Training Report no. 5 / 4

South Pacific Regional Environment Programme

Environmental Impact Assessment Training in the South Pacific Region

Meeting Report

Suva, Fiji
10 - 14 August 1992

With technical and
financial assistance from the
Asian Development Bank (ADB),
United Nations Development Fund (UNDP),
United Nations Environment Fund (UNEP),
and the World Conservation Union (IUCN).

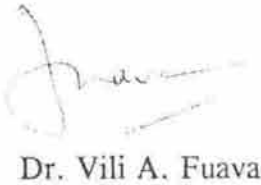
FOREWORD

It gives me great pleasure to provide an introduction to the Meeting Record for the Environmental Impact Assessment Training Course held in the Republic of Vanuatu. This course was the second in what will be a series of EIA Training courses conducted by the South Pacific Regional Environment Programme (SPREP) in the Pacific Islands.

These courses address a fundamental issues for Pacific Island countries; that of how to successfully integrate environmental considerations into economic planning. Too often such considerations have been seen in a negative light, as a break on economic development.

Thankfully, this perception is changing and decision makers in the Pacific countries are increasingly aware of the need for careful and long term environmental planning. Environmental Impact Assessment is an important tool in bringing this about. It is important that EIA be applied in an appropriate manner in the Pacific. EIA must be relevant to the social and political systems in Pacific countries and it must be simple and easy to apply. It is not an academic exercise.

These EIA training courses build on the important work carried out by SPREP in the Pacific with the development of National Environmental Management Strategies. These Strategies are being developed through the RETA (Regional Environment Technical Assistance) project and the NEMS (National Environmental Management Strategies) project. These important projects are funded by the Asian Development Bank, the World Conservation Union (IUCN) and the United Nations Development Programme UNDP). I would like to thank those agencies for their generous support. I would also like to thank the United Nations Environment Programme (UNEP) for their generous support of this EIA Training Programme.



Dr. Vili A. Fuavao
Director
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1. Introduction

The course was held at the Institute of Social and Administrative Studies facilities at the University of South Pacific in Suva, Fiji, between 10-14 August. The course was divided into two sections, with the first day being a senior officials meeting to review EIA procedures in Fiji, and the remaining four days being a course for government officials on managing EIAs.

There were five resource people to help put on the course:

Komeri Onorio, MRRP.	EIA Officer South Pacific Regional Environment Prog. Apia, Western Samoa
David Hill, M.Sc.	Regional Manager, Ministry for Environment, Auckland, NZ
Alisdair Hutchison, M.Sc.	Regional Manager, Ministry for Environment, Christchurch, NZ
David Green, Ph.D.	Acting Director Institute of Applied Sciences University of the South Pacific Suva, Fiji
Remi Odense, M.Sc.	Manager, Environment Unit Institute of Applied Sciences University of South Pacific Suva, Fiji

The EIA course was at a particularly opportune time since the National Environment Strategy had just been circulated the week before for comment. This strategy provides recommendations on the future course of environmental affairs in Fiji, including recommendations on procedures for environmental impact assessement of development projects. Both the senior officials meeting and the four-day course were, perhaps as a consequence, well attended. The two portions of the EIA course are discussed separately below.

2. Senior Official Meeting

2.1 Attendees

The senior officials meeting was chaired by Mr. Stuart Chape, head of the Environment Management Unit, and attended by the following senior officials:

Hon. Joeli Kalou	Minister of State for the Environment	
Andrew Cope	Principal Legal Officer	Attorney-General's Office
Josefa Ratuvuku	Deputy Secretary	Fijian Affairs and Rural Devel
Mitieli Bulanauca	Acting General Manager	Native Lands Trust Board
Patrick Spread	Director	Central Planning Office
Kesaia Tuisawau	Principal Planning Officer	Central Planning Office
Uraia Lesu	Chief Health Inspector	Health
Baskaran Nair	Deputy Secretary	Housing and Urban Develop
Stuart Chape	Principal Environmental Planner	Housing and Urban Develop
Peni Gavidi	Acting Director	Town and Country Planning
Mohammed Jaffar	Assistant Director	Lands
Vuetasa Buatoka	Director, Roads	PWD
Goeff Green	Director, Water and Sewage	PWD
Jamnadas Kevat	Director, Architecture	PWD
Sekove Cama	Director, Marine	PWD
Alf Simpson	Director	Mineral Resources
Nemani Buresova	Deputy Secretary	Primary Industries
Atunaisa Kaloumaira	Director, Drainage and Irr.	Primary Industries
Ram Swarup	Acting Conservator	Forestry
Lavisai Seroma	Envir. Education Officer	Forestry
Sarita Mani	Acting Director	Tourism
Devendran Kumaran	Director	Energy
Rajendra Prasad	Acting Director	Meteorology
Biren Singh	Director	National Trust
Kate Hindle	Acting Director	Museum
Viliame Volavola	Acting Director, Devel.	Housing Authority
Leba Savu	Chairperson	SPACHEE
Ratu Varani Rayawa	Liaison Officer	Placer Exploration

2.2 Agenda

The meeting began with a formal welcome by the Minister of State for the Environment. After the initial welcome was complete, Dr. Green reviewed the meaning of EIA, its history, and its role as a management tool. Mr. Chape discussed the present status of the EIA process in Fiji, and Dr. Watling reviewed the proposed new EIA procedures, including the establishment of a Department of Environment and an Environment Commission. David Hill discussed the present EIA procedures in New Zealand. The remainder of the day's discussions centred on reviewing these institutional procedures, and suggesting improvements that might be made to the proposed procedures.

