Building resilience on Temaiku Bight, Tarawa, Kiribati

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MFAT and the Government of Kiribati (GoK) are undertaking a land and urban development project in the Temaiku Bight on Tarawa, Kiribati. The goals of the Project are to provide an assessment of the feasibility of increasing the height of approximately 330 hectares of the Temaiku Bight to approximately 2 metres above highest measured sea level, and to develop an accompanying conceptual land use plan that addresses resilience issues impacting the atoll, including rapid urbanisation, limited water supply, ecosystem services and an increasing risk of land inundation from king tides exacerbated by climate change.

Jacobs have been retained to undertake this multi-disciplinary feasibility study. Our team comprises urban planners, social impact and stakeholder engagement specialists, terrestrial and marine environmental subject matter experts, geotechnical and coastal processes engineers. The focus of this paper is the approaches taken to provide integrated and collaborative solutions to resilience, including the development of an online geospatial app, the use of multiple stakeholder workshops, and participatory community engagement.

The project is scheduled for completion in March 2018 when the feasibility of the land and urban development design, engineering and environmental and social impacts will be presented to the GoK for a decision on whether to proceed with an ambitious and transformational project.

COLLABORATIVE ONLINE GEOSPATIAL APP

Jacobs project team is spread across seven offices in New Zealand and Australia, with multiple disciplines designing surveys and capturing and presenting spatial data. There clearly was a need internally for GIS functionality that had data input and output functionality by multiple users. We also want to keep GoK and MFAT updated on our field studies, meaning a web based approach would be preferred. Our solution was to build a cloud based web application using data stored on a cloud based Enterprise database.

The app also has data collection capabilities for tablet devices to record geospatial referenced field notes and photographs. The tablets are synced onto the database once a wifi connection is available, providing Jacobs and MFAT and GoK client with regular progress updates.

The app is proving to be a valuable tool, being the central "map" (Figure 1) around which meetings, reports and surveys can be collaboratively worked on, with confidence that everyone in the team is literally on the same page.

