

**INSTITUTE OF APPLIED SCIENCES
THE UNIVERSITY OF THE SOUTH PACIFIC**

**Summary Report on the 2000 Votua
Community Marine Resource
Management and Monitoring
Workshops (Fijian Version)**

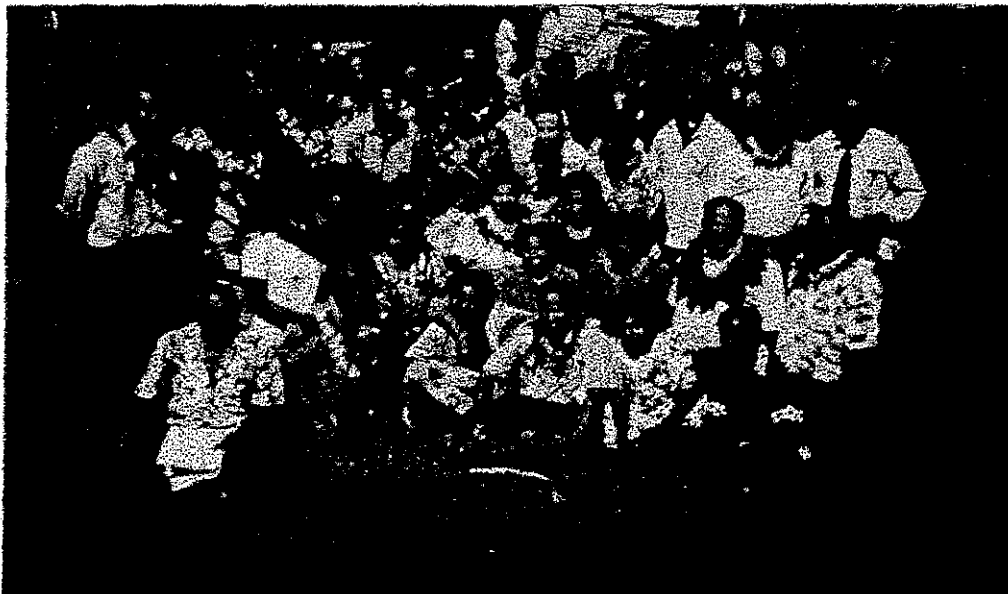
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by

Alifereti Tawake

January, 2004

SUMMARY REPORT
ON THE
2000 VOTUA COMMUNITY MARINE RESOURCE
MANAGEMENT AND MONITORING WORKSHOPS.
(FIJIAN VERSION)



By

Alifereti Tawake.

**Institute of Applied Science,
University of the South Pacific,
Suva.**

LEWE NI REPOTE

CONTENTS

Page no

Lewe ni vuli	3
Nai Vakamacala Taumada (Introduction)	6
Tuvatuva ni Veitaratara (Logistical Structure)	8

SUMMARY OF WORKSHOP ACTIVITIES AND OUTPUTS

1. Balebale ni Management Plan (Definition)	9
2. Mapetaki ni Yau bula (Resource Mapping)	10
3. Marine Resource Transect initial Analysis	14
4. Na veisau e Yaco e Votua (Historical Profile)	19
5. Na veiwekani ni tamata kei na veika bula (Marine Ecology)	22
6. Na veisemati ni ka e rawa mai nai Qoliqoli (Impact Flow Diagram)	23
7. Na veisemati ni Lawalawa se soqosoqo (Relationship Diagram)	26
8. Tuvatuva ni veivakatorocaketaki (Votua Master Plan)	29
9. Tuvatuva ni kena Taqomaki nai qoliqoli (Community Action Plan)	30
10. Macala ni Bose vanua ena Okotova (Review of Action Plan)	33
11. Qoliqoli e Votua: Community Marine Resource Monitoring Plan (Draft)	34
12. Tatadra kei na takete. (Project or Vision Map)	36
13. Vanua o Votua	37
14. Naka meda Kila Taumada ni bera na Survey (Concepts)	38
15. Monitoring and Evaluation Cycle	43

Mape (Map List)

1. Yalayala ni Qoliqoli e Votua
2. Yalayala ni qoliqoli e navuci me Vakatabui
(Proposed MPA site)

Lewe ni Vuli:

Management Plan Workshop (Sepiteba 5-8)

YACA	YABAKI	TUTU/TAVI	KORO
TUESDAY 5/9/00			
1. JOSUA TUIISOVA	39	TURAGA NI KORO	
2. AFILA SAAFI	28	LEWE NI VANUA	
3. WATISONI NAISOGO	35	TURAGA NI KORO	
4. KAMINIELI TOVATOVA	54	LEWE NI VANUA	
5. SETARIKI TIWALEVU	45	KOMITI NI KORO	
6. FILIMONI TAKA	66	LEWE NI VANUA	
7. SOVAIA LIKU	22	LEWE NI VANUA	
8. LUISA NALIVA	22	LEWE NI VANUA	
9. KESAIA NEISAU	42	LEWE NI VANUA	
10. MAKITALENA NEISULU	38	LEWE NI VANUA	
11. AKENETA RANADI	47	LEWE NI VANUA	
12. SAMISONI RANITU	62	TALATALA	
13. MELI VULAWALU	50	FISHERIES OFFICER (RA)	
14. KATARINA NAQIRI	57	LEWE JINI VANUA	
15. VASEMACA TUWAI	53	LEWE NI VANUA	
16. SELEMO VUNISINA	40	LEWE NI VANUA	
17. NIUMAIA ROMANU	41	KOMITI NI KORO	
18. LAITE SAVUI	26	LEWE NI VANUA	
19. SOLOMONE QAQA	36	LEWE NI VANUA	
20. SAM WHITE	38	KOMITI NI QOLIQOLI	
21. PIO QAU AKUILA	40	LEWE NI VANUA	
22. ENERI NASA	38	KOMITI NI QOLIQOLI	
23. VILAME NAREO	57	LEWE NI VANUA	
24. ATONINA LOWATA	53	LIULIU NI SOQOSOQO	
WEDNESDAY 6/9/00			
1. VILAME NAREO	57	LEWE NI VANUA	VOTUA
2. PIO QAU ALUILA	40	LEWE NI VANUA	VOTUA
3. SAMISONI RANITU	62	TALATALA	NATUTU
4. AFILA SAAFI	28	LEWE NI VANUA	VOTUA
5. TANIELA MATALOMANI	23	LEWE NI VANUA	VOTUA
6. EMERI NASA	35	KOMITI NI QOLIQOLI	VOTUA
7. LAITE SAMI	26	KOMITI NI QOLIQOLI	VOTUA
8. JOSUA TUIISOVA	39	TURAGA NI KORO	VOTUA
9. SOLOMONE QAQA	66	LEWE NI VANUA	VOTUA
10. RATU VATEMO TINALEVU	47	TURAGA NI YAVUSA	NAIRAI
11. WATISONI NAISOGO	35	TURAGA NI KORO	NAWAQARUA
12. KEMUELI TOVATOVA	56	LEWE NI VANUA	VOTUA
13. FILIMONI TAKA	66	LEWE NI VANUA	VOTUA
14. ATONINA LOWATA	53	LIULIU NI SOQOSOQO V/marama	NAWAQARUA
15. AKENETA RANADI	47	LEWE NI VANUA	VOTUA
16. KARALAINI NEIBIKA	30	LEWE NI VANUA	NATUIU
17. SALOME NAISUSU	19	LEWE NI VANUA	NATUTU
18. MAKITALENA NAISULU	38	LEWE NI VANUA	VOTUA
19. KATARINA NAQIRI	57	LEWE NI VANUA	VOTUA
20. VASEMACA TUWAI	53	LEWE NI VANUA	VOTUA
21. SARA CUANILAWA	47	LEWE NI VANUA	NATUTU
22. KESEIA NEISAU	42	LEWE NI VANUA	NATUTU
23. SAM WHITE	41	KOMITI NI QOLIQOLI	VOTUA
24. LUISA NALIVA	22	LEWE NI VANUA	VOTUA
25. SOVAIA LIKU	22	LEWE NI VANUA	VOTUA
26. ASELEMO YAVUNISINA	36	LEWE NI VANUA	VOTUA
THURSDAY 7/9/00			

Monitoring Workshop (Noveba 28-30)

YACA	TUTU E NA KORO	YACA NI YAVUSA/KORO
1. SAM WHITE (M)	DAU NI YAU/QOLIQOLI	NAIRAI-NASOLO/VOTUA
2. VASEMACA T (F)	KOMITI NI MARAMA	BALAVU/ VOTUA
3. NIUMAIA ROMANU (M)	KOMITI NI KORO	NAIRAI/ VOIUA
4. KARALAINI NEIBIKA (F)	LEWE NI VANUA	NATUTU
5. KESEIA NAISAU (F)	NASI NI KORO	NATUTU
6. ATONINA LOWATA (F)	LIULIU NI SOQOSOQO	NATUTU
7. AKENETA RANADI (F)	LEWE NI VANUA	VOIUA
8. WATISONI NAISOGO (M)	TURAGA NI KORO	NAWAQARUA
9. JOELI WALEVU (M)	TURAGA NI KORO	NAIRAI/VOTUA
10. LAITE SAVUI (F)	LEWE NI VANUA	NADUA/ VOTUA
11. LUISA NALIVA (F)	LEWE NI VANUA	BALAVU/ VOTUA
12. KATARINA NAQIRI (F)	LEWE NI VANUA	BALAVU/ VOIUA
13. VILIAME NAREO (M)	LEWE NI VANUA	BALAVU/ VOTUA
14. SAMISONI NASAUAMATA (M)	Talatala	NAWAQARUA

NAI VAKAMACALA TAUMADA ME BALETA NA I NAKI NI SAGAGA NI KENA DIKEVI KA MOROROI NAI YAU BULA E TU NA NODATOU BARAVI SE I QOLIQOLI E VOTUA

A. NAI TEKITEKIVU NI SASAGA OOO

Na sasaga ni kena dikevi, vulici ka maroroi na vei yau bula e nadatou quloqoli e muria mai na mataqali sasaga vata ga ka a vakayacori mai Verata, Tailevu ena vica na yabaki sa oti ka mai cava e na dua na Workshop ena 1999 e USP. Na sasaga mai Verata e a vakailavotaka na "Biodiversity Conservation Network" se BCN ka tiko mai Washington na kena vale-ni-volavola levu.

