

IX (a). MAP of Tuvalu



**Figure 1 – Map of Tuvalu.**

Intervention are proposed in all 9 inhabited islands of Tuvalu including: Nanumea, Niutao, Nanumanga, Nui, Vaitupu, Nukufetau, Funafuti, Nukulaelae, Niulakita

IX (b). MAPS indicating project location



**Figure 2 – Nanumea: Proposed Project Location**

Source: World Bank/AECOM, (2015) Pre-feasibility assessment "Tuvalu Coastal Protection Scope Definition Cyclone Pam Recovery".

— Red Lines: High Vulnerability Coastal Areas

— Orange Lines: Mid- Vulnerability Coastal Areas

\* Current cost estimates in the proposal is based on proposed coastal protection measures on High Vulnerability Coastal Areas.





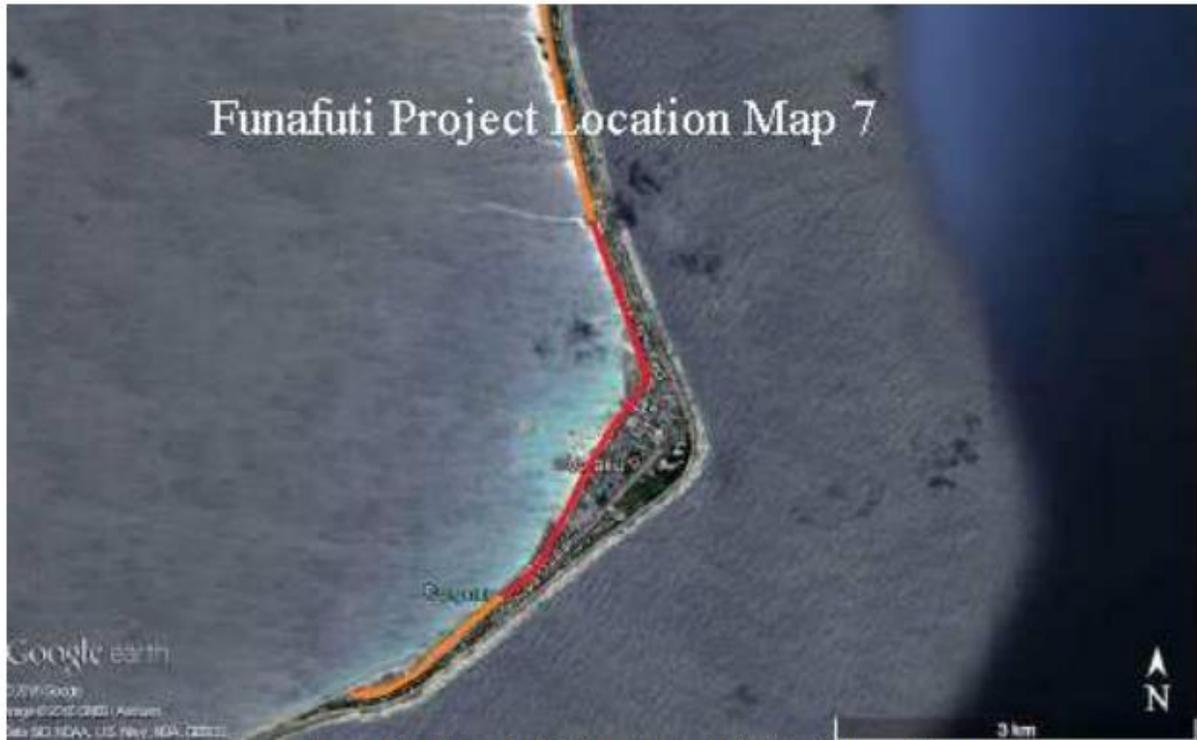
**Figure 4 - Nanumanga: Proposed Project Location**

Source: World Bank/AECOM, (2015) Pre-feasibility assessment "Tuvalu Coastal Protection Scope Definition Cyclone Pam Recovery".

- Red Lines: High Vulnerability Coastal Areas
- Orange Lines: Mid- Vulnerability Coastal Areas

\* Current cost estimates in the proposal is based on proposed coastal protection measures on High Vulnerability Coastal Areas.