2.3 Summary of Discussions

Approximately thirty EIAs have been done in Fiji. Most EIAs have been for private developments or for aid projects, but a couple have been done voluntarily by government agencies (eg Primary Industries). The voluntary nature of government participation in environmental assessment is a major weakness of the present system, and the uneven enforcement of environmental assessment on private development is another weakness. Delays in screening, scoping and reviewing EIAs as a result of undermanning in the Environmental Management Unit were also mentioned as a problem. The lack of legislative support for the EIA process was described as an underlying weakness in the present system.

The new system suggested by Dr. Watling was reviewed in discussion groups and met with general approval, with minor modifications suggested by each of the three groups.

2.4 Assessment of Senior Officials Meeting by Resource Staff

The senior officials meeting was an unusual cross-section of the government bureaucracy at a senior level, and the discussions were generally positive and accepting of environmental assessment as a standard management tool. The strong attendence and the high level of participation by the attendees made this a rewarding day for the resource staff. We felt that the senior officials meeting went well, and that the concept and the practice of environmental assessment had been strengthened in the Fiji government. About a third of the senior officials were sufficiently interested to return on the last day of the four-day course to attend the closing function.

3. Four Day Course on Managing EIAs

This was a well-attended course with representation from all the Departments impinging on the environment, and with some geographic representation from the four districts of Fiji. The twenty-eight participants are listed below:

3.1 Attendees

Semisi Naivakasoro	Senior Project Officer	Lands
Mesare Senibulu	Senior Surveyor	Lands
Nitya Reddy	Senior Surveyor	Housing
Luke Rekomokoti	Senior Surveyor	Town and Country Planning
Maraia Ubitau	Technical Officer	Town and Country Planning
Epeli Nasome	Sen. Envt. Planner	Env. Management Unit
Chris Marlow	Principal Engineer, Infr	Infrastructure and P.U.
Paula Baleilevuka	Sen. Eng. (Roads)	Infrastructure and P.U.
Manasa Niubalarua	Div. Health Insp.(E)	Health
Isimeli Masi	Div. Health Insp.(C)	Health
Gyan Prakash	Health Insp.	Health
Netava Bakaniceva	Senior Land Use Planner	NLTB
Mesake Senibulu	Senior Surveyor	Lands
Henry James	Ports Engineer	Ports Authority
Bhaskar Rao	Assistant Director	Mineral Resources
Peter Walker	Principal Eng., Mines	Mineral Resources
Maleli Naiova		Mineral Resources
Joe Kanabicibici	Div. Forest Officer (W)	Forestry
Lemki Lenoa	Div. Forest Officer (N)	Forestry
Amera Tuisawau	Div. Forest Officer (S)	Forestry
Anare Vuniwai	Div. Planning Officer(N)	Fijian Affairs and Rural Dev.
Josefa Matau	Research and Info.	Fijian Affairs and Rural Dev.
Isoa Korovulavula	Co-ordinator	SPACHEE
Kerrie Strathy		SPACHEE
Sefa Nawadua	Engineer	Primary Industry
Rohit Autar	Graduate Trainee	Energy
Makereta Sauturaga	Scientific Officer	Energy
Ed Lovell	Biologist	Biological Consultants Ltd.

3.2 Course Description

The course consisted of the following main lectures:

- Contents of an EIA and Slides (David Green)
- Social Impact Assessment (David Hill)
- Physical/Biological Impact Assessment (Remi Odense/Ed Lovell)
- EIA Process in New Zealand (David Hill/Adisdair Hutchison)

The lectures were followed by an exercise in which the participants were divided into groups of three or four. Each group was given a different Environmental Impact Assessment report, an actual report from Fiji, to review and comment upon. Seven EIAs were reviewed: a sawmill, an irrigation project, two resorts, a logging operation, a fish cannery expansion, and a marina.After having a period of time to review the EIAs, the participants in each group assumed roles: one as the developer, one or two as consultants, and one as a government official reviewing the EIA and making a decision on whether or not the project should go ahead.

The review of EIAs was followed by case studies in which the participants actually conducted an EIA. The participants broke into three groups, and each group conducted a different EIA. The case studies were:

- A new low-income housing development which is just underway through the Fiji Housing Authority.
- A controversial road bypass at the village of Korotoga on the Coral Coast, with the proponents being PWD, and the Reef Resort.
- A major (multi-billion dollar) proposed copper mine at Namosi, Veti Levu, with the proponent being the Canadian company Placer Mines.

