Marine Phosphate
Status and Scale Perspectives
Phosphate mining banned

Chamwe Kaira

The government has placed a moratorium on planned marine phosphate mining off the country’s coastal waters for the next 18 months until an environmental impact study has shown that mining will not destroy the fishing industry. No other country in the world conducts marine phosphate mining. The decision will, at least for the time-being, defuse growing tension between the fishing industry and environmentalists on one side and mining companies that claimed they would invest a lot of money to create jobs and exports.

“We (cabinet) decided to place a moratorium on Tuesday” Minister of Fisheries and Marine Resources, Bernard Esau said in an interview yesterday. The fishing industry, which is the second or third biggest foreign currency earner for Namibia, has strongly opposed the idea of phosphate mining on fishing grounds. Namibian Marine Phosphate and LL Namibia Phosphates are the two companies that have been granted mining licences for marine phosphate mining.
Key points

- Why phosphate?
- Status of Phosphate Exploration
- Process of Recovery
- Scale Perspective
Why Phosphate?

Global Fertilizer Consumption

- 40% of world food production is directly linked to fertilizer application
- Phosphate fertilizers facilitate:
  - Root development
  - Water use efficiency
  - Early plant maturity
  - Higher yields
- No substitute for phosphate in agricultural fertilizer and feed products

Nitrogen 61% (N)
Potash 16% (K)
Phosphate 23% (P)
Global Trends: World Grain Stocks
Food Security

UN warns of looming worldwide food crisis in 2013

• Global grain reserves hit critically low levels

• Extreme weather means climate 'is no longer reliable'

• Rising food prices threaten disaster and unrest

John Vidal The Observer, Sunday 14 October 2012

Namibia drought: one in three at risk of malnutrition

Climate change fears as 778,000 people face food insecurity amid Namibia's longest dry spell in a generation

An estimated 778,000 Namibians, a third of the population, are either severely or moderately food insecure," said Unicef, noting that this includes 109,000 under fives. "Against a backdrop of underlying fragility, including pre-existing high levels of food insecurity and maternal and child undernutrition (29% national stunting) combined with low sanitation coverage (14% in rural areas), children and women are particularly at risk of worsening health and nutrition status given the current drought conditions," the agency added

David Smith The Guardian.com, Wednesday 14 August 2013
Fertilizer in Africa

International Fertilizer Association (IFA)
September 2013 Monthly update for Members

QUOTE OF THE MONTH

“We mustn‘t allow emotions to cloud our understanding of fundamental natural laws.

To feed a world of 9 billion people without chemical fertilizers would irreparably damage biodiversity.

Let‘s reduce fertilizer overuse in China and shift that to Africa, where lack of fertilizer is a major cause of hunger.”

Namibia’s Marine Phosphate

- 7th largest phosphate resource in the world at present
- Proven to be one of the top 3 deposits suitable for use as a direct application fertiliser by IFDC
Tenements

- EPL Holders (Main)
  - Red Citadel Resources (RCR)
  - Chatham Rock Phosphate* (c)
  - Mawarid Tungeni JV (MT)
  - NMP
  - LL Phosphate (LL)
  - Gecko Minerals (G)
  - Epangelo (E)

- ML Holders
  - Namibian Marine Phosphate
  - LL Phosphate
Current Status

- 2 Mining licences issued
- Last EPL issued to 22 November 2012
- No new EPL’s to be issued for Phosphates
- The Mining Commissioner commented that off-shore marine phosphate license applications exploration are pending until further notice (Minutes, Chamber of Mines Exploration Committee Meeting, 09 Sept 2013)
Phosphate Distribution
## Development - Area Perspective

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<th>Area</th>
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Phosphate Mining Process

- **Recovery**
  - Standard Dredging
  - Established technology

- **Primary Impacts (all dredging)**
  - Seabed disturbance
  - Plume

- **Beneficiation/Use of Material**
  - Standard Size Screening Process to isolate sand fraction
Responsibility

Namibia is fortunate that off its coast there are world class natural resources of fish and minerals in its ocean.

Marine Industries have a joint responsibility:

- To enable Namibia to benefit from responsible development of all of its natural marine resources
- To explore and develop pragmatic solutions for integration of new industries with existing industries
- Measure, monitor and adapt the effects of operations in order to minimise impacts on the environment