts and the work was undertaken by a joint ERM UK, South Africa and Singapore team along with ERM’s Ghana partners ESL.

Description of the project

The TEN fields are situated approximately 20 km to the west of the Jubilee field and lie in water depths ranging between 1,000 m and 2,000 m.

The TEN Development includes oil and gas production wells, water injection wells and gas injection wells. Production is gathered through subsea manifolds and conveyed by subsea flowlines to a FPSO which is moored centrally in the TEN fields.
ESIA Development

- As the oil industry is new to Ghana and there have been no previous ESIA for offshore projects in Ghana there was the need for a high level of consultation and engagement with regulator and key stakeholders. This included public consultations at the scoping stage as well as ongoing meetings with the EPA and three days of public hearings at the Draft ESIA stage.

- As there is a lack of baseline information on the offshore deep water environment in Ghana there was a need to undertake an Environmental Baseline Survey along with a series of modelling studies for drill cuttings, produced water and potential oil spills.

- In addition, in response to concerns from the coastal communities on the potential impacts of the offshore project on their health and livelihoods a socio-economic baseline study was undertaken.

- To translate the ESIA commitments into operational actions ERM developed a series of Environmental Management Plans and operational procedures throughout 2014-2016.

Safety and Risk

TGL were supported by ERM's Global Risk team in London and Singapore for the development of Design and Operational Safety Cases. ERM acted for Tullow as their independent process safety consultant, and reviewed contractors safety studies and deliverables. ERM also developed Operational 'bow-tie' and performance standards for the safety and environmentally critical elements and facilitated safety workshops.

The Safety Case and ESIA teams worked together in identifying safety and environmental critical elements related to the project and in developing effective mitigation and management measures.

Local Content and Capacity Building

ERM developed a Local Content Plan and provided capacity building by working with our Ghana based partners ESL and SRC as well as directly with Tullow and contractor staff.

In addition ERM delivered ESIA and Process Safety training in a series of training courses to over 95 staff from 15 organisations including TGL, its JV partners, its contractors, and the Ghana Environmental Protection Agency, Ghana National Petroleum Commission and other regulators.

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