



Government of Tuvalu

Venue: Convention center, Room 9 – Vaiaku, Funafuti, Tuvalu

Time: 10:00 am - 1.30pm

**MEETING MINUTES FOR THE TUVALU COASTAL ADAPTATION PROJECT
(TCAP) BOARD MEETING
HELD ON NOVEMBER 12TH, 2020**

<u>ATTENDANCE OF BOARD MEETING</u>		
<u>NAME</u>	<u>ORGANISATION/MINISTRY & DEPARTMENT</u>	<u>ROLE/POSITION</u>
Hon Seve Paeniu	Minister of Finance	Honorable Minister of Finance/National Designated Authority to GCF/Chairman
Mr Malofou Sopoaga	Ministry of Public utilities and Environment	Acting Director for Public works department.
Ms Pepetua Latasi	Ministry of Finance, Department of Climate Change.	Director of Climate Change (DCC)
Ms Emelisa Tuilagi	Ministry of Finance, Treasury Department	Representative of Treasury Department
Ms Pulafagu Toafa	Tuvalu National Council of Women	Coordinator for TNCW
Ms Teresa Drecala	TANGO	Coordinator for TANGO
Mr Soseala Tinilau	Ministry of Public utilities and Environment	Director of Environment
Mr Faatasi Malologa	Office of the Prime Minister	Director of Lands & Survey
Mr Frank Fiapati	Ministry of Finance, Central Procurement Unit	Acting Director CPU
Mr Taasi Pitoi	Ministry of Transport, Energy and Tourism	Director of Marine
Mr Lopati Samasoni	Ministry of Local government and Agriculture	Representative from Local government department
Ms Kaai Fanoiga	Ministry of Education, youth and sports	Acting Director of Education
Mr Launiu Pelosi	Nanumea Community	Island Representative
Mr Penehuro Hauma	Nanumaga Community	Island Representative



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Apologies		
Mr Levan Bouadze	UNDP	Resident Representative, Pacific Office in Fiji.
UNDP Team		
Mr Kevin Petrini	UNDP	UNDP Deputy residential representative i.e
Dr. Winifereti Nainoca	UNDP	Deputy Team Leader Resilience and Sustainable Development (RSD)
Dr. Arthur Webb	UNDP	Chief Technical Advisor - TCAP
Mr Paul Audin	UNDP	CTA Operations
Ms Aishath Azza	UNDP	Regional Technical Advisor
Mr Phillip Hawes	UNDP	Coastal Engineering - TCAP
Mr Alan Resture	UNDP	Project Manager – TCAP
Ms Puanita Ewekia	UNDP	Communication Officer- TCAP
Ms Pine Andy Tonga	UNDP	Finance & Admin Assistant
Mr Jone Feresi	UNDP	Deputy Project Manager - TCAP
Ms Mulifenua E Paul	TCAP	Individual consultant
Ms Angella Katepu	TCAP	Individual consultant
Observer		



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A. KEY DECISIONS BY THE BOARD

1. The Board agreed to amend the current Letter of Agreement (LoA) with SPC to include training of government partners on climate change & coastal adaptation from 2021 – 2023. Total cost of training is USD\$600,000
2. The Board agreed on the reprogramming of the \$3.5m into;
 - I. Capacity development for TSF board members – \$100k
 - II. Adaptive management measures on Nanumea – \$3.4M
3. The Board endorsed the Revised AWP 2020 and the AWP 2021.
4. The Board endorsed the minutes of the 4th Board Meeting that was held on the 28th October 2019.



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B. MEETING PROCEEDINGS

1. WELCOME

- 1.1 The Chairman, Honorable Seve Paeniu, extended a warm welcome to everyone at the board meeting. He then gave the floor to Kevin for his introductory remarks.
- 1.2 Kevin thanked Honorable Seve and acknowledged him for his leadership and great support towards the TCAP project.

2. ADOPTION OF THE AGENDA

- 2.1 The Board unanimously accepted the agenda after noting all the information papers.

3. REVIEW AND ADOPTION OF THE MINUTES OF THE 4th BOARD MEETING

- 3.1 Chairman, Hon. Seve Paeniu, invited comments on the accuracy of and any comments on the minutes.
- 3.2 Kevin responded with the all clear from the Suva office end.
- 3.3 The Board then unanimously adopted the minutes as a true record of the October 28th, 2019 Board meeting.

