



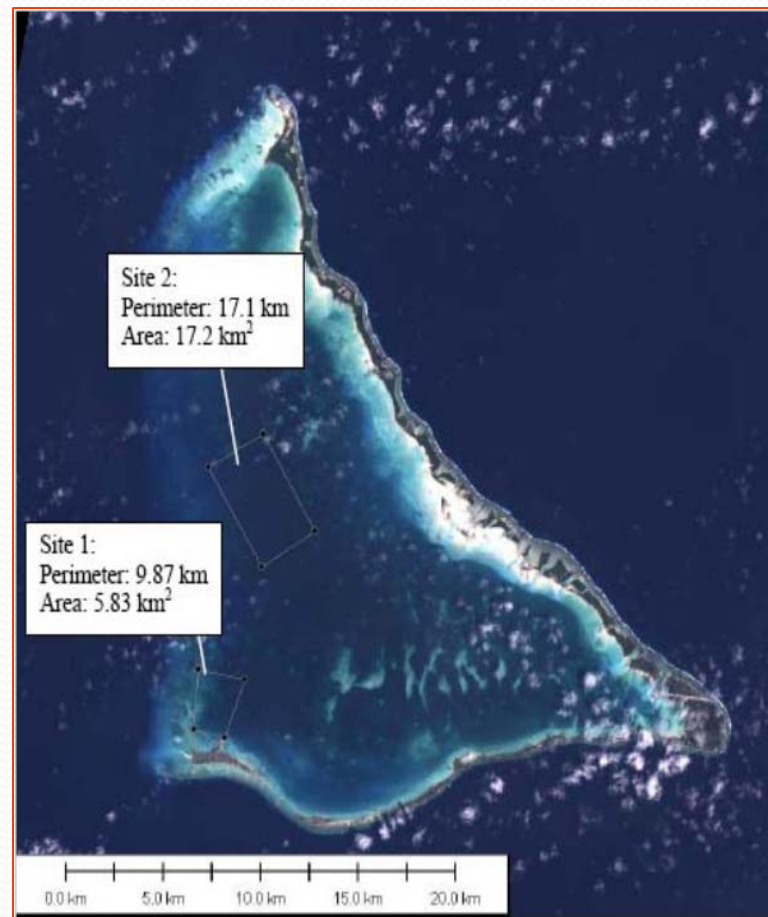
# Environmentally Safe Aggregate for Tarawa (ESAT) PROJECT (funded by EU and implemented by SPC/SOPAC in collaboration with GoK)

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# Presentation outline

- History of Aggregate extraction
- Impacts of Aggregate extraction
- Mitigation solutions to beach mining!
- Impact of new source of aggregate/sand supply
- Conclusion





# Aggregate extraction on South Tarawa

- Aggregate and sand extraction on South Tarawa has been practiced for many decades
- In the 1980's the Government of Kiribati recognized the impact of 'beach mining' to the coast of South Tarawa
- It was found out that 75,000km<sup>2</sup> is extracted per year on South Tarawa
- South Tarawa population – half of the national population (50,000 people)
- Many effects have been felt by this activity such as environmental, social and economical impacts



# Environmental impacts

- Rapid coastal erosion – loss of land, loss of buildings and loss of plants and trees
- Sand and aggregate are not replaced resulting in loss of land for future generations
- Illegal mining – inland especially within the Water Reserve (Bonriki) which is believed to be destroying the water lens and may cause contaminated groundwater by saltwater intrusion









# Social and economic impact

- New buildings and infrastructures require sand and aggregate
- Miners depend on mining as their main income - \$1.00/bag
- Provide for their children's school fees, food at home and other basic needs for their livelihood








# Addressing beach mining and its impact!

- Planting of mangroves along heavily eroded areas (lagoon side)
- An alternative supply for aggregate and sand materials from the lagoon (offshore aggregate resource)
- Environmentally Safe Aggregate Project for Tarawa (ESAT project) started in 2008 till present
- The objective of the Project is set up a State Owned Company who will operate the work of supplying aggregate to casual miners and developers
- Its other objective is to inform the public at large the impacts of beach mining, ways to minimize it and introducing the State Owned Company to the miners and how they can work with the new Company

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- A State Owned Company (called Atinimarawa Co Ltd) for Aggregate Dredging will supply the aggregates and sand materials to the miners
  - Miners will process the supply and sell it to developers
  - Miners' livelihood will not be impacted by the existence of the Aggregate company
  - Several public consultation had been conducted by ESAT Project to the miners, landowners, public through consultation, media releases (newspaper and radio etc)





# Impacts of an alternative source:

- Sand and aggregate mining on land will be minimized or eventually ceased!
- Decrease in human induced impact to coastal erosion
- A reduction and eventual cessation of Beach Mining will lead to stable beach environments which will improve resistance to the effects of changed storm activity and sea level rise resulting from Climate Change.
- Stable beach environments will mean that expensive seawalls will not be required to protect the land of South Tarawa

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- No threat to the water lens of the Water Reserve in Bonriki

.....HOWEVER,

- The livelihoods of miners whose income are currently derived from beach mining will be impacted by the development of the offshore aggregate resource
- But with the constant public engagement on this issue, the people accept the latter option rather than to lose their land and properties.



# Thank you!

