



Coping with Climate Change in the Pacific Island Region (CCCPiR)

Issue Blong Kostel Erosen mo Adapt long Climate Change long Vanuatu

Project facts CCCPIR

Funding sources: Federal Republic of Germany through the Federal Ministry for Economic Cooperation and Development (BMZ)

Regional partners: SPC, SPREP and USP

Countries: Federated States of Micronesia, Fiji Islands, Marshall Islands, Nauru, Kiribati, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

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Climate Change long Vanuatu

Vanuatu i stap experiencem ol rabis impak blong climate change finis. Ol kaontri long Pacific nao oli moa sensitive long ol envaerontal problem mo tu yumi no kat enuf risos blong dil wetem ol problem ia. So far yumi long Vanuatu yumi stap lukim ol impak olsem sea leve rise, jenj long amaon mo taem blong ren we i foldaon, damaj long ol strongfala cylcone, disis mo sik long ol animol mo plant, lak blong drinking wota mo plante moa.

'Coping with Climate Change in the Pacific Island Region (CCCPIR)' projek hemi wantem helpem ol man Vanuatu blong oli save adapt long climate change. Projek ia hemi karem mani long the Federal Republic of Germany mo Federal Ministry for Economic Cooperation and Development (BMZ). Ol wok hemi keri aot by GIZ we i stap wok klosap wetem SPC mo SPREP. Lo region, projek ia hemi laen gud wetem Pacific Island Framework for Action on Climate Change 2006-2015 (PIFACC) mo long nasonel level i stap sapatem Priority Action Agenda (PAA) blong gavmen blong Vanuatu.



From Wanem Yumi Kat Erosion?

Erosen hemi hapen sloslo ova long plante yia be semtaem tu hemi save hapen hariap, hemi depend nomo lo hamas ol bigfala ren mo lo taem blo storm mo solwota I raf. Fulap lo ol problem blo erosen lo pacific tudei from nogat gudfala planning, nogat stret costel developmen, ol haos oli stap fasfas tumas mo nara samting bakeken hemi oli stap buildem haos lo solwota mekem se oli stap spoilem rif we hemi tu i stap stopem sand from erosen.

Long wan healthy sanbij, amaon blong sand we I wash kam soa hemi semak lo amaunt blo sand we hemi wash away, mo oli kollem se **dynamic equilibrium**. Taem we extra sand hemi stap addem up I ko long sanbij bai hemi save stap mekem land ko bigwan, oli kollem **accretion**. Taem we sand hemi stap continu blo lus (erosen) lo land bai hemi save kosem ol tri olsem kokonut mo ol nara tri we oli gro lo solwota blo foldaon. Mos lo ol sanbij ol stap kat najeral cycle bitwin lo erosen mo accretion dipen long tide, kurrent, season mo weta.

Kostel Erosion mo Impak long ol Komuniti long Vanuatu

Erosen hemi wan proses we ol ples olsem long solwota (sand, gravel mo cobble) oli stap lus mo hemi semak lo graoun I stap lus. Costel Erosen hemi kam long 2 way:

1. Wan yumi save talem se hemi najaral, taem we costel oli sopsop tumas mo I no kat ol plant o krass blo holem graun mo sand bai hemi save respon hariap lo cyclic claemet konditions
2. Costel erosen hemi save kos bai yumi ol man. Yumi karem sand mo kattem ol plants kolosap lo solwota mekem se taem sowota mo ren save washem out isi nomo.



Erosion hemi wan Natural Proses

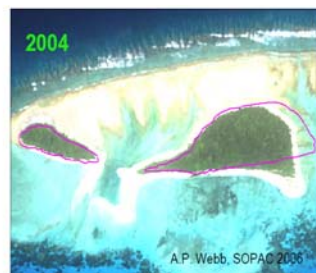
Hemi impoten blo save se erosen hemi wan najerel proses long plante wei long saed blong equal mo opposit proses, **accretion**. Be hemi semak long sandy shore ples hemi dynamic mo hemi shud expectem blo stap jenis ova taem, samtaem lo 100 mita! Mo proses hemi kam **erosion problem** sapos developmen hemi no keful plan blo avoidem area long shore ples we oli stap lus.



