

STRATEGIC ENVIRONMENTAL ASSESSMENT

FOR THE PROPOSED BOEGOEBAAI PORT, SPECIAL
ECONOMIC ZONE AND BROADER NAMAKWA REGION

September 2025

Online information sessions
Work Package 1 feedback

Welcome!



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80th
anniversary

Purpose of the session

A platform for I&APs to get involved in the SEA and provide input to the SEA outputs.

- **Share** with Interested and Affected Parties (I&APs):
 - **What is the SEA*** and **what is the progress on Work Package 1 (WP1 - port and SEZ*)**
 - **What are the draft results** of the WP1 specialist studies (WP1).
- **Receive I&AP feedback** on the SEA results.



- **Important!**
 - The Council for Scientific and Industrial Research (CSIR), as coordinator of the SEA, is **independent**.
 - The specialists who undertook respective specific investigations are **independent**.
 - The purpose of the SEA and this session is **not to promote development, provide yes/no answers or result in decisions**.
 - The purpose of the SEA and this session is to present the **possible risks and opportunities** that may result from the proposed development, based on best available **scientific evidence**.
 - The SEA aims to provide a **structured and inclusive foundation for decision-making** to ensure any future planning for the proposed Boegoebaai port, SEZ and broader Namakwa region **balances economic growth, environmental protection and community benefits**.
 - The SEA will **not reduce or replace the requirements of future project-level EIA processes**.

* SEA: Strategic Environmental Assessment ; SEZ: Special Economic Zone Sone; EIA: Environmental Impact Assessment

What is green hydrogen and 'Power-to-X' products?

- Green hydrogen (GH₂) and 'Power-to-X' products are **alternative fuels and chemicals produced using renewable energy** (e.g. from the sun or wind).
- Certain industries, vehicles and machinery normally powered by petrol / diesel / coal / carbon intensive inputs can rather use GH₂ as an **environmentally- and climate friendlier alternative**.

Main components:

Water

- Desalinated sea/waste water

Energy

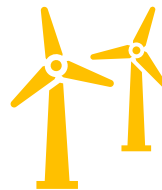
- Renewable energy, powerlines etc.

GH₂/PtX Production

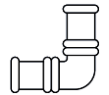
- Through electrolysis
 $\text{H}_2\text{O} \rightarrow \text{H}_2 + \text{O}$

GH₂/PtX Storage and delivery

- Tanks, trucks, trains, pipelines, ships.