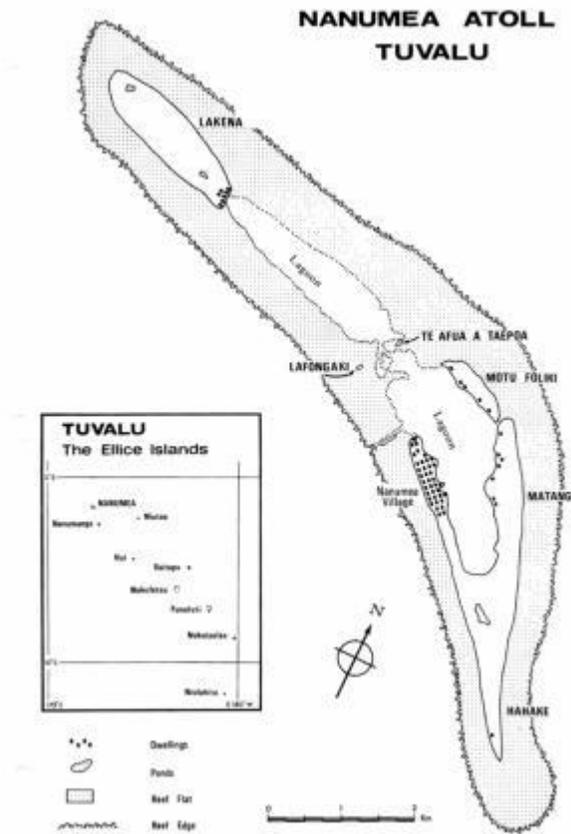
**Figure 8 - Funafuti: Proposed Project Location**

Source: World Bank/AECOM, (2015) Pre-feasibility assessment "Tuvalu Coastal Protection Scope Definition Cyclone Pam Recovery".

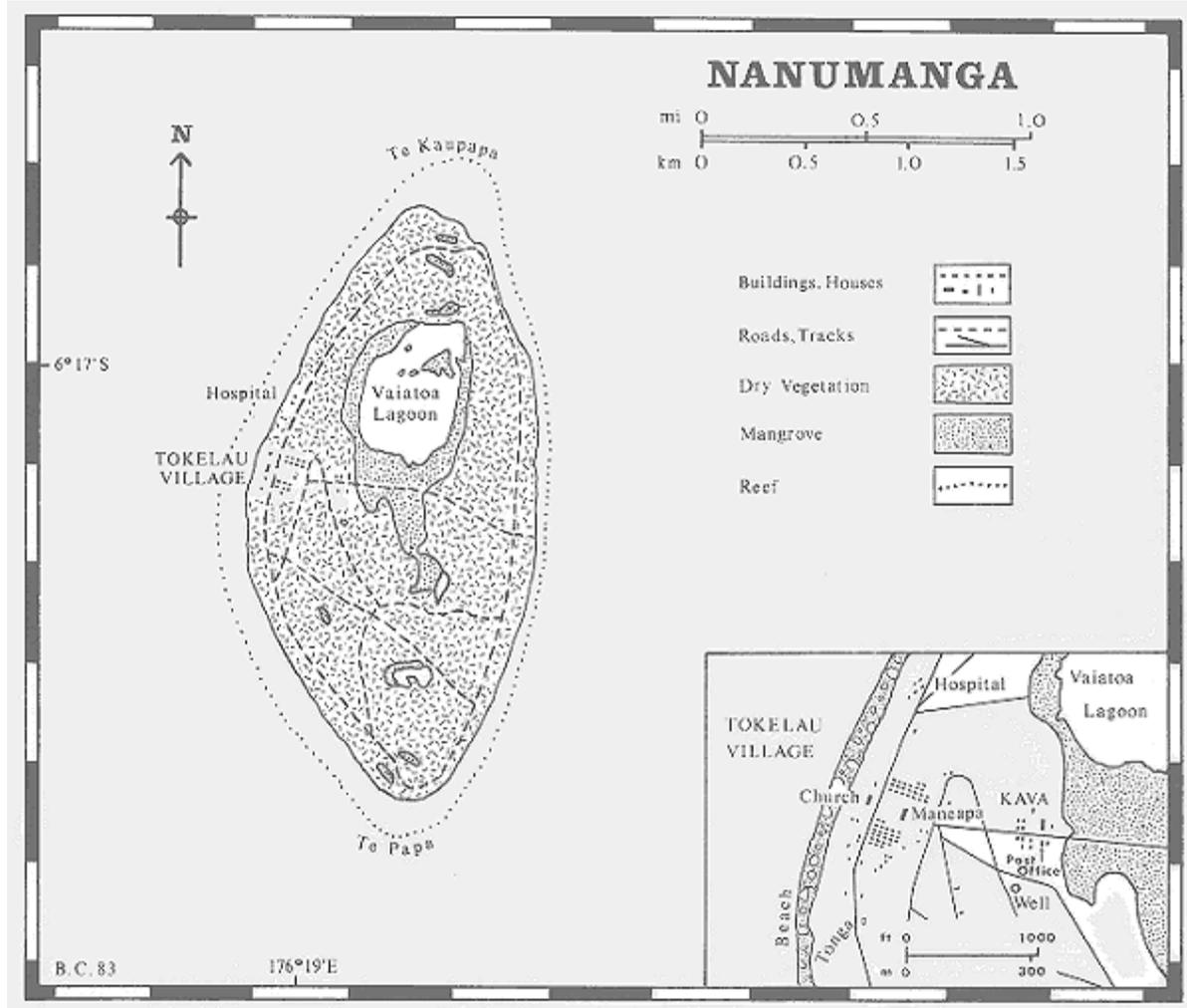
- Red Lines: High Vulnerability Coastal Areas
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IX(c). Additional maps

