"Assessing the *wantok* system of the Solomon Islands as an adaptation strategy to climate change"

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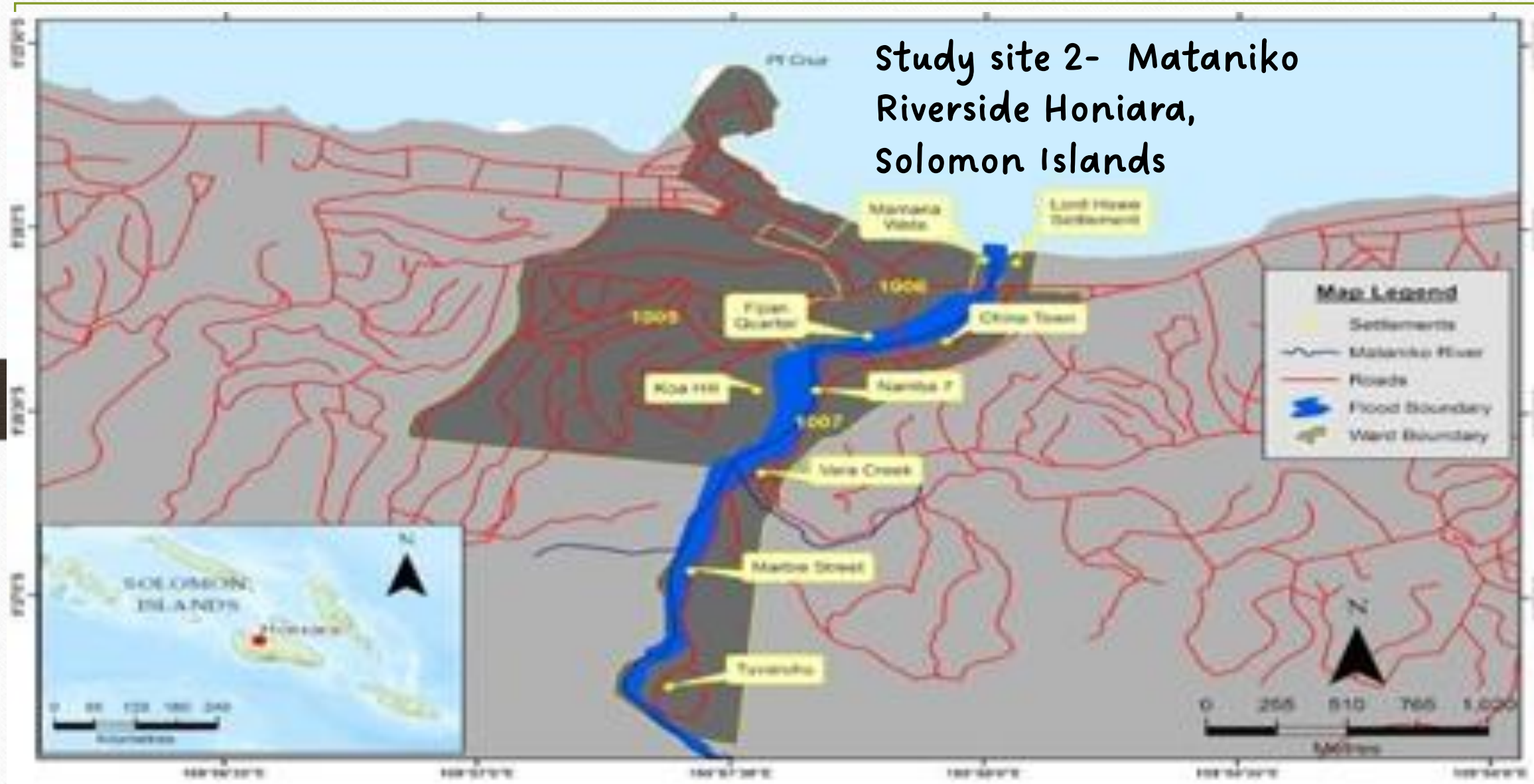
PAPUA NEW GUINEA
SOUTH PACIFIC OCEAN
SOLOMON ISLANDS
Bougainville
Arawa
Choiseul
TREASURY ISLANDS
WESTERN
Gizo
NEW GEORGIA ISLANDS
Vangunu
Mboroka
ISABEL
Buala
CENTRAL
Tulagi
Honiara
Guadalcanal
GUADALCANAL
MALAITA
Auki
Malaita
MAKIRA
Kirakira
CENTRAL
Solomon Sea
PAPUA NEW GUINEA
Coral Sea
Solomon Islands
Honiara is administrated as a province-level town. It also serves as the capital of Guadalcanal Province.
National Capital
ISABEL Province Name
Province Capital
FED. STATES OF MICRONESIA
MARSHALL ISLANDS
NORTH PACIFIC OCEAN
PAPUA NEW GUINEA
NAURU
KIRIBATI
SOLOMON ISLANDS
TUVALU
SOUTH PACIFIC OCEAN
W.SAMOA
Coral Sea
VANUATU
FIJI
TONGA
AUSTRALIA
TEMOTU
SANTA CRUZ ISLANDS
Nupani
Nukapu
Tinakula
Lata
Nendo
Utupua
Vanikoro
Anuta
Fatutaka
Tikopia
ILES TORRES
Vanua Lava
Mota Lava
Santa Maria
ILES BANKS
Mere Lava
VANUATU
NEW HEBRIDES
Espiritu Santo
Aoba
Maewo
Malo
Pentecote
Malakula
Ambrym
Epi