4. PROJECT PROGRESS UPDATE

4.1 Output 1 – Strengthening of institution, human resources, awareness and knowledge for resilient coastal management.

- **Ongoing work up to 2020**
 - Scholarships: 2 Undergraduate students in 2018 – both terminated. In 2019 TCAP selected 6 students that will study in their specialized fields in 2020. One student is already in Fiji early 2020, the other five (5) should have gone to Australia during the 2nd semester, but still stuck in Tuvalu because of COVID-19 border restrictions.
 - National coastal vulnerability assessments underway now (SPC).
 - National LIDAR (land height data) survey undertaken – all islands of Tuvalu
 - Relationship between land and sea level determined on all islands of Tuvalu in 2019 – 2020 (first time ever).
 - National coastal monitoring platform being developed.
- **Expenditure to date for Output 1**
 - \$147,914. Budget: \$203,619
- **Planned activities for 2021**
 - 4 graduate students & 1 undergraduate student to pursue their studies in 2021.
 - Training for government personnel on use of LiDAR (2021 when borders reopen)



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- SPC short-term training for government partners (2021 when borders open)
- **Budget (2021): \$517,707**

4.2 Output 2 - Vulnerability of key coastal infrastructure including homes, schools, hospitals and other assets is reduced against wave induced damages in Funafuti, Nanumea and Nanumaga.

4.2.1 Funafuti Reclamation – summary progress update

Since the restructure decision from GCF (July 2019), TCAP has been engaged in developing the Community, Kaupule and Government agreed plan for a 7.2 Ha reclamation on the Fogafale lagoon shore.

- Coastal Engineer recruited Aug 2019.
- Submission of concept plan and Development Application with Dept. Environment Tuvalu – Aug 2019.
- Additional Community consultations in November 2019 – redesign with small boat harbour.
- Engineering designs, drawings and bill of quantities all drafted July 2020
- ESIA started Oct 2019- completed October 2020 (Submitted to Dept of Environment)
- TCAP has suffered some set-backs due to the Covid 19 travel restrictions and the start of construction activities in Tuvalu will be guided by the unfolding situation with travel.
- Procurement process for construction company started September 2020 and is underway now. The process is large and complex and may take some 6 months to complete.
- GCF requires TCAP to submit the ESIA and hydrodynamic modelling which informs the design and which requires written confirmation from the Govt. of Tuvalu that there is agreement regarding the design height of the reclamation before TCAP can commence construction.
- TCAP has all of these design components completed now and will present in due course for Govt. of Tuvalu approval.

4.2.2 Nanumaga – Summary progress update

- Since the restructure decision from GCF (July 2019), TCAP has been engaged in developing the agreed plan for Berm Top Barriers in Nanumaga. These are designed to prevent wave overtopping and marine water flooding.
- Following the GCF decision in July 2019, TCAP was unable to travel to Nanumaga due to ongoing boat transportation problems and changing boat schedules. This has pushed most of the consultations to 2020. ,
- ESIA for Nanumaga is complete and has been submitted to the Govt of Tuvalu for approval.
- Design work and BoQ's for the BTB is complete.



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- ESIA and designs shared with Nanumaga community
- There are ongoing questions regarding the boat ramp, church site area in Nanumaga. A BTB cannot be successfully built seaward of assets at this location because a number of buildings are located much too close to the foreshore, making them very difficult to protect. The BTB could run landward of these buildings.
- TCAP understands the Nanumaga harbor plan is now changed so has opened a technical investigation to consider alternatives at this site. The findings should be ready to share by late November early December.
- However, it is important to share that all technical advice received to date from internal and external expert sources come to the same conclusion;
 - The best, most long lasting and appropriate technical solution is to relocate those buildings which are built too close to the shore.
 - This is the only way the Nanumaga Community can be assured their important village assets at this location can be made safe and not require continual repair following storms.