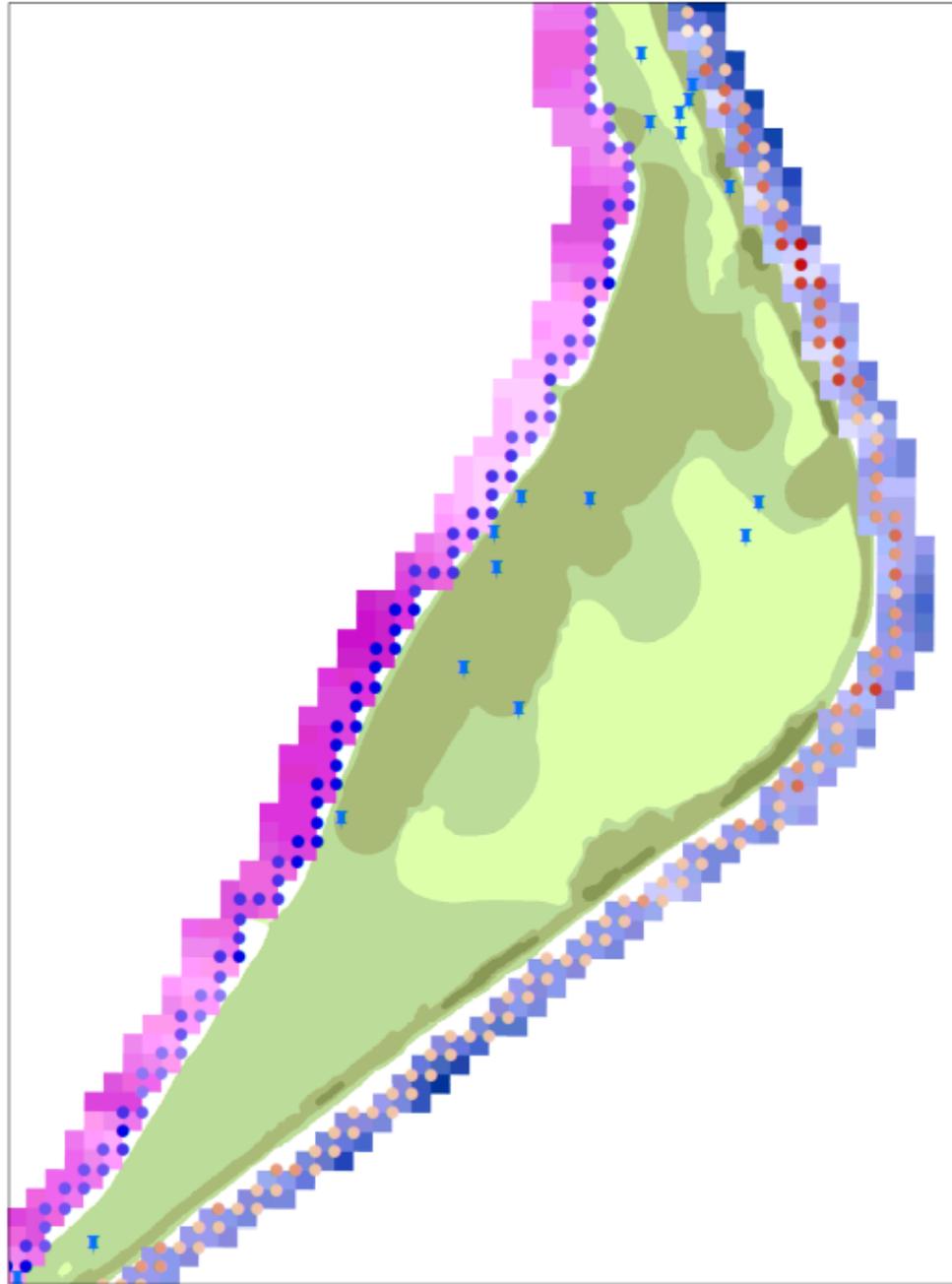


Source: [http://www.nanumea.net/Other\\_Images\\_of\\_Nanumea.html](http://www.nanumea.net/Other_Images_of_Nanumea.html)