Study site 1- Kalgold Village

Study site 2- Mataniko Riverside Honiara, Solomon Islands



Why this study?
"Wantok System as Adaptation strategy"

- There are **three main Policy Strategies** to addressing impacts of climate change.
- **Adaptation** – Countries Developed NAPs (Focuses on Increasing the adaptive capacities of communities)
- **Mitigation** – National Determined Contributions (Green house gas Emissions)
- **Loss and Damage-** In the development (Physical loss, economic loss & Phycological loss)

Background –Solomon Islands

- 992 Islands, rich in blue lagoons and coral reefs, 80% of population lives with 1.5km coastlines (Gagahe, 2011)
- Between 1980 and 2014, the country experienced 17 disasters (extreme events), costing over USD 124 million and affecting over 352,000 people, i.e., to around 60 per cent of the country's population (Lal 2011),
- 34 years period – there were 19 extreme events @ 1.7 years sequence,
- USD$124m / 17 = USD$6.5M per event,
- PICs experience 6-8 EEE p.a, [frequency, intensity, duration]

Context – Solomon Islands

- **Population 724,426** = majority in rural areas (Kimi, 2020)
- **Poverty line -** 12.7 % of the population lives below the poverty line, (Kimi,2018)
- **Population urban centers** 20% = **144,000**
- **35% of the Honiara population lives in the squatter** settlements = 39,200 (HTCPB (Honiara Town and Country Planning Board), 2015)
- **Poverty highest in the urban centres** (varies across the provinces 5.6 to 31.5% in Makira Province (Kimi,2017)

Literature

- Wantok is an identity perception at the macro level and a social capital concept at the micro and family levels, especially in rural communities. It signifies a setting demanding cooperation, caring and reciprocal support, and a shared attachment to locality (Nanau,2018).

Literatures –different lens of wantok system

- Socio-economic and political network in Melanesia (Nanau, 2011) Development lens
- Wantok was meant for binding of strong relationships in the family (Arua & Eka 2002) Religious lens
- Analytical Evaluation of effects of wantok system in the South Evangelical Church in the Pacific (2011) Religious lens
- How “place” shapes the public servant in Papua New Guinea (Ugyel (2020) Public Services (Governance lens)

Literatures -different lens of wantok system

- Positive impact of Wantok system in the Port Moresby Evangelical Alliance,(Leana 2020) Religious lens
- Wantok System "Melanesian Tok Stori Research" (Sanga & Reynolds 2023) Research lens
- Understanding the experiences in small business development – A case study in Choiseul province, business lens
- The wantok system, scale, and vulnerability : shaping disaster recovery in an immigrant community of western province, Solomon Islands ; DRM lens

Adaptive Capacity/ Adaptation strategy

- The ability, competency, or capacity of a system to adapt to (to alter to better suit) climatic stimuli (essentially synonymous with adaptive capacity) (IPCC 2014; IPCC 2007),
- Lingake between vulnerability (poverty), resilience (socio-economics) Smit, B., & Wandel, J. (2006); Poverty and Adaptation
- Ha'apio & Ricardo, (2015), Building Household attributes to increase adaptative capacity
- Indigenous Knowledge , Culture and social elements to building climate resilience (IPCC 2016)