Green H₂
or ammonia /
methanol / other
chemicals



Power-----to-----X

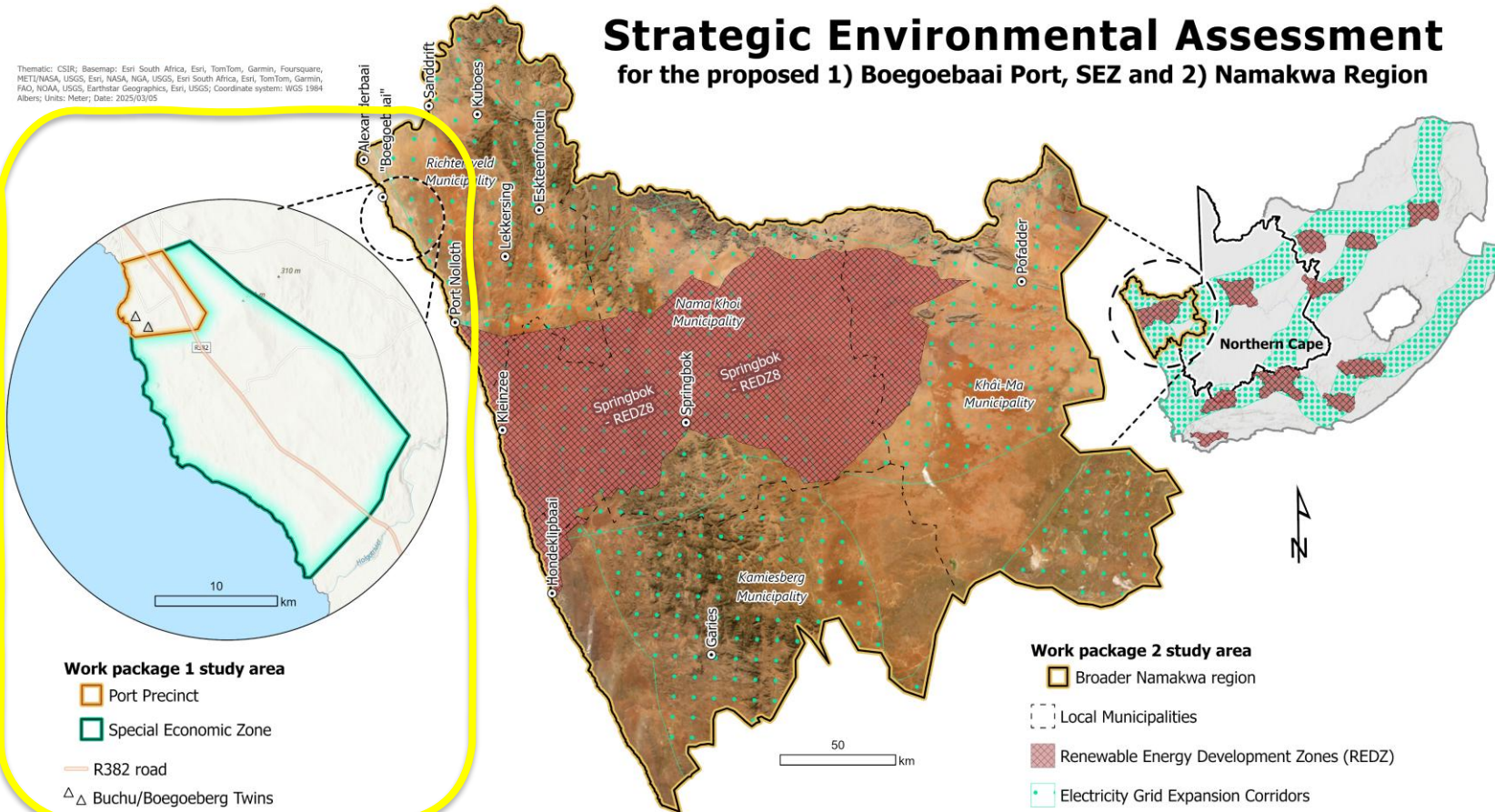
Overview of the SEA

To develop an integrated decision-making framework to guide the planning of the proposed Boegoebaai Port, SEZ, and wider Namakwa region in a sustainable manner.

Why is a SEA required?

- Large-scale GH₂ production will have **many direct and indirect impacts, both positive and negative**.
- Development components, including their interconnected transport routes, will require **large areas of land surface and resource intensive inputs**.
- Although the region is sparsely populated, it is **ecologically and culturally sensitive** with many existing and potentially competing land uses, such as conservation, agriculture, fishing, tourism, mining, and other subsistence livelihoods.
- **Legally required** for new ports in terms of the National Ports Act”).

WP1 Scale: strategic, but **local**; Outputs: **guidance for project-level (port+SEZ)** development planning, layout planning, feasibility studies, EIA and decision-making.



*WP1 – the focus of this round information sessions, similar sessions are planned for WP2.

WP2 Scale: strategic, scenarios-based, **regional**; Outputs: guidance for **broader GH₂ planning in the Northern Cape**, considers cumulative opportunities and risks.

Interesting features of the study area:

Draft results (WP1)

- a) BB* rocky headland and cliffs
→ Cape fur seal breeding colony & seabirds.
- b) BB Twins → plants, animals, cultural significance.
- c) Namakwakop.
- d) Visagiesfonteinkop.
- e) Swartbank heuweltjies.
- f) Ephemeral pans.
- g) Plants of conservation concern widespread.
- h) Birds of conservation concern widespread.
- i) Nomadic pastoralism.
- j) R382 scenic route.
- k) Past and ongoing mining widespread.

* BB: Boegoebaai



↑ North north east view from Boegoeberg South towards Boegoeberg North and Boegoebaai headland.