4.2.3 Nanumea – summary project update

- Since the restructure decision from GCF (July 2019), TCAP has been engaged in developing the agreed plan for Berm Top Barriers and a section of hard revetment in Nanumea.
- Following the GCF decision in July 2019, TCAP was unable to travel to Nanumea due to ongoing boat transportation problems and changing schedules.
- ESIA for Nanumea is complete and has been submitted to the Govt of Tuvalu for approval.
- Design work and BoQ's for the BTB and revetment are complete.
- ESIA and designs have been shared with the Nanumea community.
- On Nanumea, TCAP will build BTB's to protect from marine flooding and reinstate a revetment over the footprint of the former seawall at the church compound to hold the shoreline position.
- Following TC Tino, significant erosion has occurred and TCAP is now investigating solutions for those additional problem areas of shore.
- Since travel is impossible TCAP has acquired satellite imagery from Aug 2020 and has requested drone footage from DoLS so that it can determine the extent of damage.
- Based on these products, it appears that for areas near the church compound, there may no longer be enough space for BTB's to be successfully installed.
- TCAP has commissioned an additional engineer's study to provide an understanding of the best solutions to secure the area of shoreline which suffered badly during TC Tino. This is underway now.
- This study is expected to be completed by late Nov 2020 and will be shared with Govt of Tuvalu and the Nanumea community.



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4.2.4 Safeguards Progress

- Appointment of new Safeguards Specialist – Phillip Hawes
- Safeguards Inception Report and Workplan completed
- Completion and submission of Draft ESIA's for Funafuti and N&N
- Updating of the Grievance Redress Mechanism (GRM)
- Finalization of the Gender Strategy and Action Plan (GSAP)
- Initial review and update of ESMP and SESP
- Development of Safeguards Risk Register

Next steps

- Submission of Funafuti and N&N ESIA's to GoT, followed by public exhibition of ESIA's
- Revise ESMP based on stakeholder feedback
- Call for nominations for public positions on GRM committee
- Formation of GRM Committee
- Review and update Stakeholder Engagement Plan
- Operationalize Gender Strategy and Action Plan
- Populate Safeguards Risk Register
- Annual SESP compliance monitoring report

4.3 Output 3: A sustainable financing mechanism established for long-term adaptation efforts.

- Three (3) island communities have reviewed their Island Strategic Plan (ISP). They are Nanumea, Nanumaga and Niutao. Another three (3) island communities are conducting their ISPs now where the local government staff are in: Vaitupu, Nui and Nukulaelae. Once these three islands are done with their ISP then the Local Government staff will continue to Funafuti at the end of this year. Nukufetau will be done next year (2021).
- TCAP recruited 2 local IC's to assist the ISP consultant with the translation and printing of all ISPs in both English and Tuvaluan
- Kaupule staff on Nanumea, Nanumaga and Funafuti trained on Performance-Based Climate Resilient Grants
- Board is requested to approve the reprogramming of \$3.5m to:
 - Capacity development for TSF board members (\$100k)
 - Adaptive management coastal protection measures on Nanumea – \$3.4M
- Budget Output 3: \$241,176
- For next year, it will be continuing work for the ISP in printing and translation of ISP and to complete the ISP for Nukufetau.



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5. FINANCIAL REPORT

Financial report for 2020

Expenditures	Notes	2020 Actual USD	Cumulative Actual USD	Cumulative Budget USD
01	1	147,914	555,888	1,807,906
02	2	596,738	2,028,739	15,680,310
03	3	178,536	308,514	2,783,326
04	4	203,138	1,220,126	1,544,325**
Total program expenditure		1,145,133	4,140,372	21,815,867

Budget for 2021

- Output 1 - \$ 517,707
- Output 2 – \$10, 465,651
- Output 3 – \$459,275
- Output 4 - \$440,181
- Total budget for 2021: **USD \$11,882,814**

Cumulative expenditure to date (2017-2020):

Year	2017	2018	2019	2020	Grand Total as at Oct 31, 2020.	
Allocated Budget (USD)	330,808.00	2,531,165.00	1,700,000.00	3,043,411.00		
Expenditure- Breakdown by						
Output	Output 1	70,528.23	104,445.45	269,691.88	147,914	592,579.56
	Output 2	1,308.00	270,075.60	975,937.33	596,738	1,844,058.93
	Output 3		62,637.39	79,058.94	178,536	320,232.33
	Output 4	163,538.71	605,133.07	339,866.37	203,138	1,311,676.15
Yearly Expenditure (USD)	235,374.94	1,042,291.51	1,664,554.52	1,126,326	4,068,546.97	



