



## 11. CONCLUSIONS AND RECOMMENDATIONS

The NLNG **SevenPlus** Project, for which this EIA was prepared, is the further expansion of the LNG plant on Bonny Island. This Project will consist of the construction and operation of 2 additional trains, each with a capacity of 8.5 Mtpa LNG. An LNG train of this size has not yet been developed elsewhere in the world; the artist impression in Figure 0.10 gives a good appreciation of the scale of the Project. The current schedule foresees the development of train 7 starting mid 2008 with the first LNG exported by 2013. Site preparation work started already in 2007. The decision about train 8 will be taken later. The Project entails also the addition of 12 new LNG carriers to export the liquefied gas to the USA and, to a lesser extent, to Europe.

The history of NLNG shows a long and impressive sequence of projects. The EIA for the last project – the 6<sup>th</sup> train – demonstrated that several limits were being approached of what was possible on Bonny Island with regard to environmental and social impacts. With a focussed effort, the **Six** Project could still be developed. NLNG and its shareholders have realised from the earliest days of the **SevenPlus** Project that this would also mean that the realisation of this Project would be an even more challenging development for all parties. In the initial opportunity-framing workshop a way forward was agreed with very challenging standards. The impact assessment process that followed was managed to integrate all aspects, standards and challenges and investigate if, and how the Project could be realised.

NLNG has started this EIA process as early as possible; it was carried out parallel to the front-end engineering, and in such a way that any intermediate implications resulting from the assessment could be included in design, construction and operation to achieve an optimised design. The current report reflects the outcomes of this impact assessment process and takes into account in an integrated manner the natural environmental, human health, social, trans-boundary and global environmental aspects. Consultation with stakeholders was an integrated element of the EIA process. NLNG's sustainability principle "to engage and work with stakeholders" entails a continuing dialogue with project-affected groups and local non-governmental organisations (NGOs) about environmental and social aspects of the Project. Although the consultation process was characterised by several interfering ups and downs, stakeholders were engaged in the final evaluation of the results of the impact assessment. The main deliverables of the EIA are the mitigation measures in the ESHMP (Environmental, Social and Health Management Plan) that NLNG have committed to and which have been communicated to stakeholders.

### 11.1 Conclusions

Main conclusions from this impact assessment are:

- The EIA carried out for the **SevenPlus** Project demonstrates that this Project can be developed since all applicable conditions have been satisfactorily complied with:
  - Significant extra investments to further mitigate hazards and effects to acceptable levels.
  - Full compliance with Nigerian statutory requirements, international standards and shareholder conditions
  - A general mandate to proceed as a result of the consultation process with stakeholders.
- The Project will add to the substantial economic benefits for Nigeria from the liquefaction and export of gas in the form of generation of revenues from the sale of Nigeria's considerable under-utilised, low-cost, natural gas reserves.
- The **SevenPlus** Project can also utilise oil-associated gas, which is currently wasted by flaring in the Niger Delta. If this capability is fully utilized, the contribution to the further reduction of emissions of methane and carbon dioxide is of global environmental significance and contributes to the realisation of the national Nigerian targets of zero flaring.



- Employment opportunities will continue, as for the **Expansion, Plus** and **Six** Projects, in particular during the construction phase. The increased financial flows that this and the acquisition of materials generate will have continuing benefits for the local and regional economy.
- The hazards of the **SevenPlus** Project are similar in quality to those of the earlier Projects. In terms of quantity the difference for the operations phase is the more striking. With the LNG production of each train of **SevenPlus** being about twice that of train 6, all hazards – in terms of emissions, effluents, noise, etc. – of the **SevenPlus** trains are, without additional mitigation, also twice as large.
- The LNG site itself represents a long-term claim on land. This land, however, has currently an industrial function and cannot be used for other purposes. The construction and operation of the **SevenPlus** Project will need additional land. However, control over additional space at the eastern and southern sides of the plant is required to enforce the safety and sterile zones. Compensation for the loss of natural habitat will be realised through investment in nature conservation elsewhere. No persons will be directly affected by the land take.
- The quality of the **SevenPlus** discharges – such as emissions, effluents, noise, etc. – fully complies with the HSE Premises, which were part of the Project design process. The Project therefore also complies with the applicable Nigerian and international standards. However, when the emissions and noise were added to the ambient conditions, exceedence of applicable ambient standards was predicted. Significant mitigations will be implemented to reduce noise and emissions to acceptable levels.
- The construction and operation of the GTS-6 slug catcher will not result in hazards, which could lead to environmental and/or social impacts that require mitigation.
- During the consultation process the local stakeholders have brought up many outstanding issues. The general discontent about this has resulted in a temporary refusal of cooperation with the **SevenPlus** consultation and development process. As a result thereof NLNG has taken efforts to improve and to implement previously agreed mitigation and enhancement measures, as well as outstanding promises.
- Third party review on behalf of the Lenders of the **Plus** Project has concluded that there are no material non-compliances of the impact assessment for the **SevenPlus** Project with the applicable Nigerian and international standards.

## 11.2 Recommendations

- Continue the public consultation process through regular meetings in which all parties share concerns, perceptions, observations and potential solutions. All relevant NLNG departments, including External Affairs, Community Relations and Environmental Affairs should contribute. Tools to optimise communication, such as the NLNG website, should be used efficiently.
- Special attention is required for the position of the transient SETTLEMENT on Bonny Island, as many environmental, social and health aspects related to their locations, social integration and economic perspective are currently not sustainable.
- Integrate the ESHMP resulting from the EIA for **SevenPlus** in the existing long-term management plans of the Company under responsibility of the Sustainable Development Coordination Committee.
- Integrate the reporting of the implementation of ESHMP Plans in the annual public reporting on Sustainable Development.