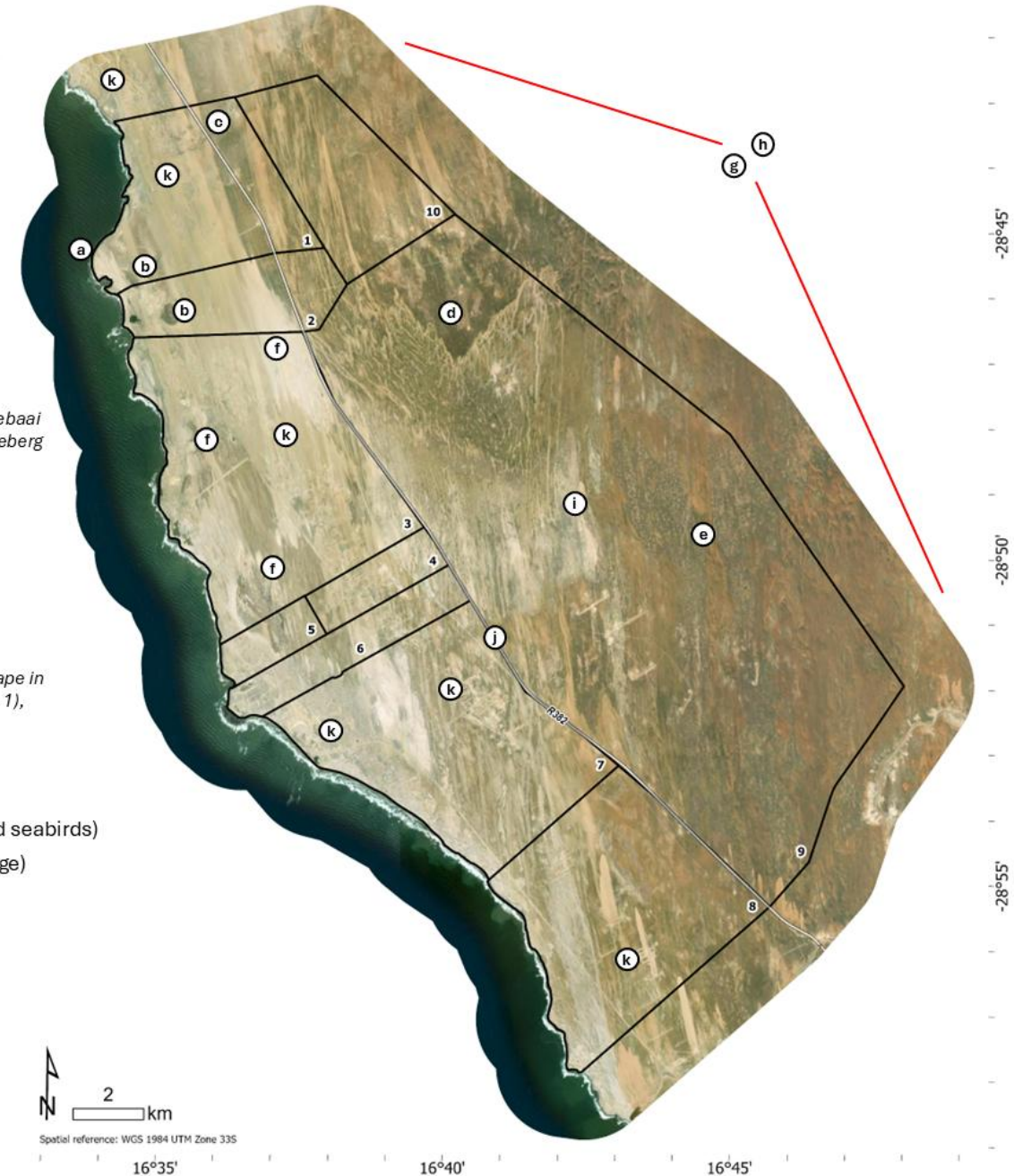


← South view from Boegoebaai headland towards Boegoeberg Twins.



← Example of 'mined out' landscape in the proposed port precinct (zone 1), looking east.

- a) Boegoebaai headland (significant for Cape fur seals and seabirds)
- b) Boegoeberg twins (significant for fauna, flora and heritage)
- c) Namakwa kop
- d) Visagiesfonteinkop
- e) Swartbank heuweltjies
- f) Ephemeral pans
- g) Plant species of conservation concern (widespread)
- h) Bird species of conservation concern (widespread)
- i) Transhumance pastoralism (widespread east of R382)
- j) R382 scenic route
- k) Past and ongoing mining (widespread)



Environmental sensitivity:

Draft results (WP1)

Plants:

- Desert and Succulent karoo biomes.
- Species rich, with endemics present.
- Disturbed by mining and mobilised / wind-blown sand.

Mammals and reptiles:

- Brown hyena, De Winton's and Grant's golden moles, Namakwa dwarf adder, Namib web-footed gecko.