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Human Resources – TCAP Personnel

Human Resources – TCAP Personnel



Name	Designation	Location	Comments
1. Paul Audin	Operations Specialist	Tuvalu	Commenced 9 th November 2020. Planning to come to Tuvalu in January 2021
2. Alan Resture	Project Manager	Tuvalu	
3. Puanita Ewekia	Communications Officer	Tuvalu	
4. Pine Andy Tonga	Finance/Admin Assistant	Tuvalu	
5. Arthur Webb	Chief Technical Adviser	Suva	Currently in Australia
6. Jone Feresi	Deputy Project Manager	Suva	
7. Mike Ravono	Finance Associate	Suva	
8. Timaima Qeranatabua	Procurement Associate	Suva	
Individual Consultants			
1. Feue Tipu	ISP Consultant	Tuvalu	12 June - 12 Dec 2020
2. James Lewis	Coastal Engineer	Australia	9 Sep 2019 - 9 Sep 2022
3. Peter Ollivier	Maritime Construction Expert	New Zealand	29 Jul - 31 Dec 2020
4. Phillip Hawes	Safeguard Specialist	Australia	1 June 2020 - 31 May 2023
5. Kate Smith	Communications Specialist	Australia	30 Sep 2020 - 30 May 2021
6. Glenn Hind	3D Specialist	Australia	15 Sep - 15 Dec 2020
7. Kristina Fidali	Project Management Specialist	Australia	27 July - 16 Nov 2020
Planned for Q4 2020			
1. MTE International	Home based	6-Nov	6 Nov 2020 - 7 March 2021
2. MTE National	Tuvalu	13-Nov	13 Nov 2020 - 7 March 2021



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6. QUESTIONS AND ANSWERS FROM THE BOARD ON THE THREE OUTPUTS.

6.1 Output 1

- Hon Seve Paeniu, asked on who will be conducting the Lidar training?
- Project Manager, Mr Alan Resture, responded that Fugro company based in Australia will be conducting the training for the government partner.
- Director of Marine, Mr Taasi Pitoi: Is there any limitation that prevents scholarships to other countries such as Taiwan, England, etc. or we just send all students to Australia?"
- Project Manager, Mr Alan Resture, responded that these candidates selected their own universities, but we haven't made any restrictions on the countries of choice. Our first awardees were sent to Australia and New Zealand and these two students didn't do well in their studies. Given the scholarship budget, their tuition fees at Australian Universities are within the allocated budget and that is why they were accepted.
- Hon Seve Paeniu, how are those field of studies determined and selected in the first place?
- Project Manager, Mr Alan Resture, responded that in the Prodoc it states that the capacity building for scholarship should be in the field of coastal protection. For instance, coastal protection, marine science, coastal management, etc. For our currently selected candidates, one student is majoring in GIS Coastal management, others major in civil engineering, specialize in coastal areas management, and environmental law.
- Coordinator for TANGO, Ms. Teresa: Are there any contracts/bond for recipients when they return from study?
- Project Manager, Mr Alan Resture, responded that the project is following procedures that the government is using now. For pre-service and in-service, these students will sign their bonds such that, at the end of their scholarship they must serve their bond for 2 years.
- Coordinator for TNCW, Ms. Pula Toafa: Is there any possibility to include women in these scholarships?
- Project Manager, Mr Alan Resture, responded that of the 6 students who shall be trained to get their higher degree, 50% should be females. So, we have sent one female and one male in the first lot. Some females did apply but they did not meet the selection criteria/requirements. Only one female candidate met the requirements and she got an award. It is hoped that should there would be savings from the scholarship budget, which shall allow TCAP to send more female candidates.
- Nanumaga representative, Mr Penehuro Hauma: This is a follow-up comment to the previous question on why we send our students to study in Australia but no other countries, my understanding is that the Board didn't want only Australia. I feel that we must identify properly the institutions for the specified field for the student. We need to find institutions that offer quality specialized training, whether it be in Japan or any other countries. We just don't go for the number to meet our delivery targets. Even if only one student returns



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with specialized qualification, that is good enough. We need students to come back with their qualifications from universities that offer specialized training and skills in the field that is much needed in Tuvalu.

