

TO: EPLGA Engineering and Works Committee Meeting

FROM: Susan Stovell, Manager, Strategy, Engagement and Knowledge, DEWNR

SUBJECT: LiDAR and Coastal Vehicle Access Strategy projects

PURPOSE

To provide the EPLGA Engineering and Works Committee members with an update on two significant projects within the region that Councils will be approached to support in due course.

BACKGROUND

The Eyre Peninsula Natural Resources Management Board (the Board) is working in collaboration with Regional Development Australia, Whyalla and Eyre Peninsula (RDAWEP) and the Eyre Peninsula Local Government Association (EPLGA) on a range of projects, two of which are detailed below:

LiDAR acquisition and sea-level rise modelling

Sea-level rise is a major risk for many coastal areas of Eyre Peninsula. Sea-level rise is projected to accelerate over the next century, with research indicating that global mean sea level may rise 18–48 cm by 2050, and 50–140 cm by 2100.

Decision-makers faced with the problem of adapting to sea-level rise will need appropriate information to make informed decisions. A Light Detection and Ranging (LiDAR) survey and digital elevation model will be required to identify accurately which areas will be affected by inundation.

To date LiDAR surveys have not been undertaken on Eyre Peninsula, as it is a costly exercise for any one party to acquire. This lack of essential data is an ongoing challenge for the region, which is affecting coastal development assessments. This has become even more evident in 2016 with the impact of storm surges on some coastal areas.

There will be increasing pressure in the future on local government and developers to provide evidence of sea-level rise considerations in development applications and to meet insurance requirements.

Eyre Peninsula has 2,355km of coastline spanning from the Upper Spencer Gulf to the Great Australian Bight. A 1km wide LiDAR survey of this area would cost approx. \$450,000, with a further \$50,000 required to undertake sea-level rise modelling.

The Board have committed \$200,000 in 2017-18 financial year to contribute to the cost of acquiring the LiDAR survey data and is working in collaboration with the RDAWEP and EPLGA to source the additional funding required. Funding will need to be confirmed by December to enable the survey to be undertaken in summer (February 2018).

The EPLGA will be contacting Councils in due course to seek support in funding this important initiative. If we are unable to raise the full amount of funds required the project will need be scaled back to focus on priority coastal sites to reduce the overall project cost.

Coastal Vehicle Access Management

Tourism is one of the fastest growing industries in the region and is a major contributor to the regional economy, currently growing by 16% per annum, with strong tourism growth expected to continue. The challenge is how to effectively manage the environmental and infrastructure impacts resulting from increased visitation to the region. This challenge is heightened by the anticipated growth in visitor demand for access to unmanaged, wilderness coastal areas.

In order to address this emerging challenge, the Board, RDAWEP, and the EPLGA collaborated last year to produce the *Coastal Vehicle Access Decision Making Framework (CVADMF)*. The framework provides a tiered approach that considers environmental, social and economic values, provides clear recommendations, a suite of management options and consistent guidelines for the protection of coastal natural resource assets at each level (or tier), for councils.

Initially the plan was to simply develop the decision making tool for Coastal Councils to then apply to their respective areas. However, the engagement process identified that additional support would be required to ensure the successful implementation of the framework. Subsequently five key recommendations were made outlining the nature of this support.

- Recommendation 1: Formalise commitment through a regional governance structure
- Recommendation 2: Source funding for a dedicated resource
- Recommendation 3: Establish a Regional Coastal Database
- Recommendation 4: Explore the use of by-laws as a mechanism for managing aspects of coastal access such as camping fees, and if desired, develop model 'by-laws' for use across the Region.
- Recommendation 5: Develop a regional approach to messaging and promotion.

The Board has agreed to commit \$50,000 in 2017-18 and \$100,000 in 2018-19 towards further progression of this work. The works will be delivered through the RDAWEP who are tasked with sourcing matching funding.

RDAWEP have included this important initiative in their *Draft Destination Eyre Peninsula Program, Foundations for success* document and are seeking funding contribution from coastal councils to contribute to the project.

Recommendation

That the EPLGA Engineering and Works Committee notes this report.

Why is sea-level rise important?

Sea-levels are rising because of climate change



Thermal expansion
Warmer water expands, therefore global warming is causing the water in our oceans to expand

+



Melting ice
Global warming is melting our glaciers and the Greenland and Antarctic land-based ice sheets

=

Higher sea levels



The amount of sea-level rise depends on the amount of climate change



Sea levels are now 19 cm higher
than they were at the beginning of the 20th century

and

will continue to rise over the next centuries
half a metre or more by the end of the century; around 6 m if the Greenland ice sheet melts completely

↓ **however**

If we limit our emissions,
sea-level rise could be reduced
but not for many decades, even centuries because oceans respond very slowly to change

Sea-level rise creates risks for our coasts



Higher water levels
Floods

+



Higher wave heights
Storm surges

=

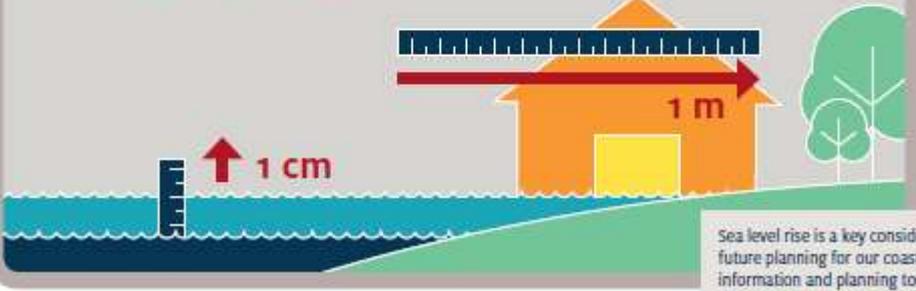


Threats
to land, roads, railways, hospitals, schools, houses

A rough rule of thumb

Approximately a 1 cm rise in sea level on a gently sloping beach...

...will bring the water 1 m further landward



Sea level rise is a key consideration for future planning for our coasts. Further information and planning tools are available at www.coastadapt.com.au

Coastal climate change infographic series
www.coastadapt.com.au


Australian Government
Department of the Environment and Energy


CoastAdapt


NCCARF
National Coastal Resilience Research Centre

Appendix 2 – Coastal Vehicle Access Program

(Excerpt from the RDAWEP - Draft Destination Eyre Peninsula Program, Foundations for success)

12

COASTAL ACCESS & DECISION MAKING FRAMEWORK 2017/18 BUDGET - \$110,000

THE CHALLENGE

To implement the regional Coastal Access Strategy and Decision Making Framework.

THE METHOD

In 2016 RDAWEP, EPNRM and EPLGA in conjunction with individual Councils and stakeholders, commissioned the development of a strategy to address how, as a region, we could consistently manage our coastal areas in a manner that acknowledges the environmental, social and economic importance of specific sites.

Subsequently 5 key recommendations were made

- Formalise commitment through a regional governance structure.
- Source funding for a dedicated resource.
- Establish a Regional Coastal Database.

THE OUTCOME

All 11 Councils are currently in the process of advising their level of commitment to the strategy and framework.

A partnership funding agreement for the employment of a project

officer is required between EPNRM, RDAWEP and the 11 councils.

The project officer will assist individual councils in the implementation of the strategy .