Na kena mai vakayacori na vuli oqo e Votua e mai rawa e na nona a volavola yani kina USP e dua na Turaga-ni-vanua ko Semisi Nadriubalavu, ni oti na nona wilika nai tukutuku ena Fiji Times. Eratou a mani sureti e lewe vica na Turaga-ni-vanua e Votua me ratou tiko maliwai iratou na Turaga-ni-Verata mai Verata ka mai tini ena workshop e na USP ena yabaki 1999. Oti koya, keitou sa tovolea me keitou kerea e dua nai lavo kina United Nations Development Programme (UNDP) me rawa kina ni keitou vukei kemudou na Turaga e Votua kei Natutu e na tovolei me vakaivolataki na taqomaki ni yau bula ena nadatou I qoliqoli me baleti ira na nodatou kawa mai muri.

B. NAI NAKI NI SASAGA OOO

Nai naki levu ni sasaga oqo sai koya na kena tovolei me vakalesuitale mai na sautuni noda vanua kei nai I qoliqoli kara dau sakitaka tu na noda qase . E tiki talega ni vuli oqo sai koya na noda vakaitavi saraga na lewe ni vanua ena kena veitalanoataki, vulici ka vakaivolataki na veika bula e tu ena nodatou I qoliqoli, ka medatou na qai raica se digitaka e vica na kena mataqali, (ika se qari se cava tale – "indicator species)" ka dau yaga vakalevu vei ira na lewe ni vanua (laukana se volitaki) me na qai vaka vuvulitaki na I walewale ni nodra dikevi ena vei gauna sa tu mai liu"(monitoring of indicator species)". E na gadrevi vakalevu na nodra vakaitavi na I liuliu se Turaga-ni-koro, ko ira na dauquli vakawasoma, ko ira talega na marama kei ira na taba gone, cauravou kei na gone yalewa kani ko ira oqo e na tomana tiko na sasaga oqo.

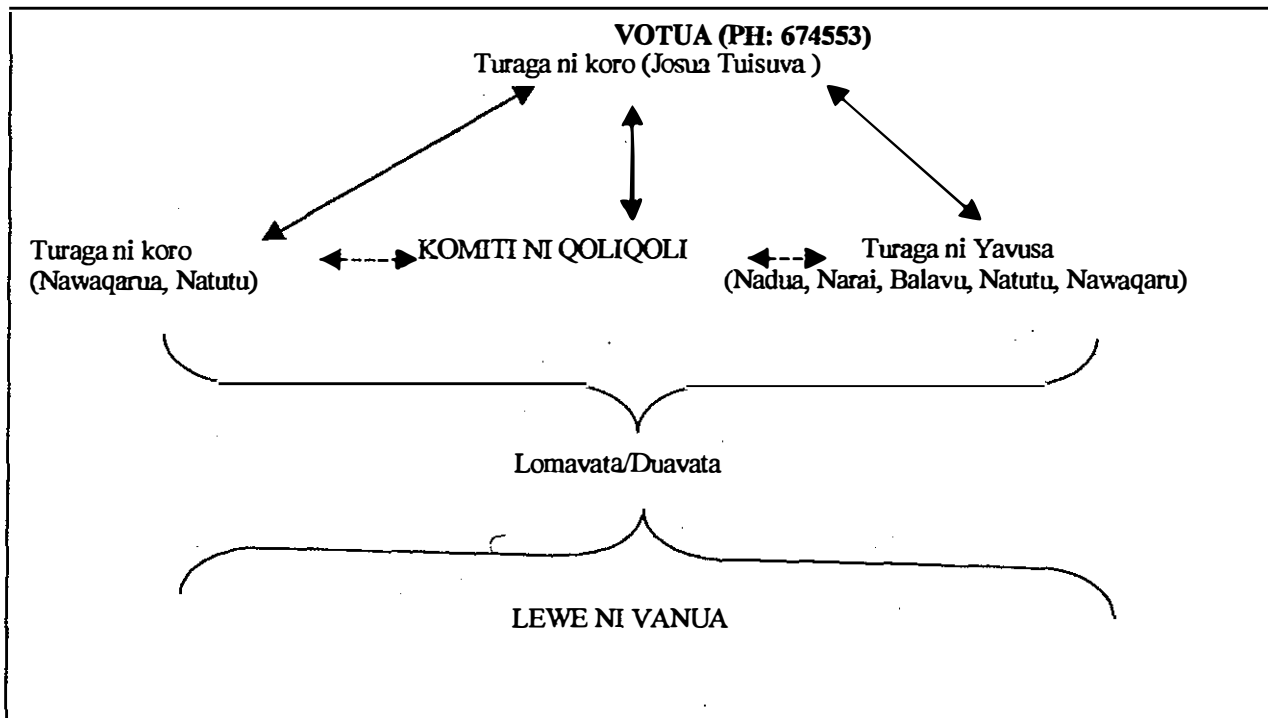
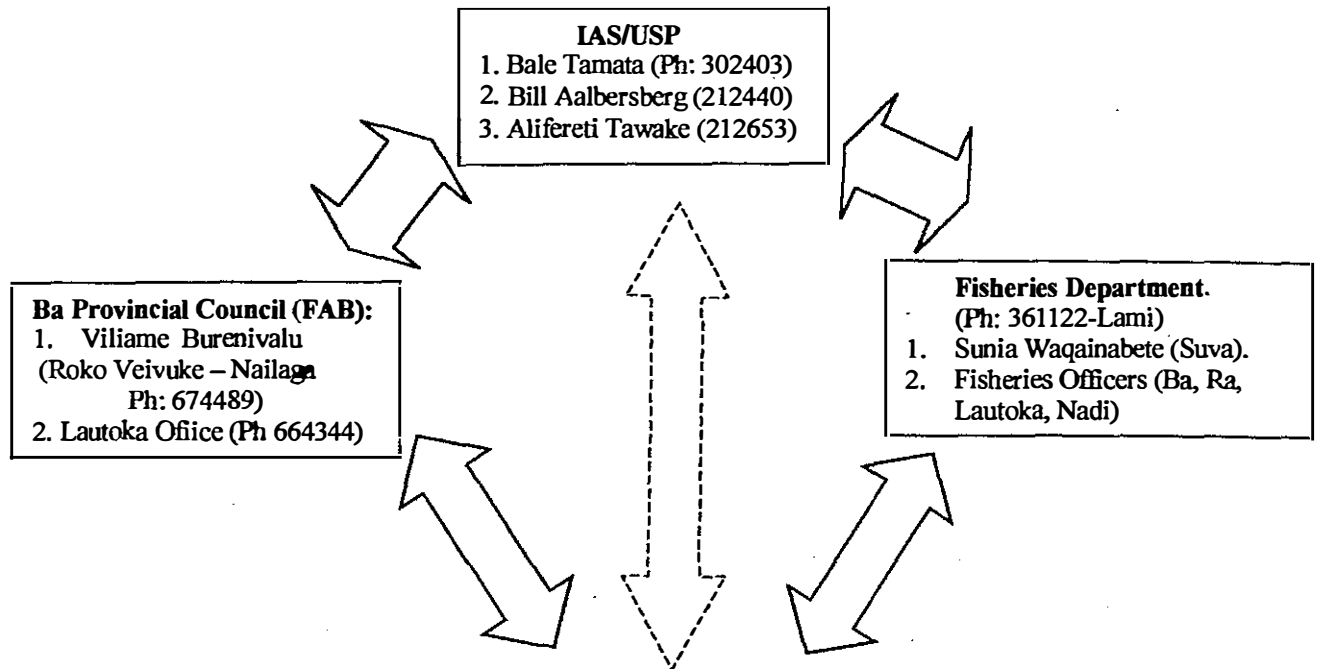
Na sasaga oqo e na vakavotukana walega kevaka eda duavata ka lomavata kina ka vakaitavi kece na lewe ni vanua ni sai kemuni nai taukei nai yau bula – (na kena bula se yali vakadua e vakatau ena kena I vakavakayagataki). Sai kemuni talega koni kila vakavinaka tu na veimataqali sasalu kei na ika e tu wai kei na I tuvaki ni I qoliqoli.

C. TUVATUVA NI KENA CAKACAKATAKI NA TAQOMAKI NA I YAU BULA KEI NA VEIVAKATOROCAKETAKI RARABA E VOTUA.

'Community-Based Marine Conservation Action Plan/Management Plan'