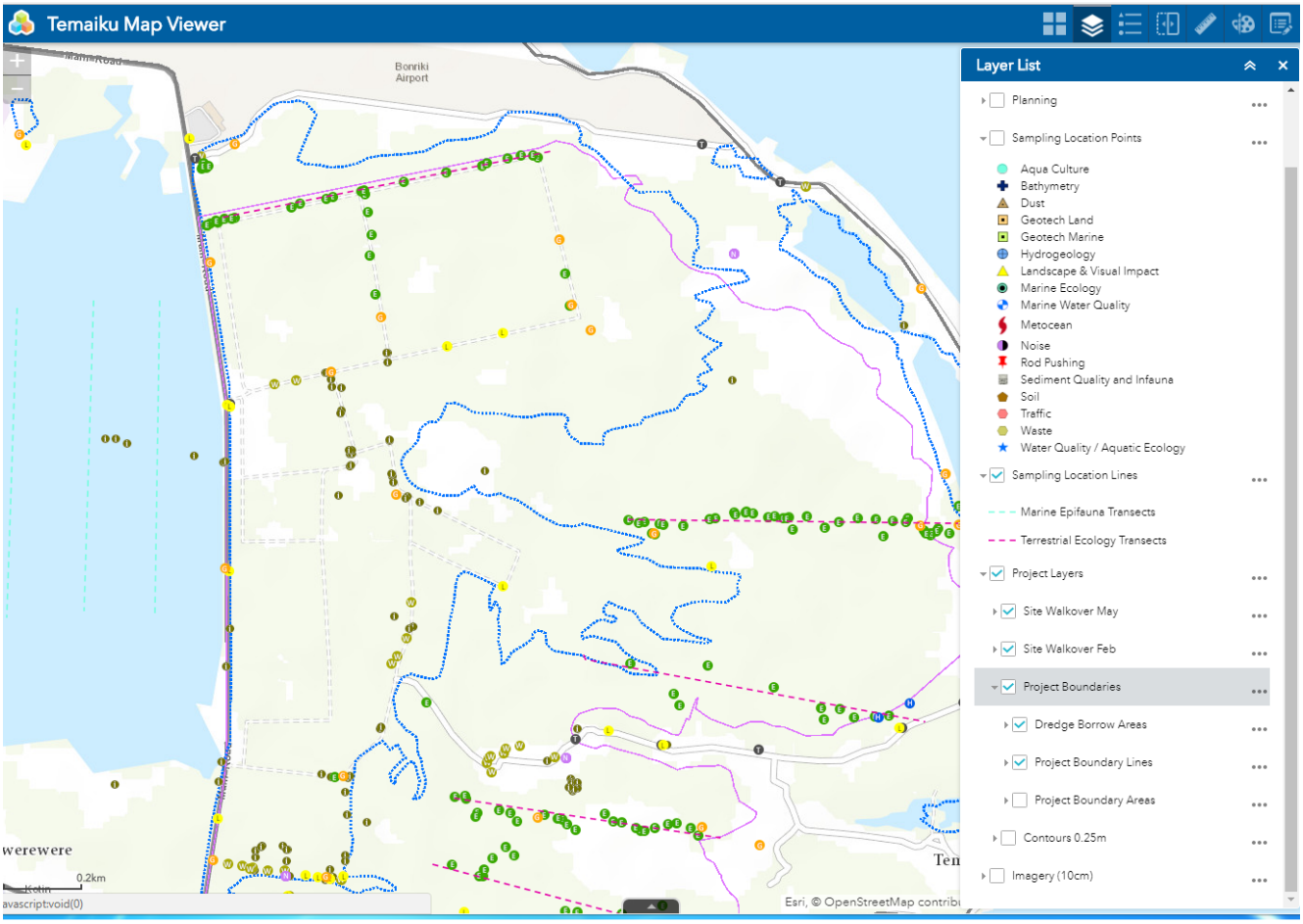

Figure 1: Temaiku Online GIS App

STAKEHOLDER WORKSHOPS

The project's success will ultimately be judged by the people of Kiribati, irrespective of the quality of the engineering, management of environmental and social impacts and design talent of the urban planners. GoK is therefore integral to the feasibility studies process. In the first weeks of the project Jacobs facilitated a Concept design and Risk workshop with representatives of government departments. Small group sessions were used to capture a broad set of potential issues the participants considered would result from the project if it were not designed and constructed suitably. The workshop format of first providing a brief to the group, breaking out into focused work groups and concluding with a group review have proven to be highly effective, with everyone participating and a sense of common concerns being recognised in a close out session.

The land and urban planning team built on this approach, facilitating a planning and design workshop with government representatives, where the participants broke out into three groups following an introduction session on vision and agreeing guiding principles. Each group then presented on their design and commented on the strengths and weakness of the other designs. Several common design elements were identified by the Jacobs design team who developed two concept plans from the workshops output.

These concept plans, which capture the vision and design aspirations of the GoK are then being taken to the community for their response.