6.2 Output 2 & 3

- Chief Technical Advisor: on the Nanumaga, Dr Arthur Webb, explained that the scale of engineering that would be required to protect the buildings and the small church area on Nanumaga would have to be very large and the budget greater than the resources available to TCAP. It's of a magnitude that we simply can't address with the project of this type. I'd rather be very honest with you about this situation and do not want to pretend that a small band aid type solution will suit Nanumaga's needs. The fact that these buildings are so close to the active shore, means they will continue to suffer damage whenever there is a large storm. And given we all understand climate change tells us that there will be larger, stronger storms in the future, sea level is rising, we simply must start thinking about the placement of such buildings because it becomes unsustainable. To reiterate, TCAP simply does not have the resources at hand for the vulnerabilities at the church site, whereas for other areas of Nanumaga, the northern and southern stretches of coast from the church, we are very confident that the berm top barrier design will effectively prevent wave over topping and marine flooding into the village.
- *Hon Seve Paeniu: Is there any design pictures of option discussed through the ESIA consultations with the community of Nanumaga?*
- Project Manager, Mr Alan Resture, responded that there are design drawings for the BTB's but no suitable designs have been finalized for the church area. He also commented that during consultations the community discussed the old concrete walls seaward of where the TCS building and church were built. The elders of Nanumaga stressed that the concrete walls were very old, it was built before they were born. The concrete wall is still there but it has been damaged. The Nanumaga community suggested that if these were rebuilt instead of the sheet piling mentioned in the ESIA, this would assist to protect the buildings at the church site? Likewise, one group suggested that the BTB's should be concrete walls too and not sand and geo-bags. TCAP advised that concrete walls would not be as effective and the cost very high and in turn the community agreed to use the TCAP BTB design with geo-bags. However, they maintained that TCAP should still consider more options for the to protect the church building and the TCS building. Nanumaga community now agreed their sand is free if used for protection measures for the church building. They now understand that if another cyclone hits Nanumaga, it will again damage their church and nearby buildings as well.
- *Hon Seve Paeniu: Could you show us the pictures for the sheet piling?*
- Chief Technical Advisor Dr Arthur Webb responded using a shared presentation. This showed a profile of the natural berm and the position of the vulnerable buildings. It showed how sheet piling at this location would likely fail during the next large wave event on this shore. It was explained that the sheet piling may persist for some years if not "tested" by another large storm but that its failure could be rapid and catastrophic in another large storm event. In turn this option would not assist the community but may simply make things worse and more dangerous.



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- *Hon Seve Paeniu: Do you have similar sort of design or alternative design for the old structure that we are now hearing about, which was protecting Nanumaga for a long time? Can you model that?*
- Chief Technical Advisor: Dr Arthur Webb, responded that we need to understand that any vertical wall is going to have the same type of problems. It will reflect wave energy, it will cause scouring away of the beach in front of the wall and that will likely cause failure. The fact we have lost buildings even though those older walls are in place, tells us they have not been effective in protecting those buildings. Ultimately, it is possible to come up with engineering designs that could protect those buildings, but it would be such a magnitude it simply be way beyond the total budget and resources of TCAP and far more expensive than the buildings in question. It would also leave a legacy of environmental effects downstream and maintenance of any engineering structure is required over time, this would also be costly for this small community on a large-scale complex structure. TCAP is simply unable to implement that scale of engineering.
- *Hon Seve Paeniu, asked whether the revetment design that is planned for Nanumea opposite the church and pastor's residence could also be an alternative for Nanumaga? Also, will this Seabee revetment also cause problems of reflecting wave energy and displacing sand?*
- Chief Technical Advisor Dr Arthur Webb responded that the Seabee revetment is specifically designed to reduce the energy of the wave not only as it meets the revetment face but also at the crest is a wave return structure. The big difference between Nanumaga and Nanumea is the scale, also if we consider the reef width in Nanumea, it's double that of Nanumaga, in places triple. This means wave energy is lost as it travels over the reef flats before it hits the shore, this is reflected in the height of the berm, the height of the berm in Nanumaga is about 7 meters above the hard reef flat where as its around 4m on Nanumea. There is a huge difference in wave energy and thus the scale of engineering required. So whilst it is correct that a form of Seabee revetment could be used in Nanumaga the problem remains the same, the scale of engineering required is beyond our resources. Whereas on Nanumea, because it is a much wider reef flat and much lower berm the scale is far smaller and so within range of the project resources.
- *Nanumaga representative, Mr Penehuro Hauma, said that had the old wall been extended right across the concerned area, it would have reduced the strength of the wave that goes across the island. He thus suggested for similar wave breakers along the area – though it may not fit the TCAP budget. He also thinks that the sea wall should cover the whole island.*
- Chief Technical Advisor, Dr Arthur Webb, responded that he introduced the presentation on sheet piling by saying up-front that it was a simplistic model and is designed to allow everyone to understand the problems with a sheet piling option. However, it is important to understand it is based on expert assessment and is also the opinion of the TCAP Coastal Engineer. This approach will not likely serve Nanumaga's needs well, it may fail catastrophically, and it may cause damage to nearby sandy shores. TCAP has considered many options and has sought the opinions of other experts on this location. However, it is the scale of the engineering required that is completely beyond the resources of the project,