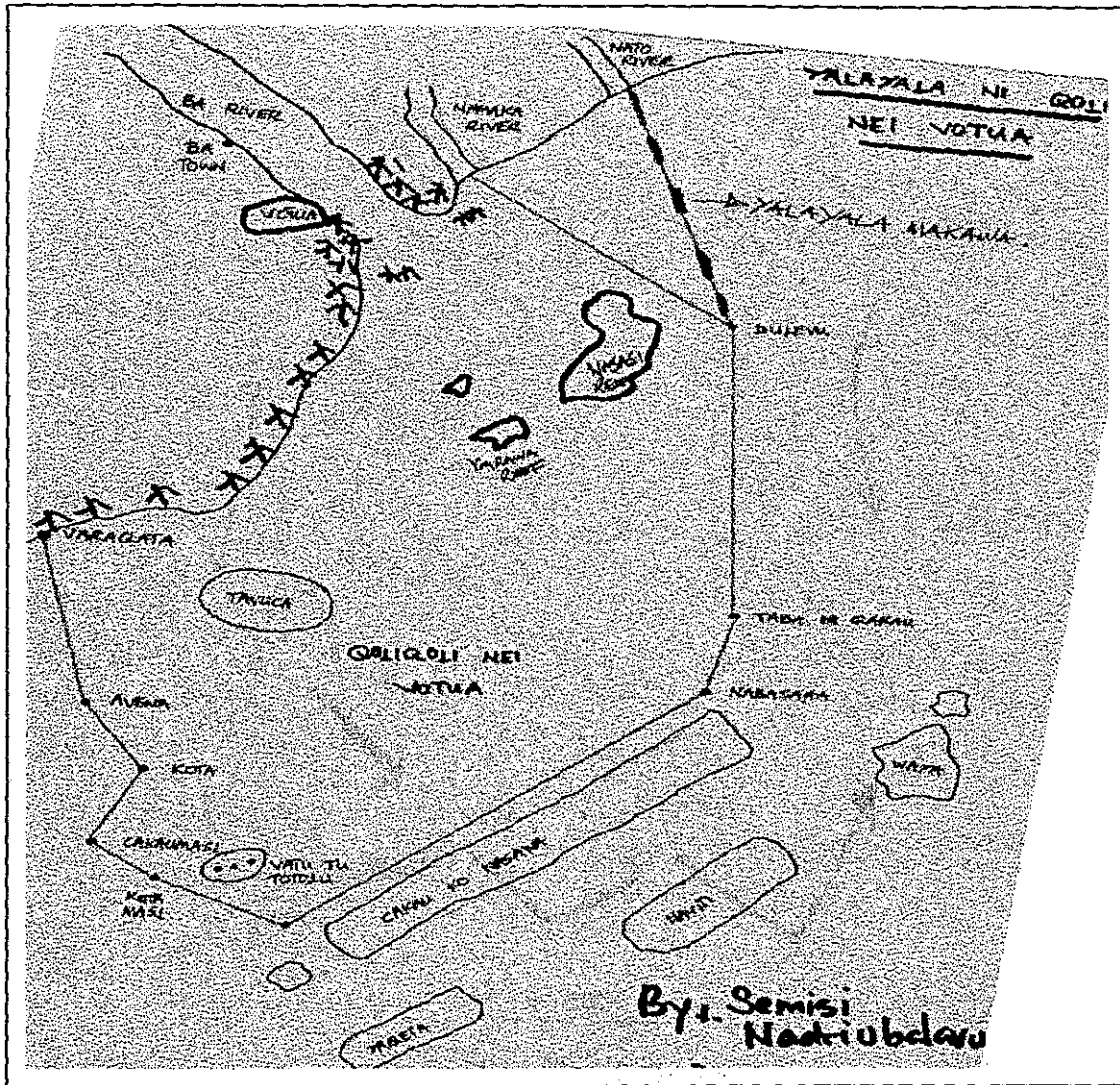
E dua talega nai naki bibi ni sasaga oqo sai koya na kena na vakarautaki e dua na "Management Plan", ka mera na vakaitavi saraga kina na lewe nivanua. Oqo ena rawa ni qali vakarautaki se volai nisa na mai cava na I karua ni workshop kana siga tolu na kena dede. E ka bibi, me datou kila na i vakaibalebale ni "Management Plan" ka vakaitavi saraga na lewe ni vanua ena kena volai, ka vakausivi na kena vakamuri tiko ena vaiyabaki sa tu ki liu ka me na rawa ni laurai na kena lesu tale mai na sautu ni nadatou I qoliqoli, me baleti ira na nodatou kawa mai muri.

Nai tuva tuva ni veitaratara me baleta na sasaga ogo.

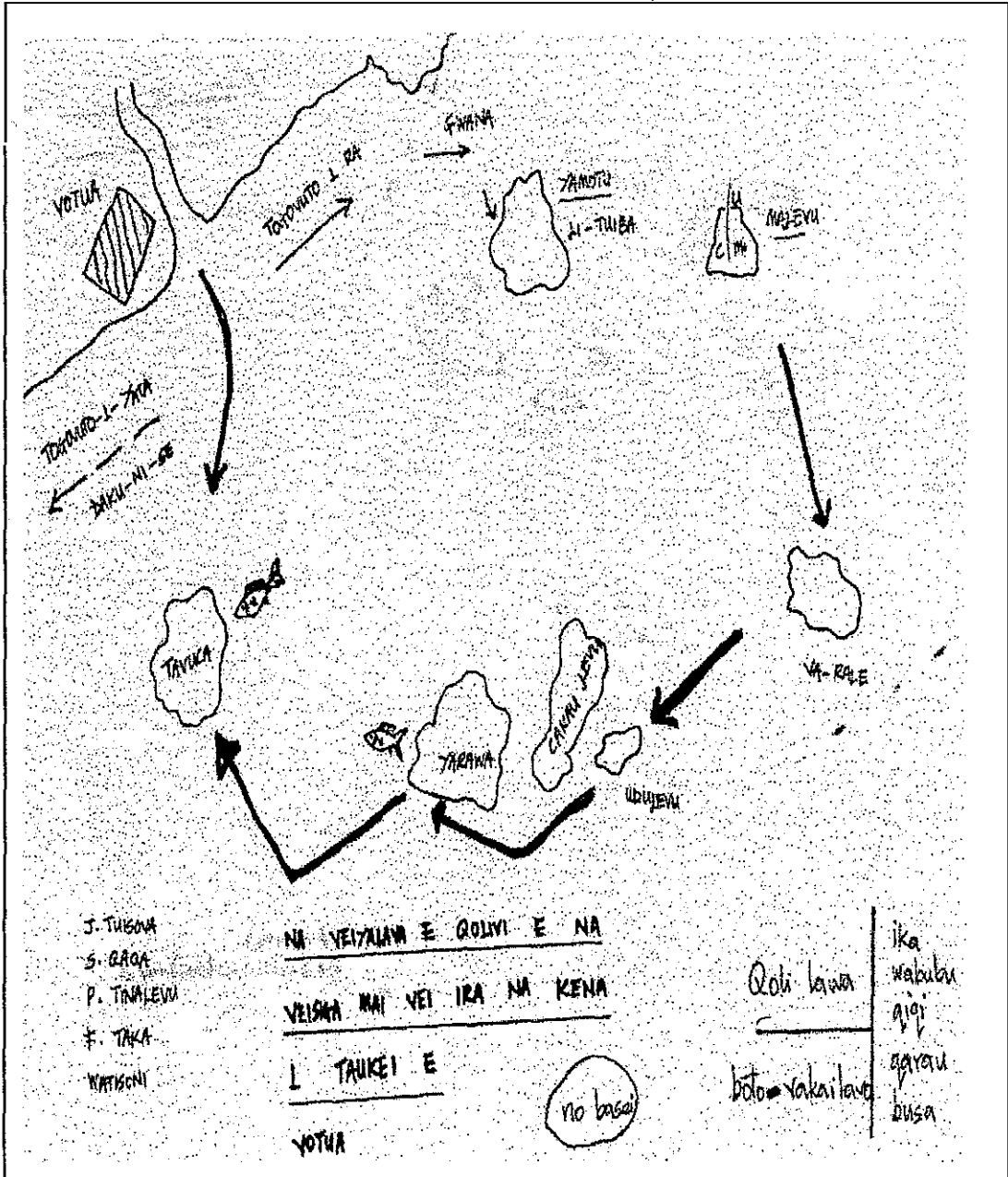


2. Mapetaki ni I Yau Bula

2.1 Yalayala ni I qoliqoli e Votua.

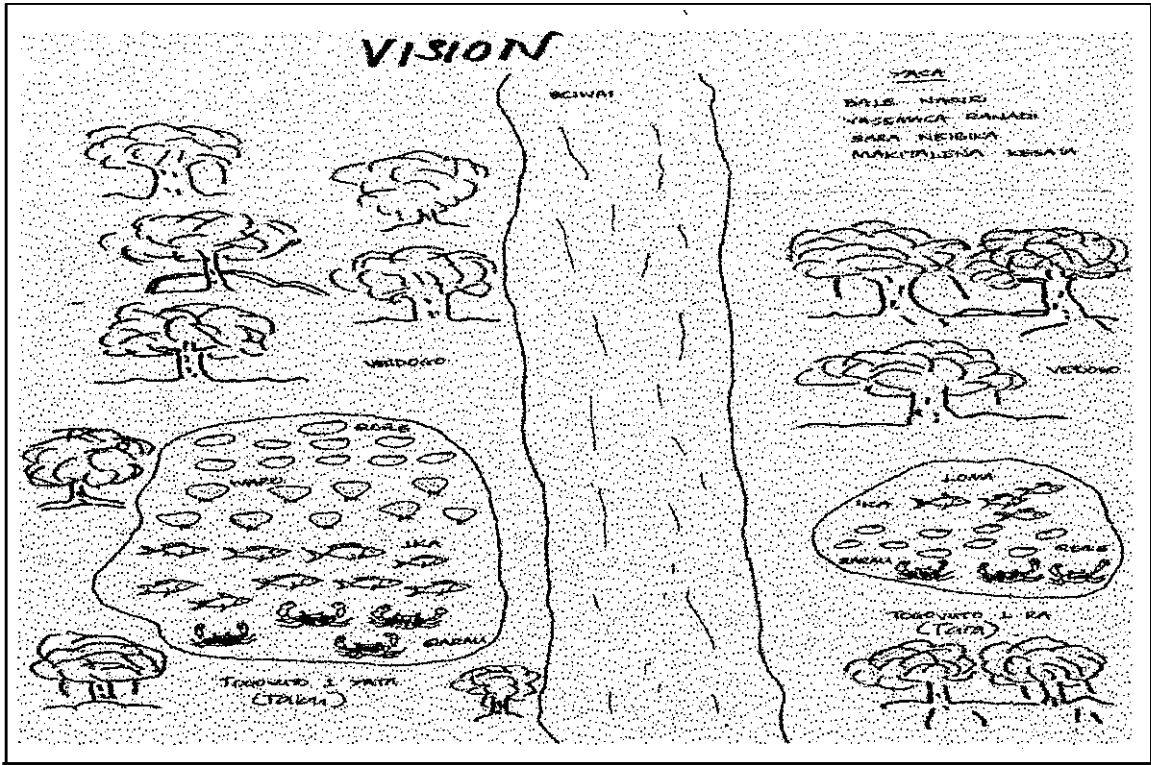


Na yalayala era dau qoliva vakalevu na Dauqoli (taukeyi kei na dauqoli vakalaiseni).