**Increasing rate of wave height**

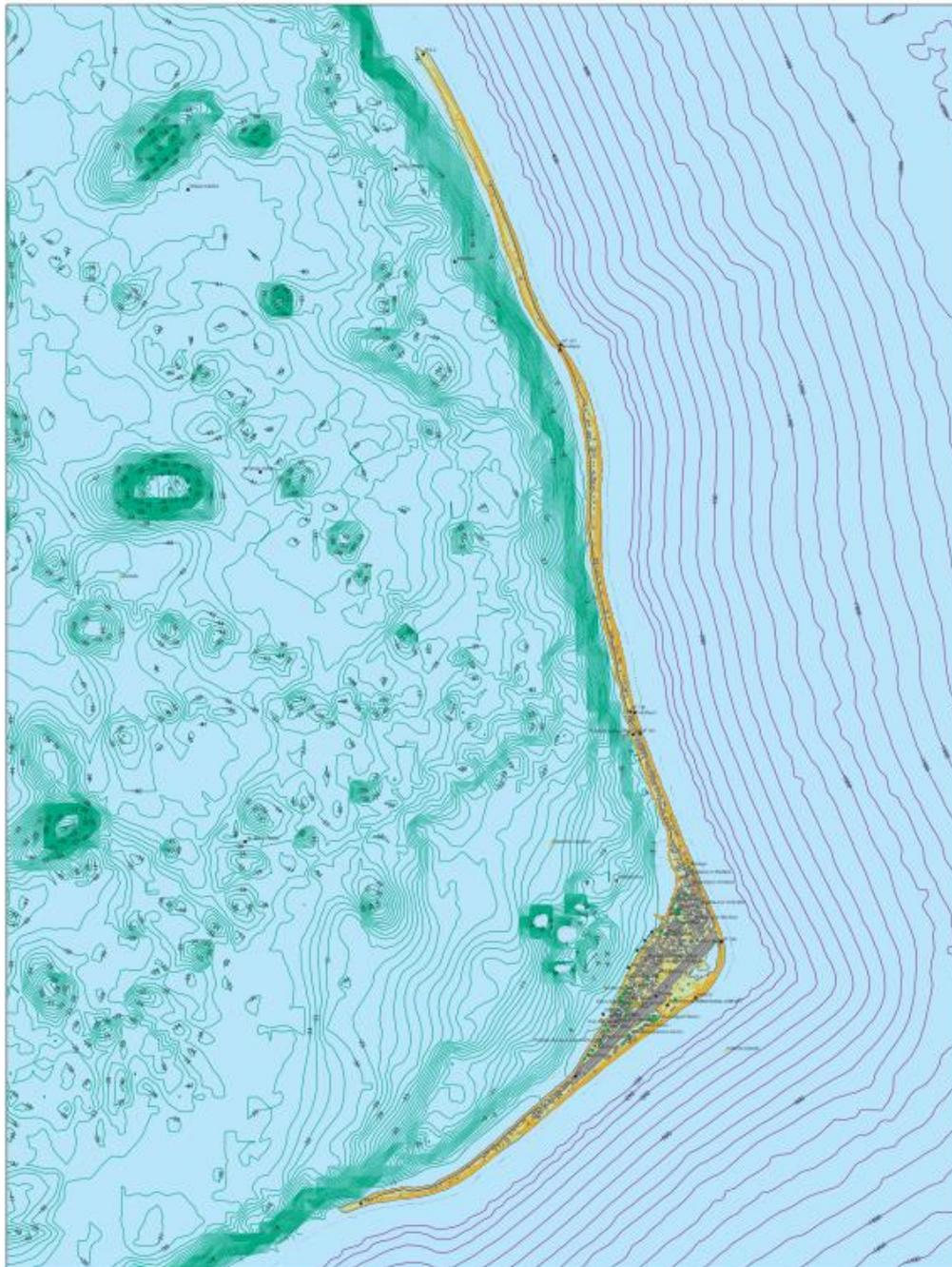
Ocean (Unit: %)	Lagoon (Unit: %)
59.9 – 100.0	100.6 – 101.0
100.1 – 120.0	101.1 – 102.0
120.1 – 130.0	102.1 – 103.0
130.1 – 150.0	103.1 – 104.0
150.1 – 200.0	104.1 – 105.0
200.1 – 500.0	105.1 – 120.0

**Wave damage points**

Elevation (m)	3.1 – 4.0
0.0 – 1.0	4.1 – 5.0
1.1 – 2.0	5.1 – 6.0
2.1 – 3.0	

**Present wave height**

Lagoon-side (m)	0.4
0.1	
Ocean-side (m)	2.5
0.1	



- |         |  |  |
|---------|--|--|
| • Road  |  swamp              |  reefline_utm                     |
| • House |  building and house |  Tuvalu_reef                      |
|         |  airport            |  Isobath of lagoon (1m interval)  |
|         |  road               |  Isobath of ocean (100m interval) |
|         |  contourline_l      |  |
|         |  land               |  |