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unfortunately there is a mismatch in terms of what is needed to fulfil Nanumaga's aspirations and what TCAP is resourced to provide. The best assistance TCAP could offer would be to work with Nanumea on a potential proposal and to explore possible donors that may be interested to work on this. Arthur also explained more details of the Seabee's concept. The Seabee revetment is considered a good option for Nanumea because it is a lower energy shore. The individual units are expected to be small and light enough that they can be lifted and placed by hand. It is a type of technology that is locally appropriate because it can be largely built with local labor and if a unit is dislodged or cracked, it would be possible for the local labor to replace without heavy machinery etc. Seabees have been pretty successful where they have been used in other atoll settings too.

- Hon Seve Paeniu: *Where is the USD\$3.4 million going into for the adaptive management measures in Nanumea, what is that for?*
- Dr Arthur Webb: The additional USD\$3.4 million for Nanumea coastal protection, is a response to damage caused to the shore after TC Tino. Areas of their shore suffered erosion both north and south of the church compound. This means that there is not enough space for the berm top barriers design (as originally planned) and that means we are looking at alternatives which help give us accommodation space for the BTBs, nourishing the beach and we are looking at possible ways reinstating the pre- TC Tino shoreline position. Essentially, the additional funds are being used to try address erosion that occurred since TC Tino.
- Nanumea Community Board member Launiu Pelosi: *What about the part of the island where the fishing center (CFC building) is located?*
- Mr Alan Resture asked Arthur to show the area in question on the Nanumea map - north of the CFC building. Arthur explained that the position of the fishing center is very unfortunate as it should not have been built so close to the shore. There is not enough space left to continue the BTB. Many buildings in this area of Nanumea are well back from the shoreline and they are not affected by the movement of the beach during storms. However, the CFC building is not only built very close to the shore, but they actually removed the protective natural berm in front of the building, so it is now very exposed to waves whenever there is a storm.
- Mr Alan Resture informed the meeting he had just been informed the Nanumea community plans to relocate the CFC building since they have witnessed it is very exposed and prone to damage. This news was welcomed by TCAP with an assurance that if the building was relocated the BTB could be built in this area too.
- Hon Seve Paeniu, *when will this happen, to build the berm top barriers for Nanumea and Nanumaga?*
- CTA, Dr Arthur, responded that at this stage, the construction design first draft is complete, the ESIA's for all three islands are complete and the ESIA has been lodged to the Department of Environment and they must now follow local Govt process of public viewing and comments, and we hope to get approval in early 2021. We expect the procurement process to be completed by June next year and this would then allow the mobilization of the selected construction company.