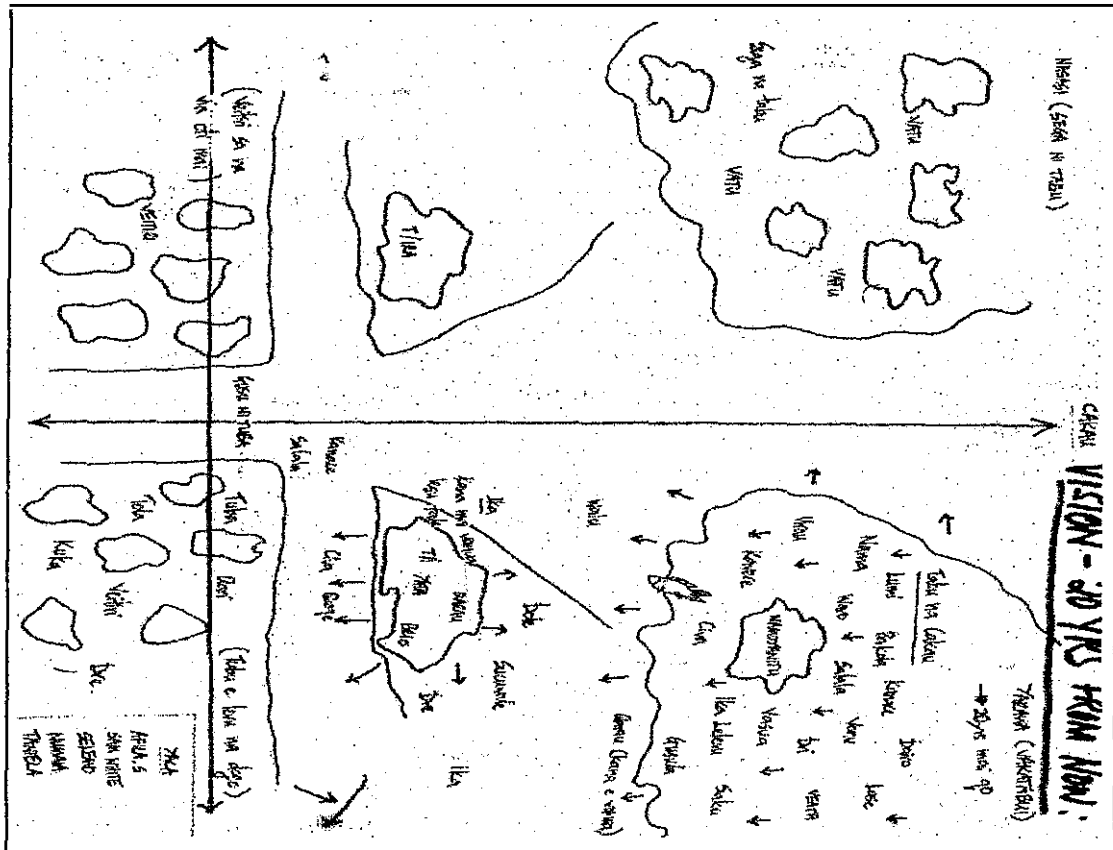


2.3 Tatadra (Qoliqoli ena 10-20 na yabaki mai oqo)

Vedidogo : Toka Vuto I Yata (Protected) Vs Toka Vuto I Ra (open).



Cakau : Yarawa Reef (Protected) Vs Nasasi Reef (harvest site)



<p>va - koli, vuaka, bulumakau, me, pusi, toa, ga <i>Manumnau vuka</i> - maina, beka, ruve, lulu, kitou, ulurua, belo, qiqi, dire, manulevu</p>	<p>Mataqali <i>cakacaka/ sei walewale ni qoli cava e vakayacori ena veivanua oqo.</i></p>	<p>Na qele e teivaki. Nai sele, matai va, i sivi, matau, nai kutari</p>	<p><i>Mataqali qoli nunu</i>, tataga, yasobe, basei, cina, cocoka <i>Yaya ni qoli</i> - lawa, liga, moto, siwa</p>	<p><i>Qoli cava</i> - ruruku, yasobe <i>Yaya</i> - liga, Noke</p>	<p>Vasua- matau, dairo - tomi, lumi -- cavu, ika - lawa/ siwa/ nunu/ cocoka</p>	<p>Siwa, vakasavuba, nunu (compressor), long line, pole and line, biibili, lawa lelevu (purse-seine)</p>
<p>Na cava nai vurevure ni lavo</p>	<p>Dovu, (volitaki ena kena dui - makete), Lisi ni qele, Tamata cakacaka e loga ni dovū.</p>	<p>Volitaki ena makete e Ba kei Lautoka Tave, ura, qarau, ika</p>	<p>Volitaki-Kuka, qarau, mana, lairo</p>	<p>Volitaki qarau kei na ika (kalo)</p>	<p>1.Soli ni laiseni vei ira na via mai qoli ena yalava 2.Qolivi ka volitaki (taukeyi ni qoliquoli) gaunisala, makete</p>	<p>Laiseni Volitaki - sasalu kece mai vei ira na bisinisi lelevu, yadua se vakailawalawa</p>
<p>Ono(6) na sasalu/ veika bula e bibi duadua (qolivi vakawa soma)</p>	<p>Dovu, maqo, vuaka, bulumakau, moli</p>	<p>Ika, tave, ura, vale</p>	<p>Qarau, lairo, mana</p>	<p>Qarau, na kalo, na qe, na waro</p>	<p>Kanace, salala Vasua, urau Lumi, dairo</p>	<p>Walu, ogo Tuna, sucuwalu, Pakapaka, ika bula</p>
<p>Vakarau vaka vanua/ lawa ni matanitu cava e taqomaki kina na veika bula ena vei vanua oqo.</p>	<p>Lawa ni tabana ni teitei kei na F.S.C</p>	<p>Na Komiti ni qoliquoli - tabu na basei</p>	<p>1. Tabu na musu dogo - Matanitu 2. Tabu na volitaki na qari lailai - Matanitu</p>	<p>1. E lawa vakavanua - me kua na basei - 1999, 2. Lawa vakamatanitu - vakatabui na qarau yasewa (qari lailai)</p>	<p>1.Vatabui na Basei, dainimati, tuva, vonu. 2.Komiti ni qoliquoli (yadrava nai qoliquoli) 3.Totogitaki ke vesu mai ka sega na nona laiseni se basei se dainimati.</p>	<p>Lawa ni tabaqoli (Fisheries Act), ovisa ni qoliquoli, Lawa ni EEZ, Lawa vakavanua</p>

Na leqa ni dau sotava se sa laurai tiko ena veivanua oqo.

1. Ualuvu, Nai sau (dovu), lauqa (draki), lailai ni qele, yaya ni teitei.
2. Duidui vakasama na lewe ni koro ka sega so ni dau cakacaka vata vakavinaka.

1. Sa vovodea ka luvu wasoma na uciwai,
2. Sisi ni qele,
3. Lailai mai na tave kei na sasalu tale eso,
4. Na ika dina ka dau laurai e uciwai sa sega mai.
5. Wainimate ca mai nai qaqj sa vakamatea tiko na ika kei na sasalu e uciwai.

Na kena musulaki na veidogo era sa yali kina na sasalu - (na kena levu kei na kedra l wiliwili)

1. Sa lailai tiko mai na sasalu (qarau, ika)
2. Sa levu na waqa mai taudaku e ra lako mai qoli- 3. Sega na neimami waqa

1. Basuki na lewa vakavanua (qoli butako, basei, dainimati, duwa)
2. Na qolivi ni ika lailai
3. vukici ni vatu (delanicakau)
4. levu ni waqa
5. lawa (lawa vauvau ki na nylon)
6. qolivi vakasivia

Sega ni yaragi ni qoli, yali/ luvu/lecalika

4. NA VEIVEISAU E YACO E VOTUA ENA LIMASAGAVULU NA YABAKI SA OTI.

Ulutaga eso me vakasamataki

- *bula sautu ni vanua*
- *wiliwili ni lewe ni vanua*
- *vuli (primary/secondary/ university)*
- *qele (lisi/ veivakatorocaketaki)*
- *cagilaba/ualuvu/uneune*
- *bisinisi*
- *na cakacaka e rawa i lavo*
- *I vakarau/se walewale ni qoli*
- *Ka e laukana*
- *Levu ni dauqoli*

WASEWASE- Turaga ni vanua (Koro)

Ulutaga kei na veika e yaco	1950	2000
Bula sautu ni vanua a) Vuata b) Sevu c) Qele – vanua	a) Moli, jaina, uvi, sarau, vurai, tawa, kavika, vudi, b) tavioka, meleni, maoli, c) uto, ivi	Sa lutu nai wiliwili vuata kei na kakana, veivakatorocaketaki (lisi, dovu)
Bula ni Lewe ni vanua a) Lailai nai wiliwili b) Vale c) cina	a) Lailai na tamata (150) b) Vale vakaviti c) Tabu cagi	a) Tubucake ni wiliwili 700-800 b) Vale buloko se vale kau c) Livaliva
Qele	Levu na qele e teivaki Sega na lisi	Lailai (vuku ni sisi ni qele kei na lisi)
QoliQoli	-Qoli (vakavanua) me laukana -Lailai na dauqoli -Sega ni soli na laiseni -Waqa vakaviti (voce, vakalaca)	-Qoli vakatabaki dua me volitaki. -Levu na dauqoli (taukey kei na vulagi) -Idini, waqa, lawa, dainimati, compressor, gas (qoli butako), tutuva, bisinisi (vakalaiseni)

Ulutaga veika e yaco	40-50	51-60	61-70	71-80	81-90	91-2000
Cagilaba, ualuvu, uneune, dravuisiga	Cagilaba Waluvu Dravuisiga	uneune	waluvu	Cagilaba, ualuvu	Cagilaba , ualuvu Dravuisig a	Cagilaba (veitaravi) Ualuvu (veitaravi) uneune
Bisinisi	-1 sitoa -1 dinicavu -1 waqa -1 lawa	-2 -4 -5 -2	-3 -13 -13 - -1 lori	-3 -16 -16 - -2	-3 -16 -16 -4 -2	-4 -17 -17 -15 -2
			-Qoli (sega na kena vakavotukana) (baleta ni sega duadua ga na ka e qolivi)		-Sega so ni levu na tubu (waqa loma 28' ka 2 na idini)	-Levu na lusi. Dovulevu na dravuisiga kei na ualuvu
Cakacaka I lavo	Ta dovu Qoli Qasenivuli	<p>Timeline diagram showing arrows for Ta dovu, Qoli, Qasenivuli, ovisa, and nasi. Arrows indicate duration from the start of the period to the end of the period.</p>			Security/ Hotel	
			-Toso vinaka (levu nai lavo ena vuku ni kena sau lailai nai yaya)		-Toso vinaka	Toro sobu na I vakataged egede ni rawa I lavo
Vuli –primary, secondary, university				-80% secondary -7 qase ni -4 ovisa		-50% secondary -4 qase ni vuli -2 ovisa
Levu ni dauqoli			Lailai na dauqoli	Sa sivia na dauqoli (sa lailai na ka e qolivi)		