Collective household model

- The maximum level of household utility is given by,
- $max_{x,q} \int_{t=0}^{\infty} U(x,q)e^{-\lambda t}dt$
- Subject to: $g_1(x,q) \leq Y;\ g_2(x,q) \leq Q; x \geq 0; q \geq 0,$
- where $g_1(x,q) \leq Y$ is the budget constraint , the solution (x^*, q^*) is also consistent with a maximum level of community's utility in a case of collective cooperation. The vector$x^* = (x_c^*, x_a^*)$, is compounded by an optimal set of consumption goods x_c^* and an optimal set of palliative or aversive market goods x_a^* to damages from extreme events.
- Ostrom Elinor (2014) (Community Management of communal resources) Nowak, M. A. (2006) Evolution of Cooperation ,

Hypothesis

- Income net-worth is a poor measure of community and household wellbeing,
- House-hold net-worth is critical to responding to the impact – extreme events and climate change (but has a limit)
- *Social net worth is critical for Climate Change adaptation* (Wantok system of Solomon Islands)
- Ostrom 2014, Nowak,2006 (*Cooperation at the local level is most effective way of resource utilization and management)*

Methodology – Case study approach

- **SITE 1 Keigold, Western SI** - The event in western province of Gizo and around Ranogha Island -53 deaths, cost millions dollars, Ranogha Island was raised 3.5m (Brian G. McAdoo (2008)

- **SITE 2 April Ridge, Honiara, SI-** The Single event – flash flood, it cost the country USD$109m (10% GDP), Economic growth 0%, 24 deaths, (World Bank, 2015).
- Questionnaires & FDGs 120 people; this represented the household heads and cross sections of the communities
- Thematic Analysis and also analysis of livelihood and socio-economic factors

Table 1 : Respondents per measurement instrument and study site and population

	Site 1		Site 2		
Instrument	Keigold	Mondo	April Ridge	Mataniko Riverside	Total
Sample:					
Semi-structured questionnaires	35	15	24	36	110
Focus groups	5	1	4	4	14
(participants)	(25)	(6)	(24)	(28)	(83)
Survey questionnaires	29	9	38	44	120
Population:					
Total households	82	21	116	130	349
Total people	(480)	(111)	(769)	(851)	(2,211)

Source: Household survey September 2015

Table 2 Phases of Thematic Analysis as per Braun & Clarke (2006)

Phases	Process	Result	Reflexivity Journal Entries
1	Familiarising with the data	Assignment of preliminary codes	Re-reading through the interview questions and questionnaires, noting with initial concepts/ideas.
2	Generation of initial ideas	Data are given codes and collate into similar codes	Provide why certain data will be amalgamated, how researcher is asking questions and why codes are interrelated
3	Searching for themes	Lists of candidate themes for further analysis.	The RJE needs to disclose how codes were combined and interpreted.
4	Reviewing themes	Reviews patterns developed and realign wherever possible	Justify how and why codes were given and how the data answers the research questions.
5	Defining and naming themes	Themes are selected and refined for clear directions	The researcher provides description of the themes developed.
6	Producing the report	A detailed description of the results.	Noted why some themes are more useful to the study over others.

List of preliminary codes - RESULTS

	Code		Code
1	Everywhere was disaster – no need to build good houses	16	People must live within their means and control their expenses
2	Government should assists communities in disgrace	17	Income is important to better livelihood
3	Family support is very important during disaster times [EEE]	18	In spite of disasters, people will prevail generation after generation
4	All the communities are vulnerable to climate change and EEEs. Therefore there is no escape	19	God is punishing this world – End of time is near
5	Community chief plays a role in caring for the community – Mondo and Keigold communities	20	Leaders are rebellious – thus we have to face all these punishments
6	Climate has changed and has become more brave - rain is heavier, storms are stronger	21	The world has been here for thousand years: Therefore climate change is not real
7	Education is important to support adaptation	22	We are poor and we have not many choices to take cover from disasters
8	We need to change the way how we face the catastrophes	23	We rely on fishing for a living, that's why we need to live near the shore
9	We know it is risky but this is the way we have been always living	24	Everyone is going to die one day
10	Government took too long in assisting the village after the tragedy	25	The aid was insufficient
11	If our family would not have assisted we would have been lost	26	Many lives were saved because of family and friends aid
12	Response of family and community to the disaster	27	climate change is a scam
13	Preparation for future catastrophes? Yes/no??	28	What would be needed to do to avoid such catastrophic impacts in the future?
14	Economically desperate households are settled mainly at disaster prone areas – becoming vulnerable communities surrounding the growing city	29	Weak city council authority by law – failing to prevent households settling at vulnerable or disaster prone areas.
15	The purpose of the earlier settlements were economically motivated at these locations	30	The government promised to help the affected communities.