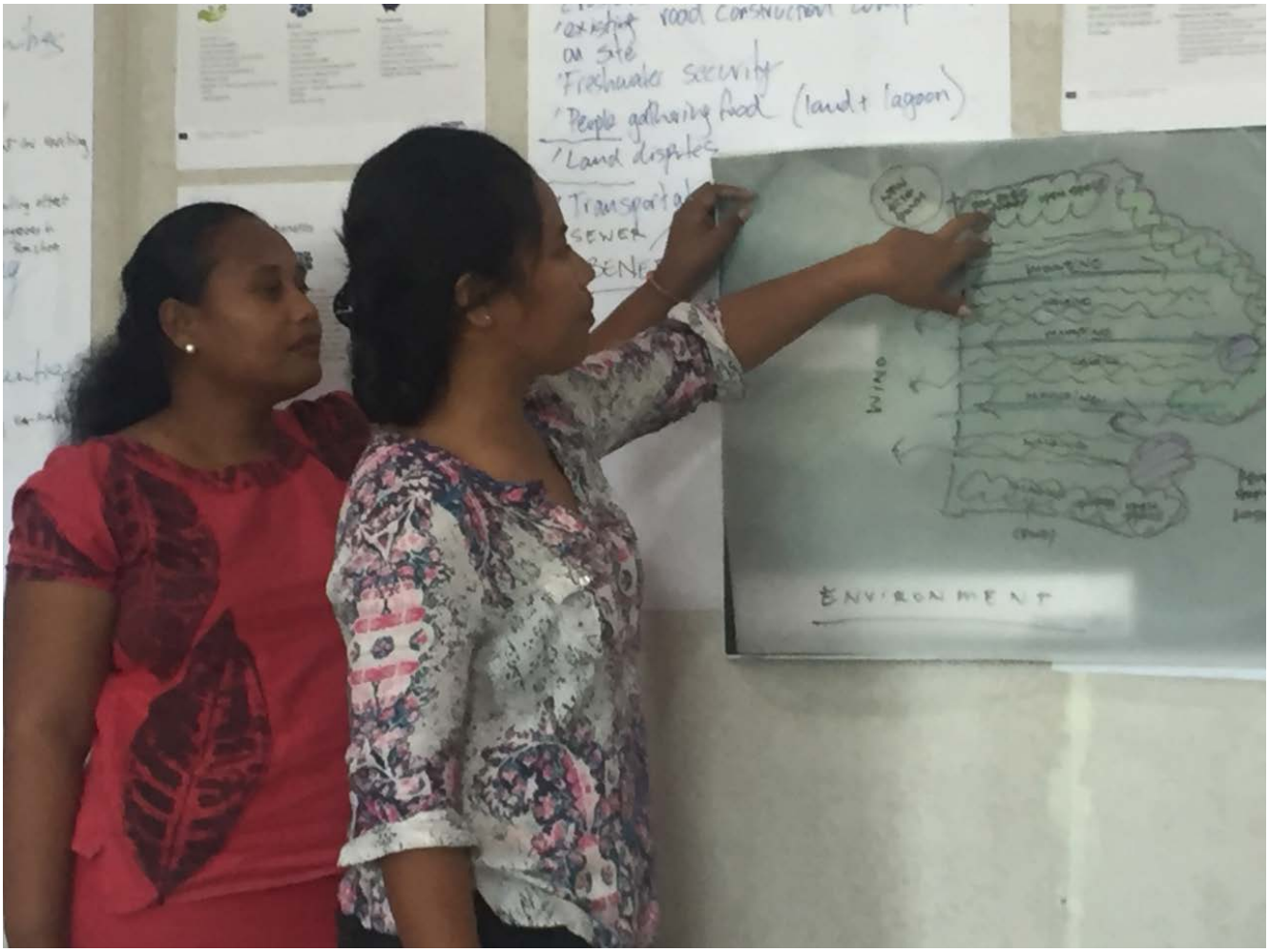

Figure 2: Land and Urban Planning Workshop – Group presentation

PARTICIPATORY COMMUNITY ENGAGEMENT

These three words presuppose that the abstract of 'community' exists alongside the tangible of 'engagement'. In an atoll of 50,000 people it would be easy to presume in an engagement scenario that i-Kiribaiti people should be organised around their settlements, family groups, or their relationship to the outer islands. Yet in undertaking engagement in a formulaic manner – following traditional ownership structures or settlement patterns - negates the most crucial element of the Temaiku Land and Urban Development feasibility study if it is to succeed: -effective participation.

Traditional meetings and decisions made in the village are dominated by a patriarchal structure –by the elders who often decide on matters affecting the village. To clarify, by men. If Temaiku is to address existing land conflicts and inadequate housing concerns in South Tarawa, as well responding to urbanisation and demographic growth, then empowerment of a wider body politic needs to be engaged. At the outset of the consultation process we do not assume a community exists.

Consultations will be undertaken with traditional village elders, so as to not supersede indigenous structures, but the difference will be in who we will bring into the stakeholder process. Small break-out groups are formed at the village consultation stage, mixing the attendees by gender, age, and wealth so as to a relay a more balanced interpretation of the impacts and to supply ideas as to how the ESIA could inform the development of the master plan. By immediately opening up the consultation process to other groups, the process affords us the opportunity to request dialogue with more vulnerable groups and individuals living in the local area.

The most at risk group on the island are the poor – not in terms of monetary poor (a dual cash economy exists alongside subsidence) but in terms of those vulnerable to shocks. For instance, squatters who may have a cash income but who exist without security of tenure face threat of eviction and limited, costly access to core services. Capturing these groups as both an impact and opportunity within the proposed project is critical. Other vulnerable groups such as the unemployed youth; single mothers; elderly women and those with special needs are often overlooked within the consultation process. Therefore, our focus groups integrate vulnerability into the engagement strategy.

Furthermore, by engaging with key informants working in these vulnerable sectors, such as local health workers, teachers, key employers, we see vulnerability from an institutional space. These key informant surveys initiate dialogue at the in-between space of government and grassroots impact.