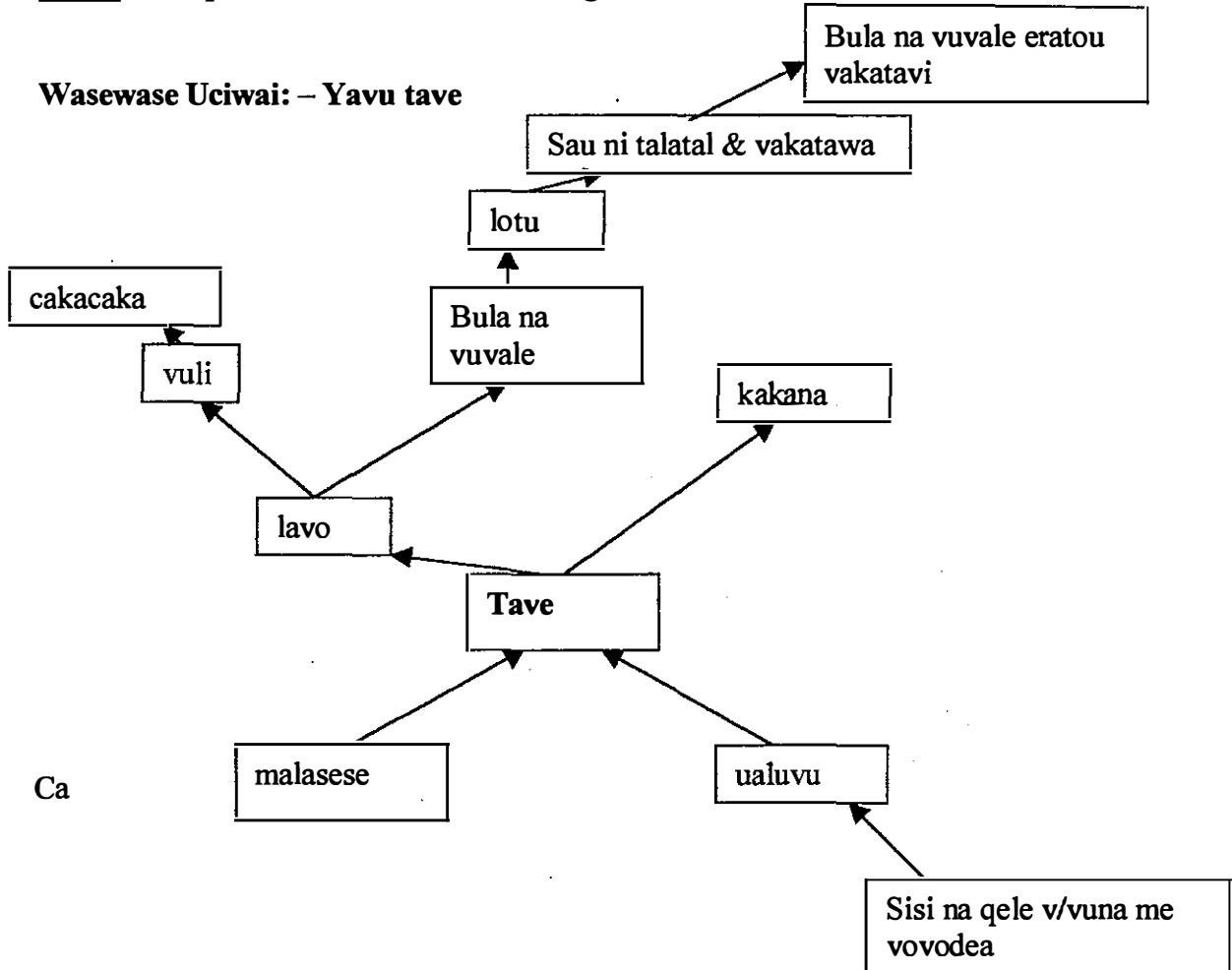
Levu ni dauqoli vakalaiseni	1992-1993	1994-1995	1996-1997	1998	1999	2000	
	1992-67 1993-50	1994-88 1995-72 Fijian-16 Indian-56	1996-75 Fijian-26 Indian-49	1997-61 Fijian-11 Indian-50	1998- 65 Fijian-10 Indian-55	1999- 73 Fijian-13 Indian-60	2000- 77 Fijian-14 Indian-63

6. NA VEISEMATI NI VEIKA E RAWA MAI NAI QOLIQOLI, SASALU NI WAITUI, NA VEIVAKATOROCAKETAKI RARABA E VOTUA, KEI NA KA E VAKACACANA NAI QOLIQOLI.

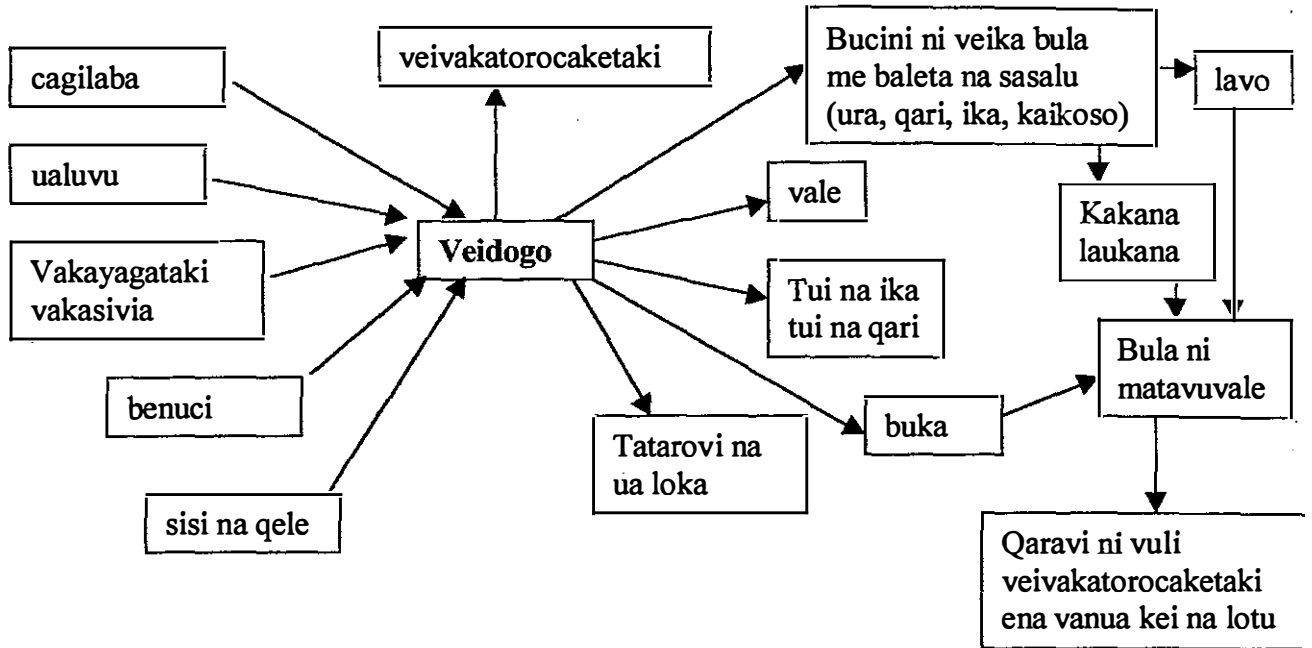
‘IMPACT FLOW DIAGRAMS.’