From wanem nao erosion I kam bigfala problem tedei?

Long pas, ol man oli lif long hamony wetem muvng costel blo olgeta. Ol haos blo olgeta oli muv sloslo tu mo shoreline haos we oli biltem long wei we oli no distebem shoreline proses (e.g lo stilts o pylons). Ol man oli save mo avoidem denja mo unstable location. Tedei, bilting stael hemi jenis mo ol haos oli no save isily muv o reples mo no kat enaf spes, bai hemi save resal lo ol man oli save bilt lo location we hemi no stret blo bilt lo hem. Taem ol bilting oli bilt lo shoreline klosap lo najerel dynamic shoreline bai yumi save end up wetem human setlemen mo planning problem – ol pits oli stap muv be yumi forget blo plan from muvmen ia.....

Bes wei blo ko long hem blo finem erosen issue hemi blo untastanem how costeline hemi muv mo yu plan from muvmen blo hem taem yu stap bilt kolosap o developem ol shoreline olsem. Samtaem yumi bilt festaem afta yumi jus stap wori abutem erosen afta. Long ol ples olsem bai hemi save led ko lo propety damage mo bigafala expens blo stop erosen. Sorí, ol effot blo stopem erosen samtaem bai hemi kosem mo environment problem!



Wanem I kosem Erosion?

Kostel Engineering

Lo developmen we hemi jenisem how sand hemi muv I ko lo hem, wea o stert nomo lo sandpit bai hemi save caussem erosen; ol samting ia hemi solwota wal, reclamation, groynes, causewei, bot chanel, klerem costel vegetation (e.g mangrove), jenisem wota flo / karen patens, etc



Seawalls



Groynes



Causeways



Boat channels



Reclamation



Building onto the beach

Beach Mining

Blo incresem impoten hemi pits aggregate (sand, gravel mo rok) minning. Taem we population hemi stap gro, ol haos mo infrastrature oli nidem mo material we hemi bin minning lo ol sandpits blo yumi. Hemia hemi upsetem sedimentary budget mo hemi caussem widespred, irreversible erosen.

Rif mo Ecosystem I no Helti

Ol korel rif oli givim aot bigfala volum blo sandbij, gravel mo rock we hemi biltem mo maintenem ol coastline. Ol disteben long ol rifs hemi save jenisem volum blo materials we I stap muv ko lo sanbij mo hemi save kosem erosen.

Pua managemen, pollution mo ova exploitation blo ol living rifs oli save redusem helt mo productivity blo ol rif system – hemi save redusem sand suply ko lo ol sanbij blo yumi – kosem erosen.



Erosion wetem Climate Change

IPCC (intergovernmental panel on climate change, 2007) indicatem exact patten blo klaemet / ocn sistem jenis ol man oli no save gud tumas wan clear trend blo incris atmospheric mo ocn temperature hemi kam out mo olgeta oli accelerate. Solwota level hemi rise long 20th centuri kolosap lo 170 mm (6 ½ inches) mo oli stap aroun blo rise long wan rate blo about 3.1 mm/yia (about 1/8 inch/yia)

Ol najerol sistem blo mifala olsem pits mo living rif oli gat limit ability blo absorbem mo adapt long wan kind environmen we hemi stap jenis. Sapos yumi stap wikem shoreline mo no stap folem stret fasin blo developem, pit mining mo polution bai yumi save kat wik shoreline mo rif bai hemi less resilient. Be nara wei hemi avoidem activiti we oli save wikem costel rif mo pits sistem hemi wan gud exampol wei blo showem se yumi gat bes najerol costel defens lo klaemet wori.

Hao blong Adapt long Erosion?

Wanem nao yu sud mekem :

- Folem local bilting codes mo zone advice , spose hemi stret lo yu
- Bifo yu bilt yu mas plan festaem
- Lanem wanem yu save mekem ababoutem costeline (Ol man we oli save eria ia hemia ol gud sos blo information)
- Vanuatu I kat ol GIS mo histori map facilities, askem sapos oli save showem yu blong eria blong yu
- Yu mas live wan certain disten awei lo solwota. No build klosap tumas!