By applying a participatory poverty approach we have moved away from traditional forms of consulting that use an 'informed' narrative when engaging with stakeholders, to a process of collaboration. Collaboration acts as a starting point to gauge both local resilience, and also interest in forming the abstract: 'a community'.

In this sense, if we can identify a community and their capacity early on, then there is an opportunity that a resilient Temaiku can be delivered by the i-Kiribati people rather than assuming the strategic direction is led from a masterplan or Government alone. A resilient and engaged community offers the possibility for the government to develop partnership to deliver low-cost housing and infrastructure options. Through collaboration, the community becomes the conduit to implement, manage and monitor how Temaiku is developed. Engaging with the abstract is just the beginning.

Figure 3: Land and Urban Planning Workshop – Groups reviewing others work

Building Resilience on Temaiku Bight, Tarawa. Kiribati

Simon Liddell – EIANZ Conference 30 October 2017

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OUTLINE

Context

Project overview

Collaborative approaches applied to building resilience

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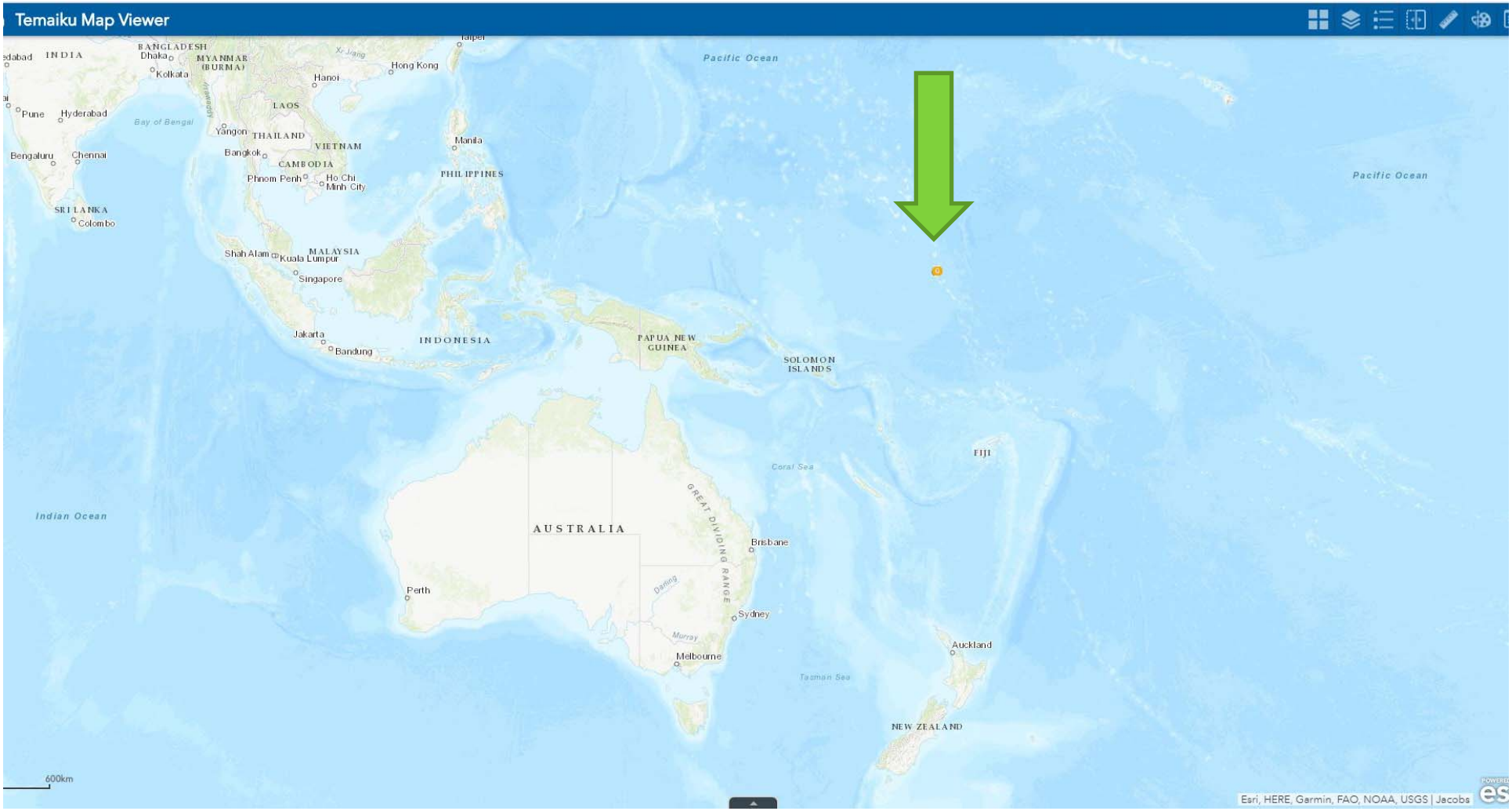
Kiribati