Yavu: Qoligoli e Votua, Qarau & veidogo, Tave e uciwai, Vuvale, Walu

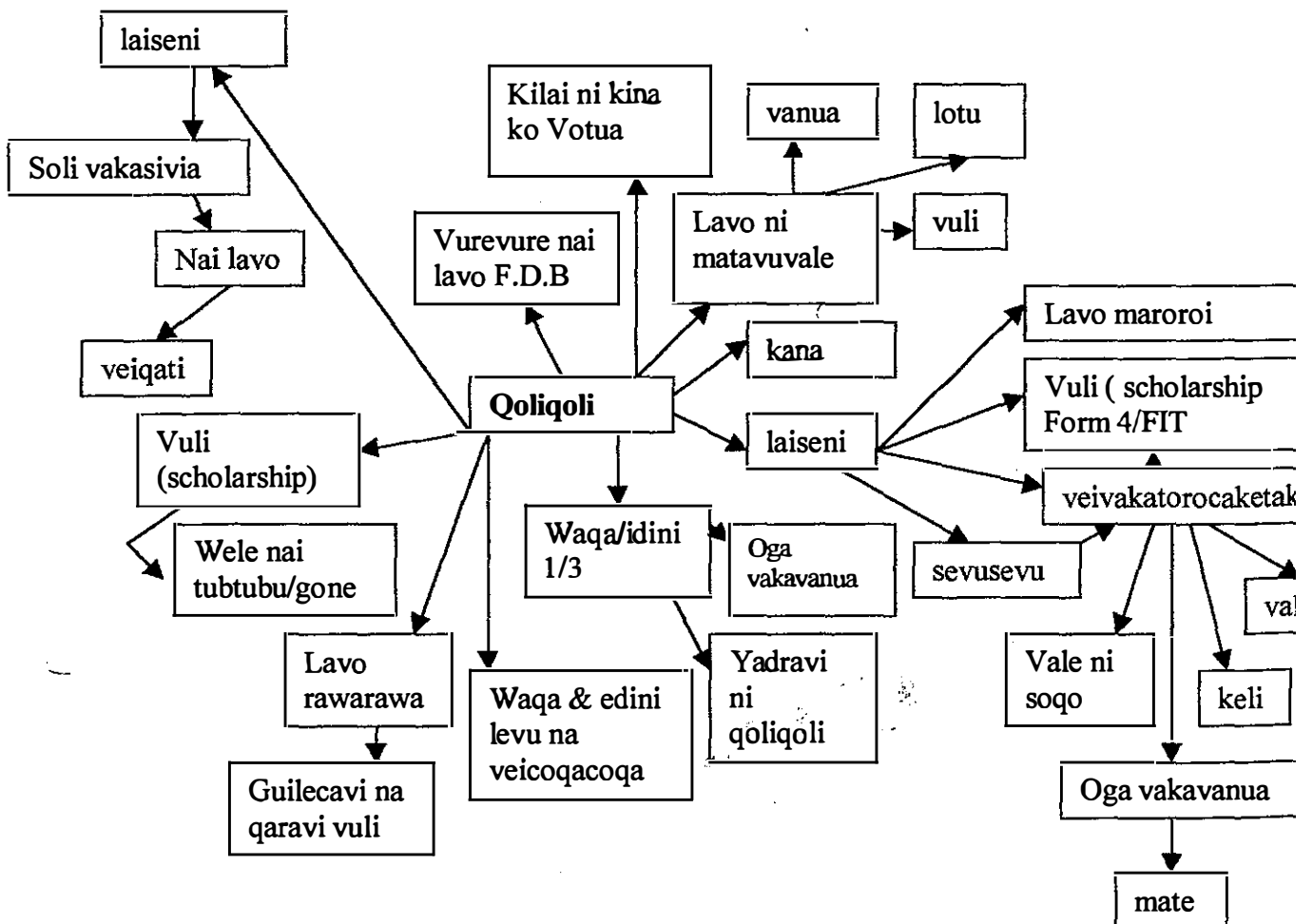
Wasewase Uciwai: – Yavu tave

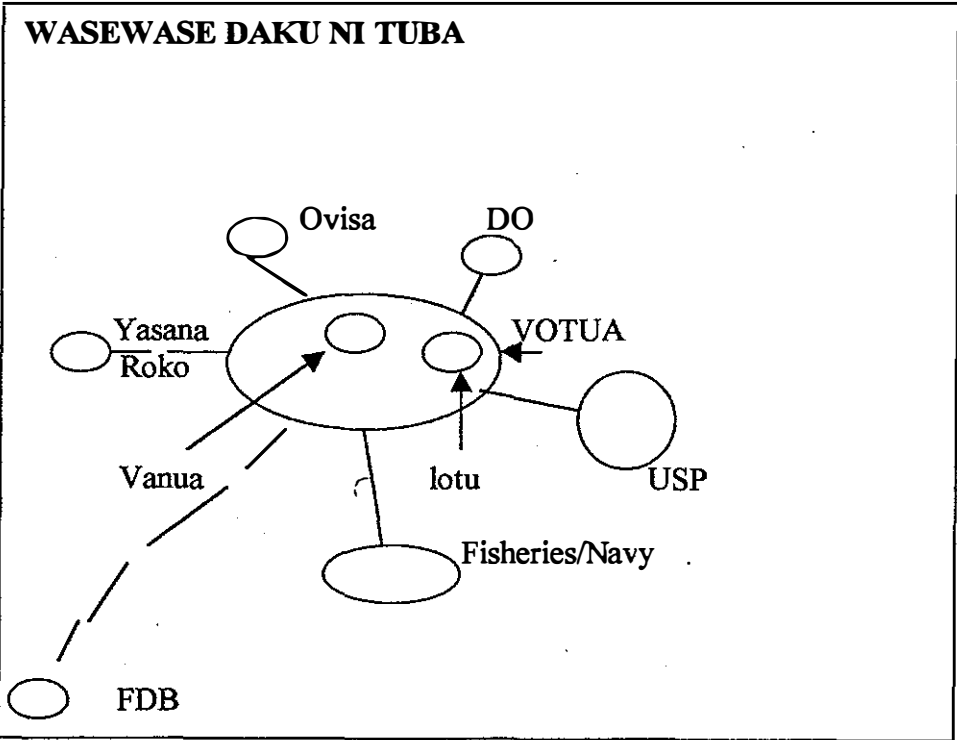
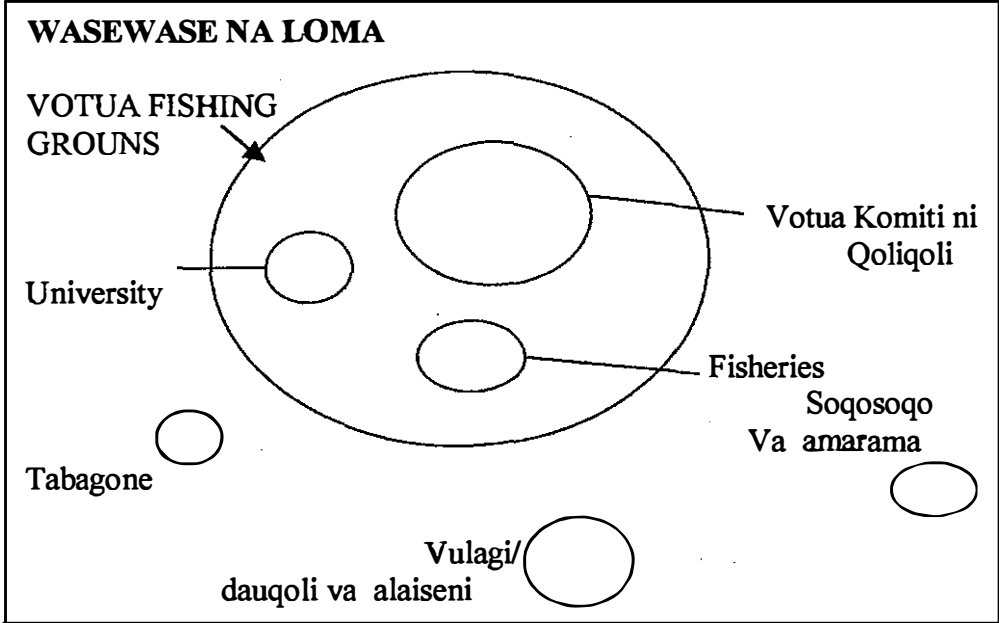


Wasewase Veidogo: Yavu Veidogo



Wasewase Cakau: Yavu —Qoliqoli e Votua.





8. NAI TUVATUVA NI VEIVAKATOROCAKETAKI KEI NA KENA TAQOMAKI NAI QOLIQOLI KEI NA YAU BULA E VOTUA

8.1 2001- 2010 VOTUA KORO MASTER PLAN

1. (Tubu) wiliwili ni lewenivanua : 10 years - 2,550 population
2. Qele - ALTA lease : 100 acres e na suka mai. Lease A & B 2,500 acres e na suka mai. Na qele e vakasukari mai me ra teivaka na lewe ni vanua e Votua.
3. Veivakatorocaketaki
 - a) Veivakavaletaki (Vakaoti)
 - b) Vale lailai (flush) kece
 - c) Vakata ni wai - Foot path
 - d) Kerei e na matanitu me dua mai drodro ni ualuvu
 - e) Qele vakarautaki
4. 4 na waqa ni qoli e taukeni mai na koro.
5. Ika rawa mai wai mai voli vei ira dauqoli vakalaiseni ka me qai volitaka ena makete na I soqosoqo ena Votua. Laurai na gauni sala me maketetaki kina I valagi (Kerei nai vakasala mai na Fisheries.) (Deep Freezer)
6. Vakabai kece na manumanu

8.2 Nai tuvatuva ni kena survey-taki na nodatou I qoliqoli.

Na leqa ka vakacacana tiko Na noda I yaubula se sasalu e Votua

- | | |
|-------------------------------|-------------------------------|
| 1. Qolivi sivia na I qoliqoli | 9. Biu kelekele |
| 2. Levu na waqa | 10. Duva |
| 3. Dainimati | 11. Benuci ni matasawa |
| 4. Qoli butako | 12. Benu mai nai qaqi ni suka |
| 5. Qolivi na ika la ai | 13. Ualuvu |
| 6. Lawa matalalai | 14. Lailai na qele |
| 7. Basei | 15. Manumanu sega ni vakaba |
| 8. Vuki vatu | |

TARO (LEQA)

1. E vakacacana tiko beka na cakau kei na veisasalu kara vakavale se vakararavi vakatabakidua ena veicakau na kena vakayagataki na dainimati, biu kelekele, vuki vatu, sivia na levu ni waqa ni qoli kei na duva.
2. E vakarusa tiko beka na ika lalai na basei?
3. E vakaleqa (poisoni) tiko beka na sasalu (tave, qarau) e uciwai kei na lewe ni vanua o Votua kara kania/ vakayagataka na veisasalu oqori, na kena benuci na wai (qaqi) kei na koro?
4. Ni vakalailaitaki na laiseni, e rawa ni da na raica tale na ika lelevu (walu, salala) e gusu ni wai?
5. E ra na tiko vinaka beka kina na vanua o Votua kevaka ena sautu tale nai qoliqoli?

Biological and Social SURVEYs are used to collect information to answer questions.

NA LEQA	NA VU NI LEQA	NA CAVA E SA VAKAYACORI OTI	NA CAVA E RAWA NI CAKA (WALI NI LEQA)	O CEIME CAKAVA	ENA GAUNA CAVA
Qolivi na ika lailai	<ul style="list-style-type: none"> ▪ Lawa matailalai sa vakayagataki ▪ Noda leca I ka ▪ Sa sega mai na ika kei na sasalu lelevu. 	<ul style="list-style-type: none"> ▪ E se sega ni dua na lewa vakavanua e tau se vakayacori ▪ Sa tiko na lawa ni matanitu (Fisheries) me baleta na levu ni lawa 	<ul style="list-style-type: none"> ▪ Yadravi na kena muri na lawa me baleta na levu ni lawa ni qoli e vakayagataki. ▪ Me vakabibitaki na nodra tiko na marama (tataga ika lalai vakalevu) e na bose vanua se veivosaki ni koro 	Lewe ni vanua	Tekivu qo ka lako yani
Lawa matai lalai	<ul style="list-style-type: none"> • Coko na ika yasewa • Volitaki tiko ga na lawa matalalai- Fisheries me raica. 	<ul style="list-style-type: none"> ▪ Tabu vakalawa ni matanitu ia ka sega soti ni bibi vei ira na lewenikoro 	<ul style="list-style-type: none"> ▪ Vagaqacotaki na kena vakatabui na soli ni lawa matai lalai ▪ Me vakatabui na kena vakayagataki 	<ul style="list-style-type: none"> ▪ Fisheries ▪ Komiti ni qoliqoli ▪ Lewe ni vanua 	1/1/01
Basei	<ul style="list-style-type: none"> • Mate vakaiyauyau na ika kei na qari lalai, lutu sobu na kedrai wiliwili. 	Tabu vakalawa ni matanitu, Komiti ni qoliqoli	Vesu na lawa, idini, waqa	<ul style="list-style-type: none"> ▪ Komiti ni qoliqoli, ▪ Fisheries 	1/1/01
Vuki vatu	<ul style="list-style-type: none"> ▪ Vaqara sasalu e.g. dri, dairo, qari, loliloli kei na so tale ▪ Sa sega ena dela ni cakau/vutika vuna nodra vaqau ena vuku ni vatu ▪ Vasua ▪ Na vanua e susu kina na ika ▪ Ua loka 	<p>Vakatabui na caka</p> <p>a) dri</p> <p>b) sucuwalu</p> <p>c) dairo etc.</p> <p>me vaka sa rokai rawa tu enai vola vakadonu ni vanua (vola tara)</p>	<ul style="list-style-type: none"> ▪ Me vakaukauwa taki na kena vakatabui na vukici ni vatu ▪ Tabu na cakau ▪ Na kena yadravi 	<ul style="list-style-type: none"> ▪ Komiti ▪ Lewe ni vanua ▪ Vakalaiseni 	Jan 2001
Biu kekele	<p>Me rawa ni kele na waqa</p> <ul style="list-style-type: none"> • Qoli, siwa, vakayagataki ni dainimati, vakaruru <p>Yavalata na vanua e susugi kina na ika kei na veika bula</p>	Sega	<ul style="list-style-type: none"> ▪ Taro vakasala mai vei iratou na Fisheries ▪ Biu eso na boyou e ka me kele kina na waqa. 	<ul style="list-style-type: none"> ▪ Komiti ni qoliqoli ▪ Dausiwa ▪ Lewe ni vanua 	Nikua