Thematic analysis process

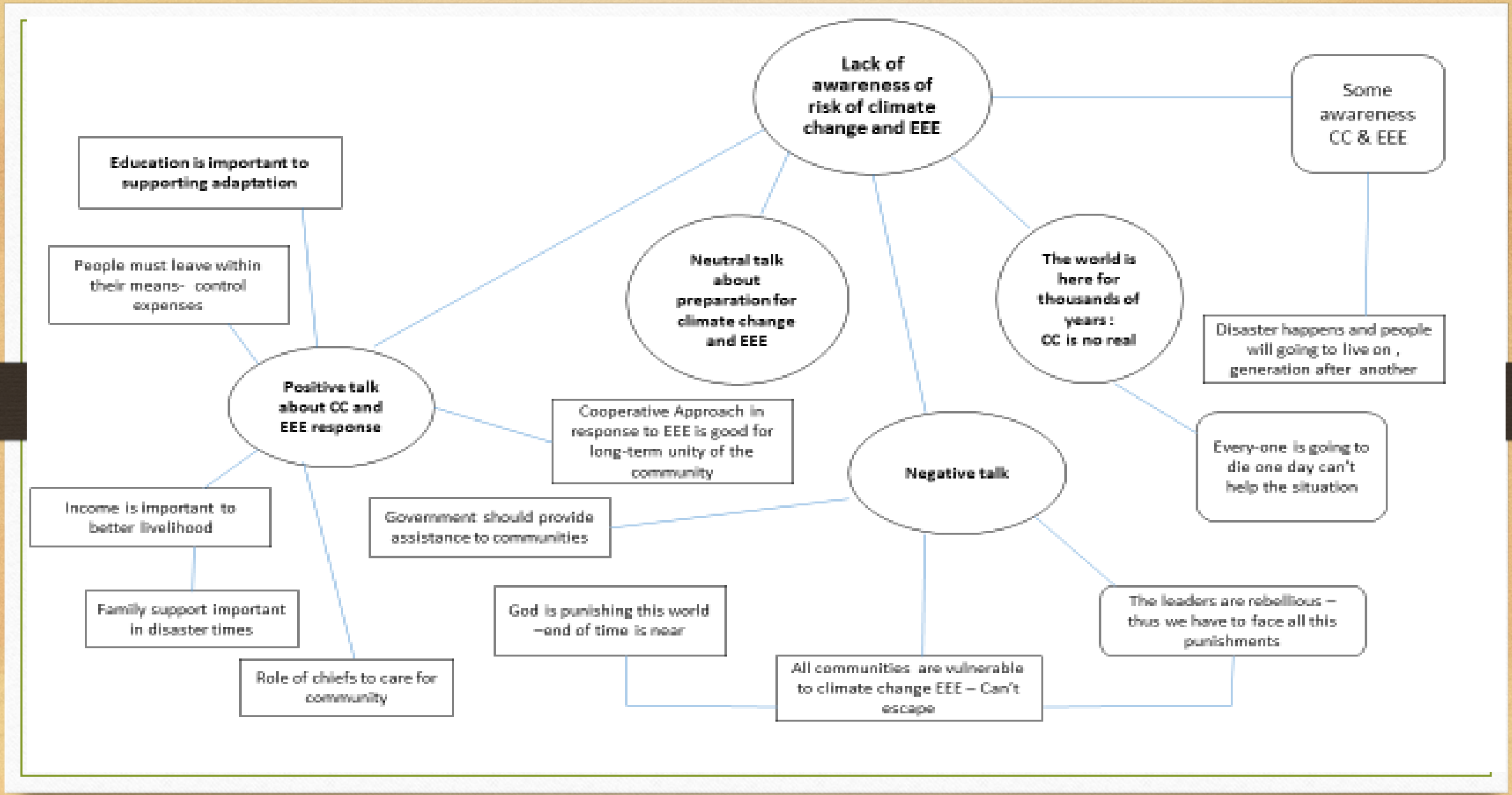


Table 3 Searching for emerging themes

Preliminary theme	Description	Associated codes (See Table 3)
(i)	Family-and community aid and support in times of disgrace is key important to respond to catastrophes	3, 5, 11, 12, 26
(ii)	Claim for a major role of government in disasters (in preventing, and assisting before and after the catastrophe)	2,10,25,29,30
(iii)	Nothing to do in respect climate change and natural catastrophes. (Resignation and acceptance of the situation)	1, 9, 4, 18, 19, 20, 24, 21,27
(iv)	Climate change is the topic of the discussion (Adepts and detractors of Climate Change)	4, 6, 21, 27
(v)	Need for a change in the way how we face catastrophes	7,8,13, 28
(vi)	Poverty is a determinant of vulnerability to disasters	14, 15, 16,17, 22, 23
(vii)	Dependency on natural resources. Location was necessary because of the availability of land for gardening and, natural resources as source of food.	9, 14, 23
(viii)	Dependency on the social network. Location was necessary for the need to live together as a community.	3, 5, 11

Quotations

- ***Keigold Village, Western Province Site 1***
- Chief Kana from Keigold village stated that building trust amongst the members of the community is vital. In his own words, "*It is important that community members trust each other as we embark on building meaningful adaptation program at the village level*"

Quotations

- ***Keigold Village, Western Province Site 1***
- Chief Kana, explained that: "*after the 2007 tsunami, as the villagers were trembled and traumatized by the loss of their houses and gardens*, I offered them the opportunity to relocate on a new village inland".

Quotations

- ***Keigold Village, Western Province Site 1***
- Chief Kana explained that since "*people were my wantok and close relatives, they trusted me, which eventually resulted in the relocation on the new Keigold village*".
- He emphasized this fact made him remind on the '*importance of trust that I have in my people to assist me when I'm in trouble*'.

Quotations

Mataniko Riverside –site 2

- Chief John from Mataniko village. He stated that, "*the first people to arrive at our home during and after the flood of 2014, with basic items as water bottles and food supplies, were our own wantoks living in other parts of Honiara*".

