11 CONCLUSION

PCMRB propose to undertake 2D and 3D seismic activities within deepwater offshore areas of the Rovuma Basin off the coast of northern Mozambique. The various components of the seismic survey have been evaluated through an impact assessment process whereby potential environmental impacts were identified and assessed in terms of potential impacts to the marine environment and/ or local human populations. Identified impacts were further evaluated for possible mitigation/ management measures that could be implemented by PCMRB to reduce environmental impacts to acceptable levels.

The marine environment of the Rovuma Basin supports the livelihood of impoverished coastal communities that are considered vulnerable to change that may affect the fishing resources that they depend on. Tourism is also a contributor to the local economy, and the area is earmarked by the Mozambican government as a priority area for tourism investment and development in the future. In addition, the proposed seismic survey area overlaps with important whale migration routes, and within dolphin, turtle and dugong habitats. The sensitivities of the areas offshore are, however, less sensitive than the general coastal environment, as they fall outside of the primary fishing grounds and sensitive coastal habitats such as coral reefs and seagrass beds, and are in deep water where cetaceans and fish are able to move away from the seismic activity

Although the area has elements of sensitive ecology and socio-economic importance, the location of the seismic surveys offshore and in deep waters avoids the most sensitive areas. In addition, the majority of impacts on the receiving environment as a result of the seismic surveys can be mitigated by the implementation of well established measures routinely used during seismic surveys in other parts of the world. Nonetheless there are a number of potential impacts where the post-mitigation significance remains moderate. These are impacts associated with the interference of seismic emissions with acoustic communication between baleen whales, possible noise impacts on turtle hatchlings (mainly because of their low mobility), impacts on artisanal fisheries due to the survey's exclusion zone, and cumulative impacts on the tourism sector mainly as result of a decrease in investor confidence.

In addition, a number of impacts associated with a high level of uncertainty remain. These include impacts associated with the interference of seismic emissions on acoustic communication of toothed whales behavioural noise

impacts on turtle hatchlings, and medium to long term cumulative impacts on the tourism sector resulting from impacts on the sense of place, enforcement of exclusion zones, noise affecting dive experiences, risk of oil spills and other associated impacts.

While various measures to mitigate short term impacts on the tourism sector are discussed in detail, the intensity and duration of potential medium to long term cumulative impacts on the tourism sector as a result of actual and perceived impacts remain uncertain.

The perceived incompatibility of the tourist activities with oil and gas activities may promote a negative attitude towards tourism and investment in tourism infrastructure. The growth of the tourism sector is largely dependant on a pristine natural environment and the benefits accrue mainly locally. By contrast, the development of the oil and gas sector is perceived as a threat to the marine environment and offers limited benefits to the local communities. The national economic benefits of the oil and gas sector may, however, be an order of magnitude greater that that of the tourism sector.

In summary, no post-mitigation impacts of high significance are associated with the proposed 2D and 3D seismic activities within Areas 3 and 6 of the Rovuma Basin. This could be ascribed to the fact that the seismic areas are located in deepwater offshore areas, which are generally less sensitive to seismic activities than the shallow water coastal environment. The shallow water areas outside the survey area provide the primary fishing grounds for artisanal fishermen, as well containing sensitive habitats and the breeding areas for cetaceans and fish.

In order to mitigate the anticipated impacts, several management measures have been proposed in an Environmental Management Plan (*Annex E* of this report). The management measures are intended to make the planning and implementation of the proposed seismic surveys as socially and environmentally responsible as possible. The management plan is a dynamic document that will be modified and improved during the course of its implementation.

CONTENTS