**10. Na cava sa lewai ena bosa vanua me baleta nai tuvatuva ni kena cakacakataki na kena Maroroi na Noda i yau Bula e Votua ni mai cava na vula ko Seviteba.
'Review of Action Plan'**

1. Qolivi sivia na i Qoliqoli?
 - Vakalailaitaki na waqa kina 30 – 40 maji na 77 (vaka laiseni ni qoli)
 - Toso cake na sau ni laiseni
 - Vakabiri ka veisoliyaki nai vola e baleta na lewa ni vanua oqo me musu mai na laiseni mai na 77 kina (30 – 40) e tauni kei na vei valevale era ra vakalaiseni tiko.
 - Na 30-40 na laiseni ena soli ga veira na kere laiseni yani kara gadreva dina na qoli me nodra l vurevure ni l lavo. Soli ga vei ira na rawa i lavo ga mai wai. O ira era vaka qele ka dauteitei kei ira na vakabisinisi (taxi) ena sega ni soli.
2. Basei?
 - Basei kei na Qolivi ni ika lalai e na sogo ena yabaki mai oqo, 2001.
3. Lawa?
 - Tabu na biu lawa o ira na Vakalaiseni ena yabaki 2001.
4. Dainimati, Duba/ Compressor/ Qoli Butako?
 - Vakatabui (Veiyabaki)
 - Kerei na Navy kei na Fisheries me veitokoni ena kena vakaqacacotaki na yadravi ni qoliqoli mai veiira na qoli butako, na vakalaiseni kei nai taukei no qoliqoli.
5. Na vuki vatu / Biu Kelekele??
 - Vakatabui
6. Lailai na Qele?
 - Soli tiko na 2001 - Grace period
7. Benu mai na i Qaqi
 - Sepiteba 12 – 14 era laurai ni ra ciri tu e uciwai na ika mate e rauta ni 50kg ika (lalai/levu) ka kilakasamitaki ni wai ca mai nai qaqi e vakavuna na nodra mate. Sa vakaraitaki na kudru ki veiiratu na FSC e Ba kei na tabana ni Fisheries.
 - E ra laurai talega na qari mate e na veidogo (35)
8. Manumanu sega-ni vakaba
 - Eso bulumakau, vuaka sa qai vakaba.
9. Benuci ni Matasawa
 - Sasamaka vakoro – e na September
 - Bulu na palstic

<p>4. E vakarusa tiko i na sasalu e cakau kei na cakau na</p> <ul style="list-style-type: none"> • Dainimati • Biu kekekele • Vuki vatu • Levu ni waqa • Soli sivia (laiseni) • Lawa qoli (siwa, basei) • Wai gaga (FSC) • Benu (Ba Town) • Vakarusai ni veidogo 	<p>veidogo. Me ka lelevu na ika, kei na qarau.</p> <p>Ena loma ni 7 yabaki me vakatabui kina na vuki vatu, dainimati, biu kekekele ena I qoliqoli e Votua me na bulabula tale mai na cakau/lase, laurai tale mai na ika lelevu kei na sasalu sara yali yani ka tubu cake ena 75% na levu ni ika kei na sasalu.</p>	<ul style="list-style-type: none"> • Vasua, dri, tero, vonu, vula, qarau, ika (bokola, kawago, sabutu, silasila, gusula, dole, vilu), dri. lase (vakavale kina na urau, kuita, ika). 	<ul style="list-style-type: none"> • <i>Urau,</i> • <i>Kuita</i> • <i>Bokola</i> 	<ul style="list-style-type: none"> • Protected Reef – Yarawa • Harvest Reef - Nasasi/Cakau Levu 	<ul style="list-style-type: none"> • Underwater visual census count of Urau, kuita, bokola and other new species-line Transect • % substrate cover of coral species and diversity. (Manta tows, Belt transect) • Permanent quadrats/ transects for coral growth. • Still Photos.
<p>5. Ni sautu nai qoliqoli, e ra na tiko vinaka beka kina na levu ni vanua o Votua/Nawaqarua kei Natutu?</p>	<p>-Ni oti e lima na yabaki mai oqo, me sautu tale mai nai qoliqoli e Votua, toso cake nai vakatagedege ni bula, levu se toso cake nai lavo e rawata na veivuvave yadudua ka me levu na veivakatorocaketaki ena Koro (bisinisi, vuli vinaka). Vanua na nomu I yau, nomu kalou, nomu tiko vinaka.</p>	<ol style="list-style-type: none"> 1. Levu mera vuli vinaka ka levu na lewe ni vanua e ra vuli ena maroro ni I yau bula. 2. Yalomatua ka veilomani na lewe ni vanua. 3. Veivakatorocaketaki ena koro kei nai vakatagedege ni rawa ka vakailavo. 4. Taqomaki na ika, & sasalu. Komiti ni qoliqoli me dau vakadikeva vakawasoma na vanua ka vakatabui. 	<ol style="list-style-type: none"> 1. Veivakatoro caketaki ena koro kei nai vakatagedege ni rawa ka vakailavo.--- --Sautu na vanua o Votua ni mataka 	<ol style="list-style-type: none"> 1. Votua, Nawaqarua, Natutu: kei na Dauqoli 2. Cakau o Yarawa (sogo kece) 3. Veidogo kei na Loma --Togovuto I Yata. (sogo kece) 	<ul style="list-style-type: none"> • Household/questionnaire survey for socio-economic study annually. • Catch effort of <i>garau, ta, ulavi and dri</i> at harvest sites (Togo Votu I Ra and Nasasi reef) for impacts of Protected areas (Spillover).
<p>6. Ni vakalailaitaki na laiseni, e rawa ni da na raica tale na ika lelevu (walu, salala) e gusu ni wai?</p>	<p>Me rawa ni vakalesu tale mai na tuvaki ni qoliqoli - eliu - Me dikevi ni oti na vei ya 12 na vula</p>	<ul style="list-style-type: none"> • Levu ni laiseni e soli. • Laurai ka levu tale mai na sasalu ka sa yali tu yani (salala, walu, kabatia etc.) 	<ul style="list-style-type: none"> • Laurai tale na sasalu ka sa I yali tu yani (salala, walu, kabatia etc.) 	<p>Na Yalava ni qoliqoli e Votua.</p>	<p>Landing Survey of important fish (eg kabatia) caught.</p>

**11.0 Qoliqoli e Votua: Community Marine Resource Monitoring Plan.
(Draft made from questions, objectives and indicators)**

QA)	TAKETE/NAKI NI SASAGA OQO.	DUSIDUSI	DUSIDUSI VINAKA DUADUA	VANUA ME VAKADIKEVI	PROPOSED MONITORING METHODS
carusa tiko ilu e na siviva?	-E na loma ni 5 na yabaki me vakatabui na cakau o Yarawa kei na veidogo e Toka Vuto I Yata me ra susugi kina na veisasalu, e na sautu tale mai na nodatou I qoliqoli.. -Ena loma talega ni lima na yabaki oqori ena tubu nai wiliwili ni qarau, dairo kei na ikaena 75 %.	<ul style="list-style-type: none"> Cakau/Naloma - e ka lelevu ka levu tale mai na qarau, ika (ulavi, ta, kakarawa) ika dina (kawakawa, sabutu) vasua, dairo, urau, lumi Na veidogo – Era kune tale mai na ura, tave, kei na qarau lelevu. 	<ul style="list-style-type: none"> Cakau-dairo & ulavi, ta. Veidogo – qarau 	<ul style="list-style-type: none"> Cakau: Protected Area - Yarawa Harvest Area- Nasasi Veidogo: Protected area: Toka Vuto I Yata.– Harvest Site: Toka vuto I ra 	<ul style="list-style-type: none"> Visual census (point count) of <i>dairo, ulavi, and ta also itiviti, kakarawa, davui, bula keina vasua.</i> Belt transect/quadrat of qarau (qarau holes). <i>In situ</i> catch efforts surveys of <i>dairo and qarau</i> harvested. Paired survey: Tabu and harvested sites.
iea tiko cacana na ko na ika, ve kei na vai na wai qaqi kei).?	E laurai ni sa yali mai na ika kei na sasalu kana dau kunei ka qolivi ena uciwai e liu. Ena loma ni 7 na yabaki mai oqo ena tovolei me vakagoleitani kece na benu mai tauni kei nai qaqi ka me savasava na wai ka ra lesuva tale mai na ika kei na sasalu sara dro tani e uciwai ka 50 % na tubu ni kedra wiliwili. 90% pollution reduction by 2003.	<ul style="list-style-type: none"> Kua ni laurai na ika, qarau, tave se sasalu mate e uciwai. Me savasava na wai ka mera kune tale na ika me vaka na <i>kanace, waiu e uciwai.</i> 	<ul style="list-style-type: none"> Dikevi na savasava /poisoni mai na I qaqi ena wai kei na tave e Uciwai, qarau e veidogo Koro – savasava 	<ul style="list-style-type: none"> Wai: Ba river Qarau: Togovuto I ra Togovuto I Yata Veidogo e matasawa. Tave : Nadranu Wavuwavu Savasava na matasawa kei na bili ni koro 	<ul style="list-style-type: none"> Water quality along the Ba river to mouth of the river. Chemical analysis of tave, qarau, & ika before and after sugar cane crushing season. Estimate % rubbish cover along Matasawa monthly. Catch effort of tave, qarau and kanace from the river.
tiko isalu	E na loma ni lima na yabaki mai qo ni sa vakaukauwataki na kena tabu na basei e na susugi ka sega ni vakasosataki na ika lalai, qarau kei na sasalu e bati ni	<ul style="list-style-type: none"> Me na lelevu ka levu na <i>qarau, kanace, nuqa, damu</i> ena bati ni veidogo. 	Qarau	<ul style="list-style-type: none"> Na Koro/vanua me dikevi – Nawaqarua, Votua & Natutu. 	<ul style="list-style-type: none"> Landing surveys (population and weight) of qarau harvested per month, every 6 month.