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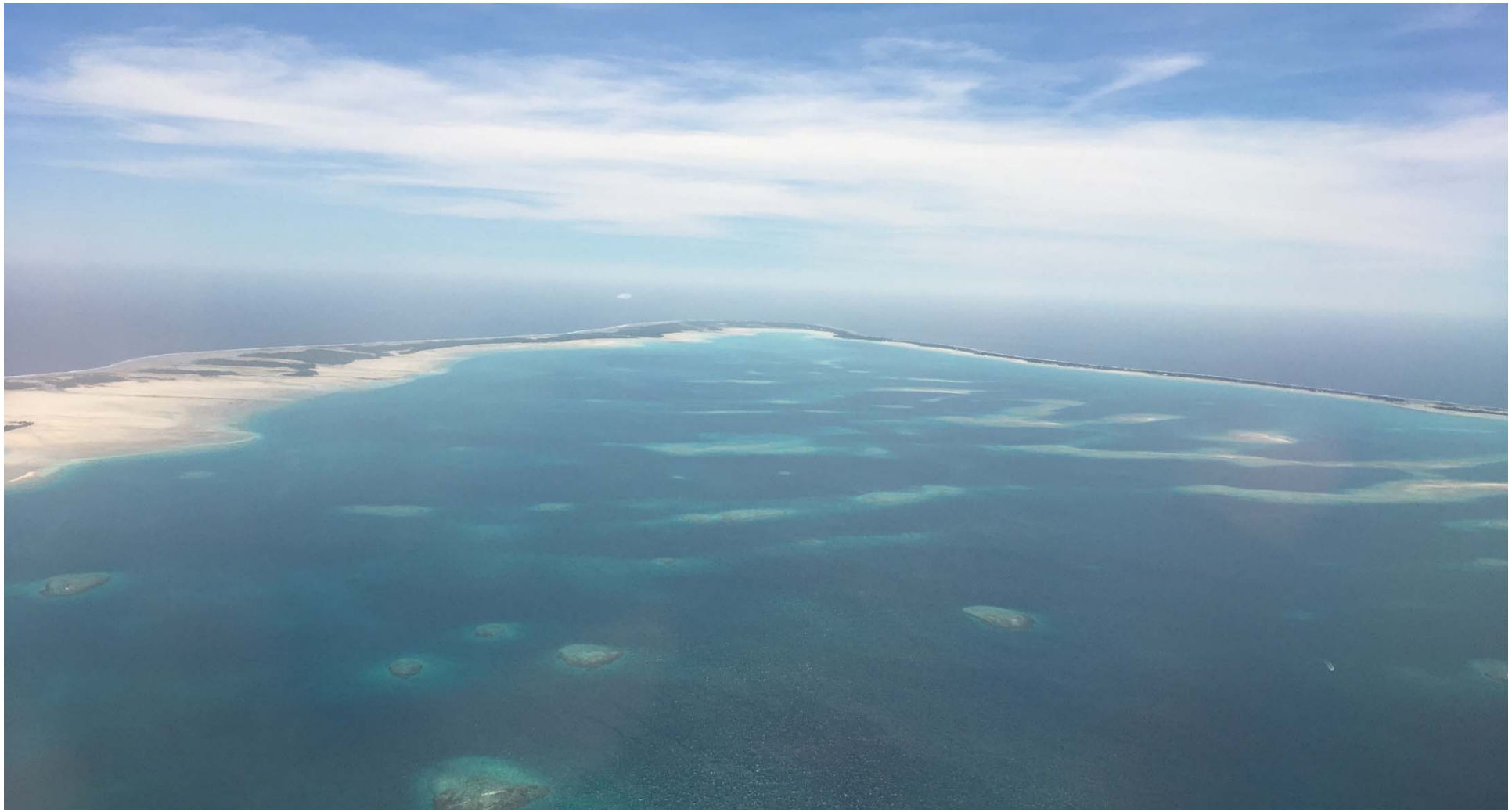
Tarawa