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- Hon Seve Paeniu, if there were to be any shortcut so that we could start in the first half of next year so that we avoid getting into the wet season of storm season of the year, what sort of things you would recommend for government to take action in order to get that shorter time?
- CTA, Dr Arthur Webb, mentioned that from that perspective, the procurement process is very much run by preexisting protocols and rules and we can only accelerate those in limited ways. However, TCAP is giving the procurement process close attention and ensuring the timelines are as efficient as possible. From the perspective of the Tuvalu government he thinks it would be excellent if we could receive any update in terms of when Tuvalu expect return flights to be reinstated, as it would be very helpful for TCAP to receive relevant advice around possible travel exceptions for project staffs and contractor company staff to enter Tuvalu since we are all aware that travel is currently restricted. Additionally, one of the huge challenges for us has been the difficulty to get confirm bookings for outer island travel. This prevented travel (to the outer islands) for the entire second quarter of 2019 and any assistance that TCAP is able to receive from government in terms of getting preferential access or charter arrangements from local vessels could greatly assist in keeping timelines as short as possible.
- Hon Seve Paeniu, invite Mr Soseala to explain the internal process in reviewing the TCAP ESIA documents and what is the likely timeline to complete that?
- Director of Environment, Mr Soseala Tinilau, responded that the process is to review the ESIA documents for Funafuti and N&N; and if it meets the requirement criteria of the department, then DoE can raise it to the Minister for his consideration. The process can take up to a week.
- Nanumea Representative, Launiu Pelosi, asked if there are any other options or alternative for the cemetery where the BTBs will be placed?
- Project Manager, Mr Alan Resture, responded that the BTBs cannot be laid too far on that southern side where cemetery is because the shoreline is close to the road. Alan relayed the question to Arthur for his detailed explanations.
- CTA, Dr Arthur Webb, responded using a map clearly showing the BTB ending just south of the cemetery and also the solar generation plant on Nanumea. TCAP's understanding is that there probably is adequate space for the berm top barrier this far south.
- Hon Seve Paeniu, question Arthur on what sort of design he is referring to? (in respect to areas further north of the Nanumea church compound where there is not sufficient space for the BTB following damage by TC Tino)
- CTA, Dr Arthur Webb, responded that in fact TCAP have a dedicated study underway right now with our Coastal Engineer to model wave impacts and sediment transport pathways moving on this shore. This study attempts to model the way a cyclone impacts the shore at this location and this information will be used to select the best option. TCAP hopes that we will have the preliminary alternative designs by end of November. At this stage we are looking at a range of soft through to hard engineering approaches and we are trying to keep those within the boundaries of the resources TCAP has on hand. For example, we could



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produce designs which requires 50-60 million dollars engineering, but we don't think that's going to be particularly useful at this stage of TCAP because we simply can't implement that (similar to Nanumaga), so we are looking at designs that are affordable to us and hopefully match the aspirations of the community and reduce erosion and lessen marine flooding. Once the study is complete, we will be very happy to share this.

- Arthur also noted that on Nanumea the new school building site is obvious in the Aug 2020 imagery. When analyzed using the new TCAP acquired Lidar data, it shows the school location is very low laying and may be vulnerable to frequent flooding. Arthur indicated TCAP would be very happy to assist the Kaupule to consider alternative safe sites etc using the Lidar data.
- *Hon Seve Paeniu*, questioned that if that area were to be raised up (in height), would that be subject to future flooding?
- CTA, Arthur Webb, responded that if the area is raised, absolutely that's a great alternative and worth considering before any valuable asset is built in that area. The location in question is quite well protected from wave impacts from either shore, so the type of flooding expected in that area would be due to ongoing sea level rise, and particularly very high tide. So, this indicates raising the land could be an effective measure.