Wanem nao yumi NO sud mekem?

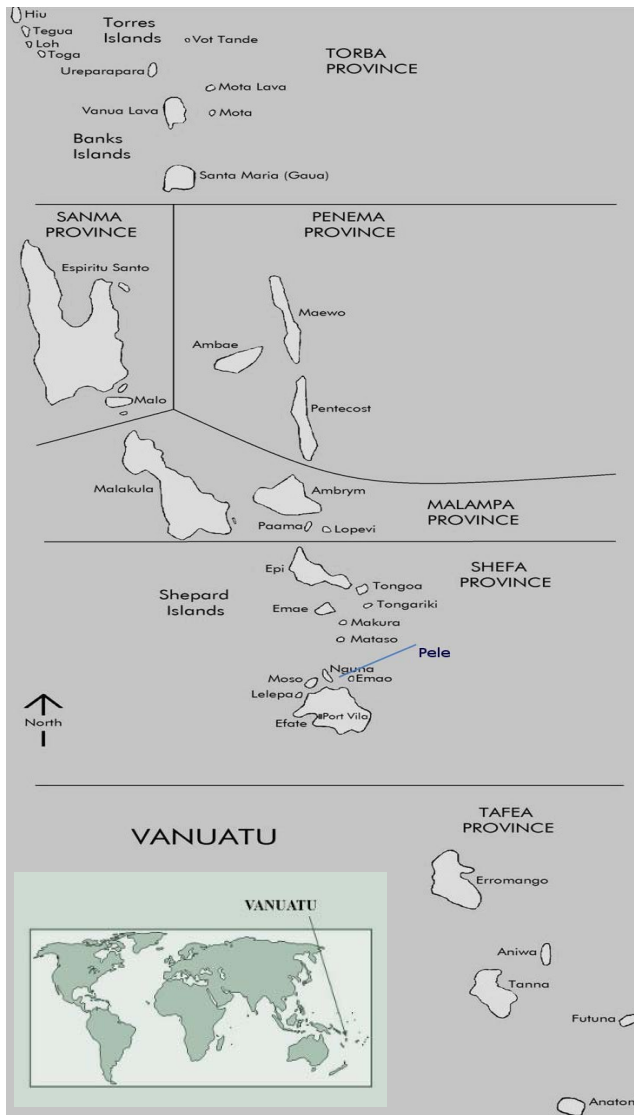
- Avoidem biltem barrier we hemi stap preventem sand from mov alone long pits blo yu
- Avoid bilting kolosap ol lo sanbij stret
- Avoidem blo biltem solwota wol kasem taem sapos yu luk hemi impoten; taem ia now bai yu save biltem
(Solwota wol bai hemi mas design lo wan stret wei sapos no bai hemi save brok mo kosem mo erosen)
- Avoidem blo pamem domestic wes mo machenari I ko lo sanbij from bai hemi save spoilem pit blo bai hemi no save preventem hemi from erosen

Sapos yu Wantem Mekem Wan Developmen long Sanbij

- Considerem mos extreme weta eva lo eria blo yu – structure hemi sud mufabol o bai hemi save abol blo solfaif long ol rabis taem ia
- Considerem ol family o nara man we hemi stap nex lo yu – sapos haos blo yu hemi blokem sand mufmen bai yu kosem erosen lo eria blo nara fren blo yu mo bai hemi sisly save damage
- Expectem sand blo hemi mov – bilt lo stilt blo mekem se taem sand hemi mov bai hemi no save af fectem strucja blo yu (Stilt hemi allowem ol najerel mufmen blo sand along sanbij)

RIMEMBA:

Wan gudfala proteksen akensen stom wev hemi wan helty sanbij – hemi no kostem wan samting blong kipim yu sef oltaem!



GIZ is a federally-owned enterprise that supports the German government in the field of international development cooperation. For more than 30 years, GIZ has been cooperating with Pacific Island partners in strengthening the capacity of people and institutions to improve the lives of communities for this generation and generations to come. GIZ is an implementing agency providing support through technical cooperation to balance economic, social and ecological interests through multi-stakeholder dialogue, participation and collaboration.

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