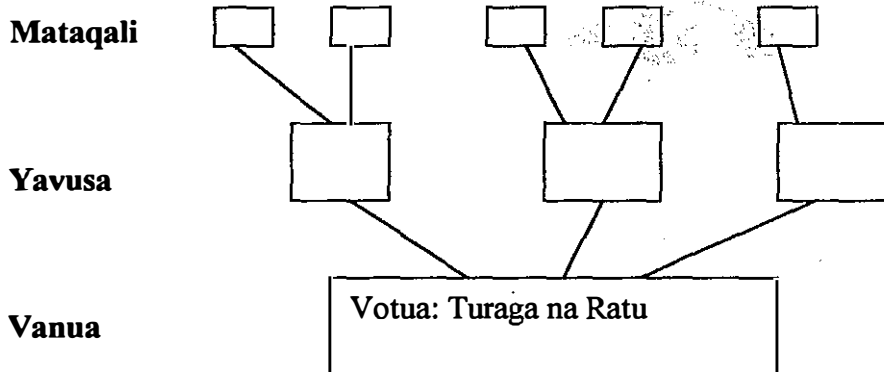
13. VANUA O VOTUA

'Na rokovi ni vanua kei na kena I yaubula, oka kina nai qoliqoli kei na kena sasalu, ka vakakina na qaravi ni sasaga sa tauyavu oqo e na sega ni MANA ke sega ni dei tiko na yavu ni vanua o Votua. Na sasaga oqo e baleti keda nai taukei ni qoliqoli e Votua ka vakauasivi o ira na noda kawa mai muri, ka dodonu meda veitauri liga ka dua vata ena sasaga oqo.'———*Alivereti Bogiva, FAB*

- Taro:** a) E na rawa vakacava ni dei na vakatulewa, ni yali, nai mudumudu ni lewa?
b) A cava me caka me rokovi kina na vanua kei na kena I yaubula, oka kina nai qoliqoli kei na sasalu?

Vuvale (750)

Tokatoka



14.2 Paired Sampling:

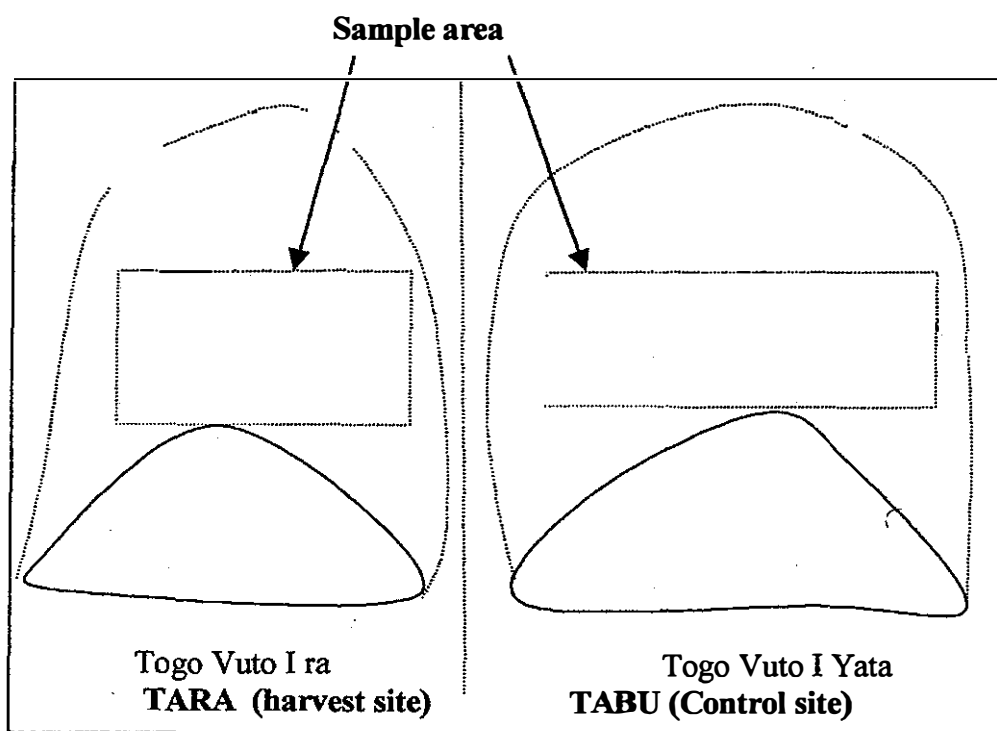
Kevaka eda via kila nai tuvaki kei nai wiliwili ni qarau e veidogo, se na vakacaca ni basei, ena vakadikevi e rua na vanua ni qoli.

- Tara se qolivi tiko (Harvest site) = Toka Vuto I Ra
- Tabu (control site) = Toka Vuto I Yata.

Ena veidutaitaka vata na macala ni survey e rua na vanua oqo, ka na rawa ni vakatakila veikeda nai taukei ni qoliqoli na veisau e yaco tiko ena gauna ni vakatatabu ka vakakina na mana ni sasaga oqo.

To see if our qarau population is healthy or over-harvested (caused by basei), we sample from two paired sites. This way we can compare the harvested population with the control population to see if there is a difference, and if so how much of one. It can also tell us whether our management actions (MPA's as replenishment zones) is effective or if the dauqoli is still using destructive fishing methods such as basei.

Na vanua e navuci koto.

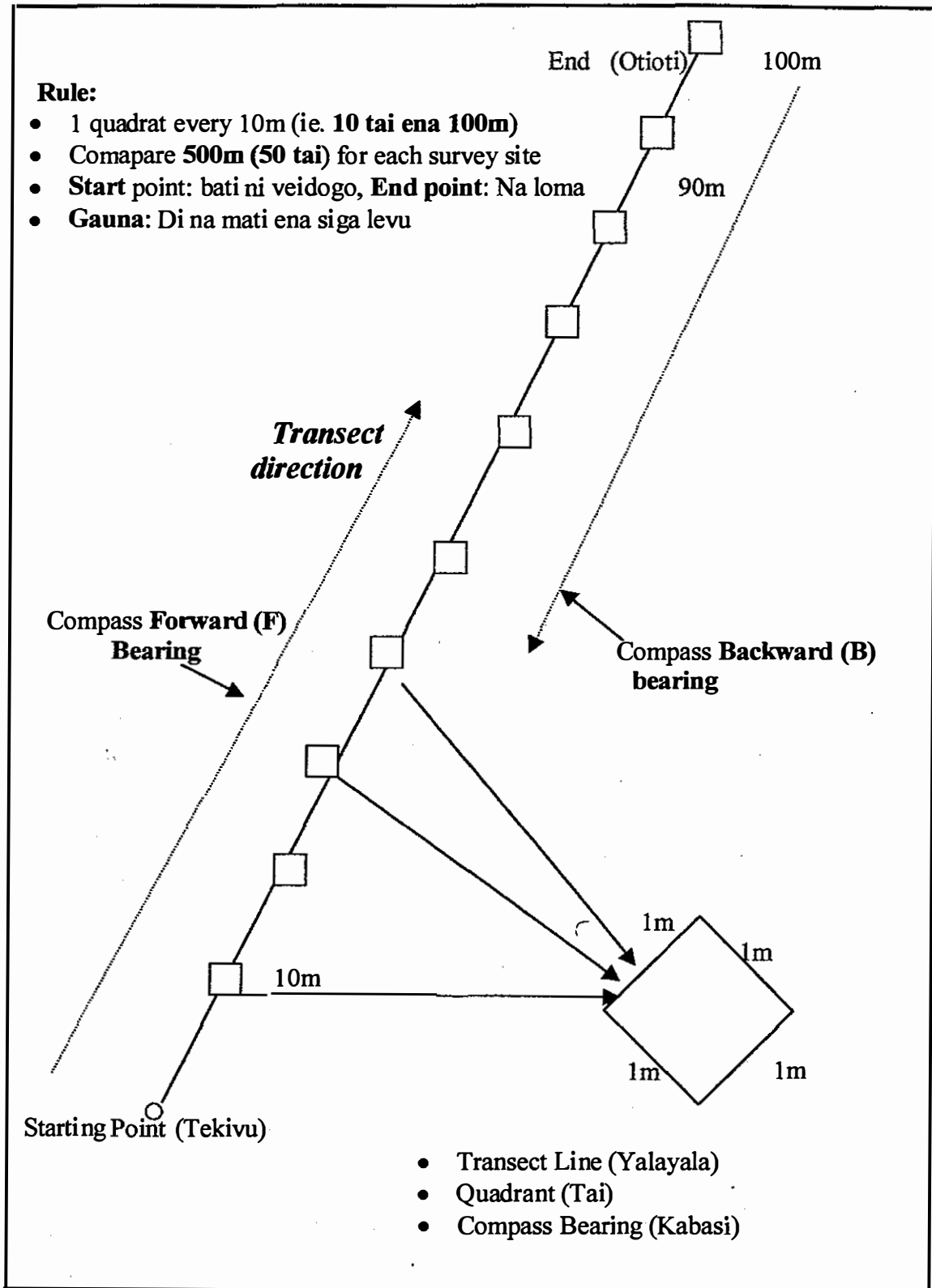


Control site (Replenishment zones)

‘As resource population inside the control area grows, some resources must move out to harvested area to look for food or for space.’

14.4 Line Transect Method (Survey Techniques)

(100m Total length)



15.0 Monitoring and Evaluation Cycle.