Birds:

- Damara tern, Black harrier, Ludwig's bustard.

Ephemeral pans:

- Important for plants and animals.

Heritage and culture:

- BB cultural significance for nomadic Nama people.
- Shell middens, graves at BB South, seasonal pastoralism, tourism route, sense of place. .

Marine ecology:

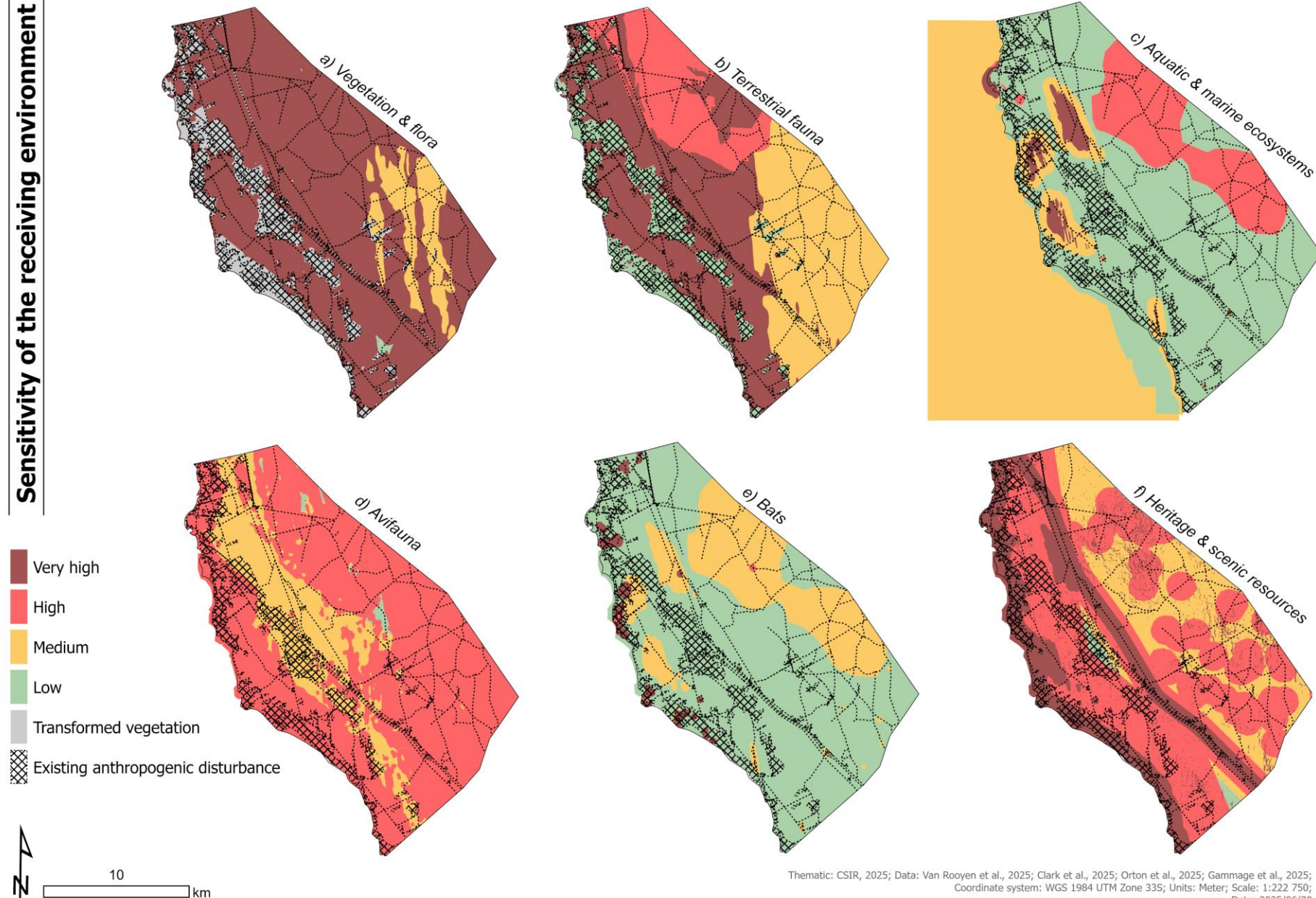
- BB headland with seals, rocky beaches, underwater corals.

Fisheries and coastal livelihoods:

- Fishing communities and practices (Port Nolloth to Hondeklipbaai, west coast).
- Historic injustices cause by industries (e.g. mining).