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Temaiku Bight

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WICKED PROBLEMS

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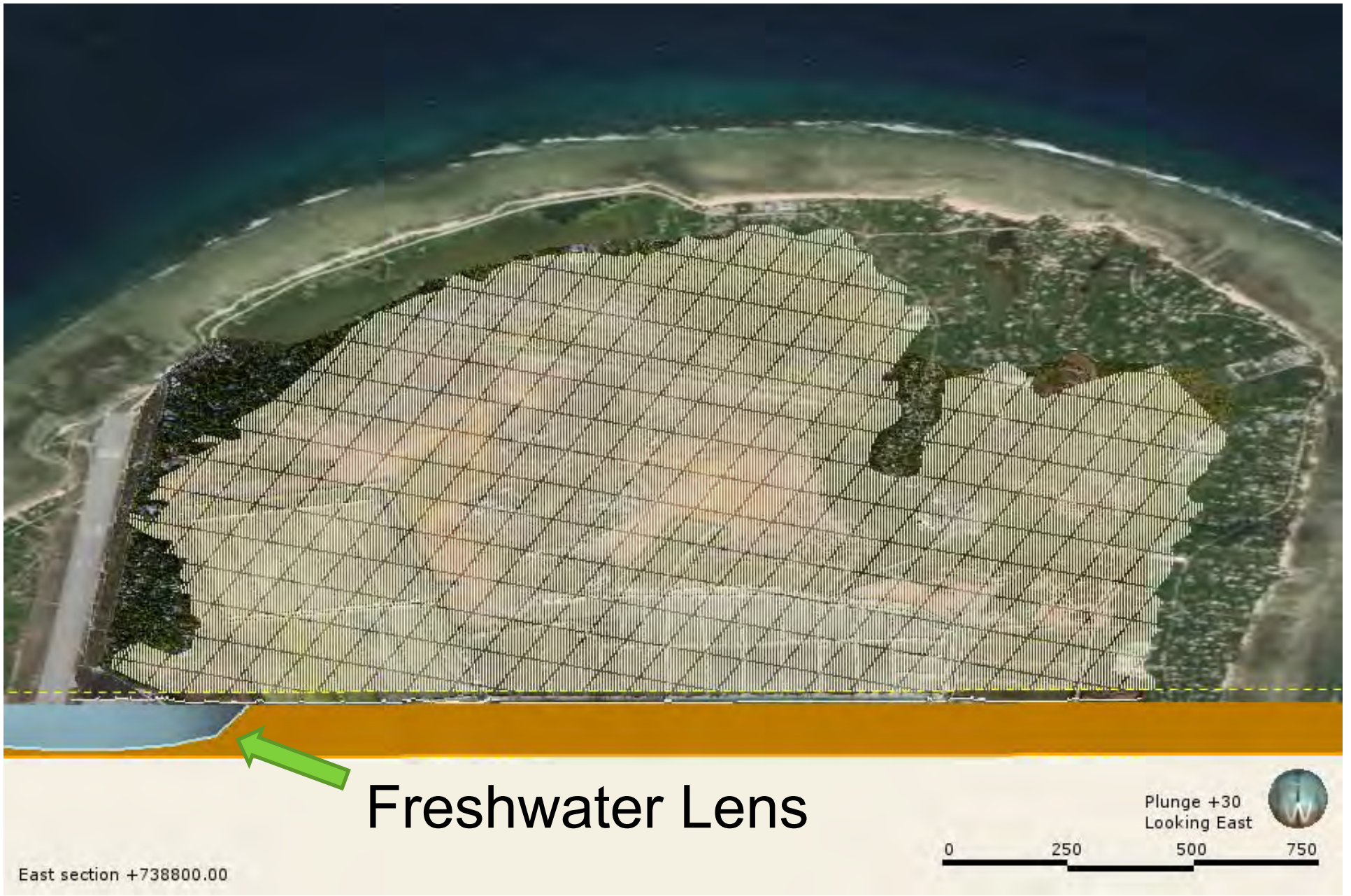
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Plunge +30
Looking East
0
250
500
750
East section +738800.00

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Project Overview

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Fronting Up - Building resilience collaboratively