Quotations

- ***Mataniko Riverside , Honiara, Site 2***

- Chief John thanked the NGOs and local government's assistance after the flood but in his own words,
  - *"A very "big tagio"* (big thank you) *to my close relatives and wantoks since they were the first people who had come looking for us during and after the flood". "They were worried whether we survived the flood or not".*

Commonalities of both sites

- *Wantok's* arrival psychologically boosted their positivity regardless of the impact of the flood or environmental event (land slide).
- Loss & Damage_ communities experienced; physical loss, Social loss & Psychological loss,
- According to Chief Michael from Koa hill, "*although help was slowly forthcoming from both local and national governments, I trusted my wantok's would come shortly to our aid that morning*".

Discussion Points

- National Adaptation Plans (NAP) are being Developed across Pacific Region,
- How many of them considered “ Social-Capital or Culture “ into the design the design of these NAPs
- Adaptation strategies often are very High-Level documents, tailored to suit economic capacities as always required by donor agencies, but failing to consider;
- Social Capital or In the case of Solomon islands “ the dynamics of wantok system as foundation of adaptation strategy which is aimed to addressing the impact of climate change at the local level.

Conclusion

- Wantok system (a form of social capital) could be an effective means to adaptation.
- National Adaptation Strategies- Interventions focuses on capacities, reduction of vulnerabilities through economic and financial resilience
- [are in-effective when not blended into social context of the country]

Policy Recommendations

- NAP adaptation policies must consider, the context of countries, policies must not very high level , but inclusive of cultural practices and dynamics of the country,

- Wantok System [form of Social Capital] must also be considered as medium for building resilience adaption to the impact of climate change.

Thank You

Any Questions!!!

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