Strategic Environmental Assessment for the Proposed Boegoebaai Port and Special Economic Zone

Sensitivity of the receiving environment



Summary of possible impacts:

Draft results (WP1)

Possible **negative** impacts / risks:

- Disturbance, fragmentation and loss of ecosystems, habitats and species (terrestrial, aquatic and marine).
- Establishment of alien and invasive species.
- Contamination: soil / water / air through chemical dumping, exhaust gases, dust, light, noise.
- Increased mobile sand burying plants and infrastructure.
- Disturbance of hydrodynamic ocean processes and patterns.
- Decreased seawater quality.
- Disturbed function of ephemeral pans and possibly associated groundwater (due to currently limited understanding of surface-groundwater relationships in the area).
- Damage or destruction of fossils, graves, shipwrecks and other cultural resources.
- Disturbance of nomadic small-scale pastoralist lifestyles.
- Change in the area's sense of place' (despite current mining).
- Disturbance and limitation of, and competition with, existing fisheries and coastal livelihoods.
- Inflow of newcomers.

Possible **positive** impacts / opportunities:

- Investment in new/ / upgrades to existing, infrastructure and services.
- Creation of new and diverse income streams, as well as employment and livelihood opportunities.
- Rehabilitation of disturbed areas / areas buried under shifting sand.
- Creation of a conservation area in the SEZ, if important, rare and conservation interest species and areas are conserved, and rehabilitated / protected from shifting sand.

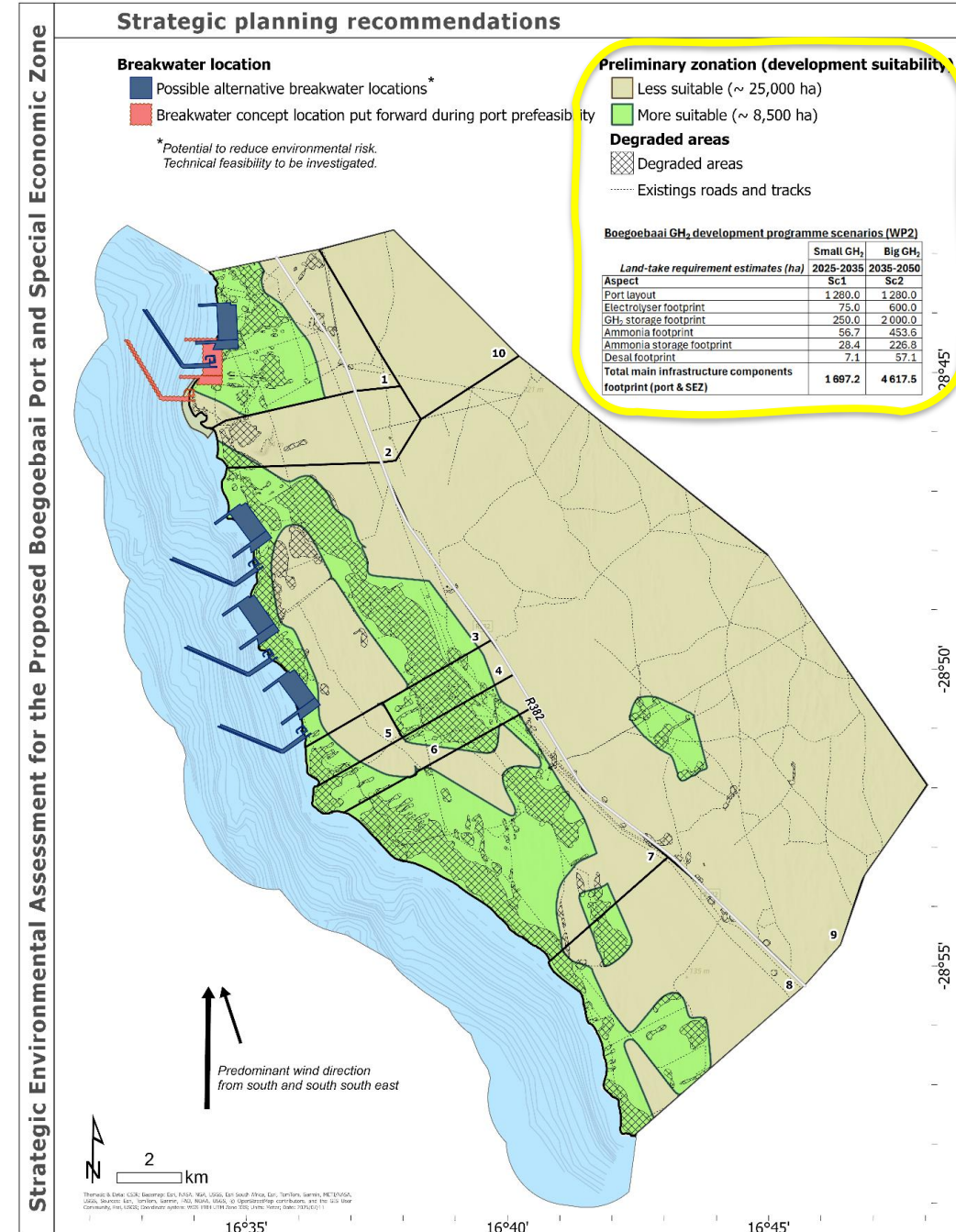
*The above summary is an initial (not exhaustive) list of aspects that require specific attention going forward in terms of planning, investigation during Environmental Impact Assessments and regular measures for **avoidance / mitigation / enhancement**.*