6.3 Discussion on Financial updates:

- *Director of Marine, Mr Taasi Pitoi*, asked that for Output 3, can we insert the assets management for the project or just leave it for the Government assets management?
- Director of Climate Change, Ms. Pepetua Latasi, responded that under the Project Prodoc, one of the major things under the Co-financing is that once the project is done the maintenance should be going back to the government, so for assets management it will go back to government.
- *Coordinator for TNCW, Ms. Pula Toafa*, questioned about the portion that should be given to the TSF (\$3.5m), but was held back due to the Due Diligence report, what is the status of the Due Diligence and how did it go? She supported the idea to give a portion into the TSF.
- Project Manager, Mr Alan Resture, responded that the due diligence was done in 2019. The \$3.5 million should go to the TSF, unfortunately the outcome of the Due diligence report was not favorable. The project then requested government to look at other options to use the \$3.5m. One of them is the capacity development for TSF Board members for about \$100k.
- *Coordinator for TNCW, Ms. Pula Toafa*, asked why TSF did not pass the Due Diligence and which areas did it fail?
- Director of Climate Change, Ms. Pepetua Latasi, responded that the Due Diligence was looking at how we implement the Survival Fund, so when the Due diligence was done the TSF didn't work out their policy or their process of how TSF should operate. So, the due diligence was undertaken, and it found a number of shortfalls in the way the TSF would



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manage and utilize the funds. Maybe next year (2021), we can find a way to address capacity development for TSF Board members.

- Director of Climate change, Ms. Pepetua Latasi, mentioned that the budget from 2017 to 2020 is underspent, and that the 2021 budget is very large, what ways can we keep up to the timeframe especially the expenditures?
- CTA, Dr Arthur Webb, responded there's assumption in the 2021 \$11.8 million budget that construction should begin. So long as the procurement process is concluded successfully at the end of Quarter 2, then it is possible the mobilization of the construction Company can start in Quarter 3 / 4.
- Hon Seve Paeniu, there will be a mid-term review, that might be a process to identify some bottlenecks and risks and perhaps address them in going forward.
- Hon Seve Paeniu, what is the way forward for addressing the design for Nanumaga?
- Project Manager, Mr Alan Resture, responded that during consultation for ESIA, we have given them 3 option: 1) To move the church to the playground; 2) To move closer to the Maneapa (Falekaupule Hall). 3) To move to the safe zone that was identified from the Lidar survey. All these three options were not approved by the community.
- Hon Seve Paeniu, suggested that we must work on the berm top barrier where it is already approved by the community and leave the church site to be sorted out later.
- Director of Marine, Mr Taasi Pitoi, suggest if the government can lease a land to build their chapel.
- Project Manager, Mr Alan Resture, also advised that we already advised the community that during cyclones the Church building can be damaged if it remain in the same place.
- Nanumaga representative, Mr Penehuro Hauma, also mentioned that there were 3 church renovations for Nanumaga. The church was built from limestone, then bricks and cement. But the brick is not good quality. He also mentioned that the berm to be placed on where the community approved it and leave this area for the church.
- Director of Environment, Mr Soseala Tinilau, mentioned that the evidence from this old people from Nanumaga is clear, and it's good to find out when was the time they broke the reef flat, maybe this is a reason for the impact of the island.
- Hon Seve Paeniu, concluded that we stick to that decision that we go ahead with the berm top barrier that has been approved by the community and leave the site that's not been approved but look for alternative options for the site.

7. ACTION POINTS

1. Government to provide support for facilitating travel arrangement for Operations CTA, Paul Audin in January 2021.
2. Written confirmation letter from government for the height of the Funafuti reclamation.



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3. Approval of the design prepared and submitted to the government.
4. The approval of the ESIA reports from the Department of Environment.
5. Endorsed by Chairman Honorable Seve Paeniu the revised AWP 2020 & AWP 2021, and Minutes of the last Board meeting in October 2019. Need UNDP Resident Representative Levan's Signature.
6. Outer island mission will be confirmed for the 14 of December 2020.

8. NEXT MEETING & VENUE

The next Board meeting will be confirmed at a later date.

The Chairman closed the meeting and thanked all for their attendance.

<p>On behalf of the Government of Tuvalu, Office of the Prime Minister, Funafuti, Tuvalu</p>	<p>On behalf of United Nations Development Program – Multi-Country Office, Suva, Fiji</p>
<p>Approved by: </p> <p>Signature: </p>	<p>Approved by:</p> <p>Signature: </p>
<p>Date: <u>28 January 2021</u></p>	<p>Date: <u>28-Jan-2021</u></p>
<p>Name: Hon Seve Paeniu</p>	<p>Name: Mr Levan Bouadze</p>
<p>Title: Minister of Finance & Project Board Chairman</p>	<p>Title: Resident Representative UNDP Pacific Office in Fiji</p>