Collaborative Approaches

- Shared smart maps
- Workshops for scoping and design
- Community participation in designing resilience

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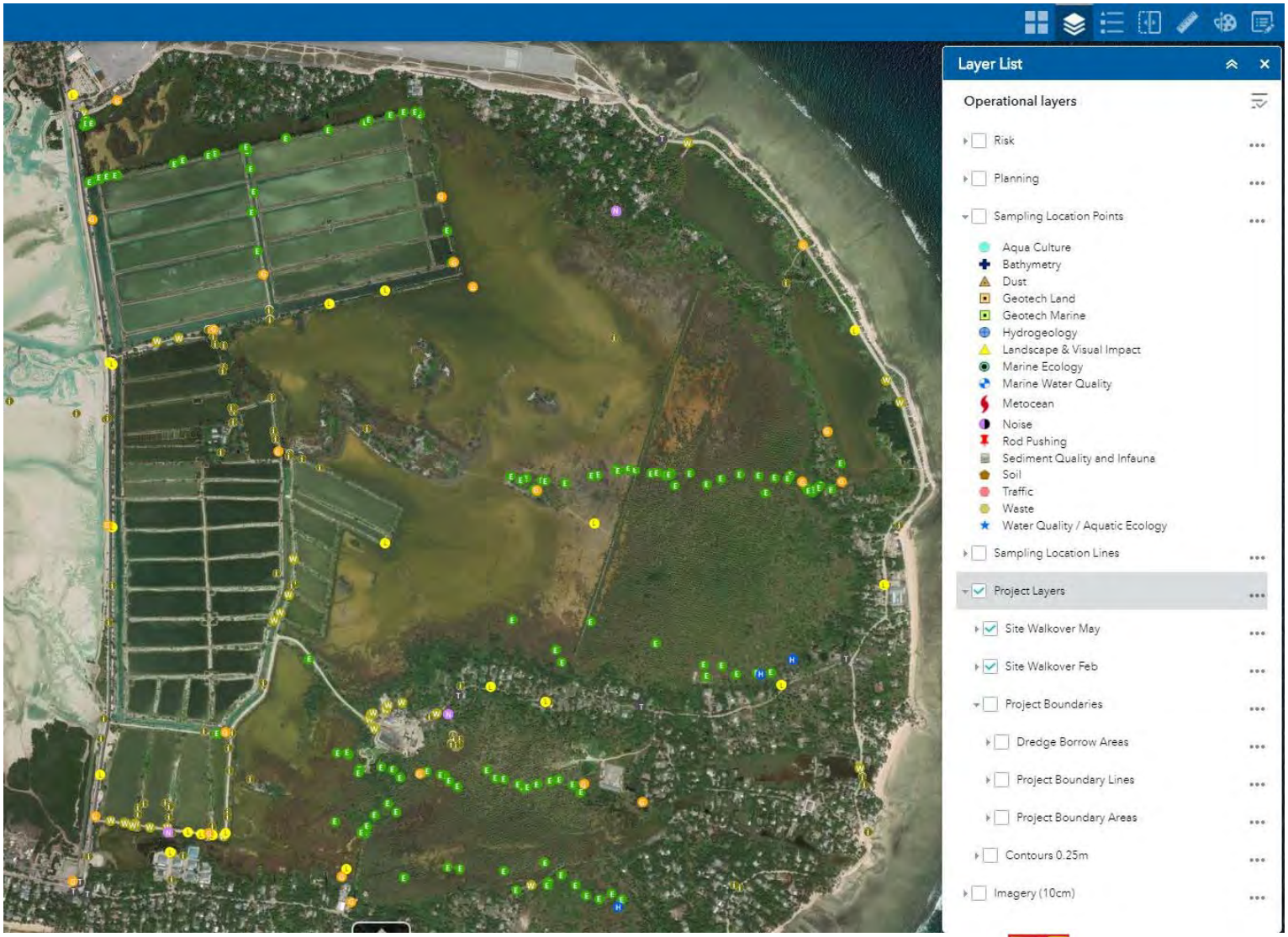
Collaborative web based GIS mapping app



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Working it – from the top

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Keep on Working it

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Present

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Review, debate, engage

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Community Engagement - with and for the most vulnerable

Focus groups for; squatters, elderly women, unemployed youth and special needs

Key informant surveys; health care workers, teachers, key employers

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Wicked Solutions - Building resilient communities through participation

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Questions

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