Recommendations - strategic planning:

Draft results (WP1)

Conclusion: key recommendations for strategic planning of the proposed BB port and SEZ:

- 1. Place the harbour breakwater such to avoid** sensitive Cape fur seal breeding colonies and rocky sea cliffs. The technical feasibility (e.g. regarding sea depth) of the harbour placement should of course be investigated and determined.
- 2. Place infrastructure in already disturbed areas, and avoid Very High and High sensitive areas** - current estimates indicate that there will still be (more than) enough space to place infrastructure in already disturbed areas.
- 3. Manage shifting / wind-blown sands** which present widespread ecological, social and engineering challenges.
- 4. Consider a strategic biodiversity offset framework**, where specific areas, e.g. east of the R382, around the Holgat River and along the Orange River, are set aside as target areas for long-term conservation.
- 5. Commence environmental monitoring early**, before development takes place, to enrich data in this isolated area.



Recommendations - strategic planning:

Draft results (WP1)

Conclusion: key recommendations for strategic planning of the proposed BB port and SEZ:

- 6. Plan for a sustainable port,** balancing economic growth, environmental protection and quality, and social development.
- 7. Establish and implement a comprehensive, transparent and ongoing consultation plan,** from the earliest project planning and management phases. Aimed at fair consultation and negotiations (incl. "Free, Prior & Informed Consent (FPIC)" principles).

Recommendations – impact management:

Draft results (WP1)

Conclusion: key recommendations to mitigate potential negative impacts and enhance positive impacts:

- 1. Prioritize diligent, proactive and best practice planning and EIA* processes.**
- 2. Avoid sensitive ecological and cultural areas,** as identified in the SEA, and further confirmed through fine-scale investigation during project-specific EIA.
- 3. Consult with local communities,** including fishers and herders, regarding areas and practices that are important to culture and livelihoods, as well as to enable mechanisms for coexistence.
- 4. Invest in local skills development.**

* EIA: Environmental Impact Assessment (that needs to be undertaken in order to apply for Environmental Authorisation in terms of the National Environmental Management Act.

How will the SEA outputs be used?

- **Source of information** (current knowledge as at the time of the assessment), to be enriched as further studies and fieldwork are done.
- **Point of departure** for future investigation, planning and decisions at strategic, local and project levels.
- **Accountability** of future investigation, planning and decisions.

Next steps:

- **Please write any comments / questions in the chat.**
- **Please remember to fill out the register form.**
- The full draft SEA WP1 report is **available for public review for 45 days** ~ Aug - Sept, exact dates to be confirmed.
- Report, incl. instructions on how to comment on the report, is available online here → <https://www.csir.co.za/boegoebaai-port>.
- After comments are received, the WP1 report will be updated (where appropriate), finalized and published on the website (~ Nov 2025).
- WP2 (SEA for the GH₂ development program in the Namaqua region) is ongoing. The WP2 draft report should be released later this year.
- Public information sessions will also be held for WP2 (format, location/s and date/s to be determined).
- WP2 draft report will undergo the same public review and finalisation as WP1. Aim for final publication early 2026.

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Thank you for your attention and inputs!

Contact:

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Project website

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