The eight or nine participants in each group visited the site on Wednesday afternoon, and interviewed the developer and concerned groups. On Thursday they prepared a point form EIA, interspersed with a video and presentations of EIA reviews from the previous day. On Friday each group was divided in half, of which one half assumed the role of objectors to the proposed project, and the other half assumed the role of proponents. Three tribunals were enacted to review the EIAs, with other course participants assuming roles in the tribunal, and acting as a participatory audience. The tribunal listened to the proponent and his consultants describe the project, its environmental impacts, and the mitigating steps that were to be taken, listened to the objectors, and allowed questions from the audience. At the completion of each tribunal, the chairman of the tribunal gave a decision on the project's environmental assessment. One resource staff member was assigned to each EIA, and at the completion of each tribunal, gave his assessment of the EIA and the tribunal's decision.

The final tribunal was also attended by senior officials returning to attend the closing of the course.

Resource material for the course consisted of the EIA booklet handed out to each participant, about fifteen EIAs from Fiji and elsewhere, a variety of books and reference materials, a brief slide show, a set of videos, and a set of posters which were used at the meeting and distributed to participants to use in their offices.

3.3 Assessment of Course by Resource Staff

The course went very well, from the point of view of the teaching staff. There was excellent participation, and the EIA reviews and the case studies were conducted vigorously Communication was not a problem in general, with all participants being fluent in English Logistal support for the case studies was provided by the Environment Management Unit, and by a variety of other government departments. The venue at the Institute of Social and Administrative Studies, University of the South Pacific, was excellent. The various services such as teas, lunches, copying, telephones, and presentation equipment were provided flawlessly.

3.4 Assessment of Course by the Participants

The course was formally assessed by the participants using a standard form. The aspects of the course were scored on a scale of 1-10, with 1 being good and 10 being bad. Average scores are shown, as are all the comments made.

The course booklet: Score of 2.2 (1=excellent, 10=awful)

a) O.K.
b) More details on how to go about, and give important points on the physical and social impact assessment in the booklet (in this course it was spoken very quickly), we didn't get time to note anything down.
c) Pictorial examples, maps, illustrations, etc., would be helpful to enhance ones image of the picture and examples given.
d) Hope some copies can be made available to us in our various field of interest.
e) Clear, brief summary of the required contents of an EIA report - easy to follow.
f) Need more booklets.
g) The booklets provided are good but we could also do with EIAs that have been refused for information.
h) Do a better job - bind it.
i) The materials would have been of greater use if time was extended.
j) An excellent brief on the EIA process.
k) Expand these.
l) Include some case study in the booklet.
m) It was definitely worth the effort to include local examples.
n) The booklet is excellent but it needs some actual examples on how ecological and biological surveys are done. This particular survey may have a standard way so I think it is important to at least show some examples.
o) Description on the present health studies of the community affected as to current environment characteristics to be used as a preventive health guideline when development commences operation.
p) If this booklet be followed and implemented by Fiji Government.

Lectures: *Score of 3.0*

Contents of an EIA and slides (David Green)
The EIA Process in Fiji (Stuart Chape)
The EIA Process in NZ (David and Alisdair)
Social Impact Assessment (David Hill)
Physical Impact Assessment (Ed Lovell and Remi Odense)

a) Notes on lectures 3-5
b) Okay
c) The above resource personnel came up with very good materials and I am thankful to them.
d) Physical impact assessment got a bit too carried away. Remi: too wide an area with too much information in too short a time. Ed: a bit too technical otherwise very interesting.
e) Well presented and simple.
f) Social and physical impact assessment could have been dealt better by including going through samples of 1-2 case studies rather than in general form.
g) Physical impact speakers lost quite a few of us; they need visual aids.
h) There would be a need to involve a lot of experts in EIA in the next workshops eg NSR consultants.
i) Use of slides needs more examples and not concentrated only on reef and coral.
j) It is perhaps a bit condensed - maybe it should be spread over 2 days instead of 1.
k) Continue as you have done.
l) For Stuart, David Hill written material would have helped considerably. For Remi and Ed: some variations or excluded areas from the written material given.
m) Handouts or notes could have made things more simple especially for lectures 3-5.
n) It seems that lectures tend to be quite fast and sometimes it is quite hard to follow. On the whole it focussed clearly on the main issues.

o) All are good but the practical implementation of the EIA studies promptly in Fiji should be urgent.
p) If other countries like Australia, America also submit their experiences. Have a wider knowledge rather than NZ.
q) Very good - easily understood.

Exercise : Review of EIAs Score of 2.7

a) However, more time should have been given.
b) It is agreed that this is actually an effective learning method.
c) More time should be allocated.
d) Puts us into the shoes of those doing the audit on EIA's. Also points out hings that should be done and other things that could be done.
e) Need time to review. Prefer that this be handed out well before review group discusses the issue. This will enable the review group to be brief and to the point during discussion.
f) Need more time for group discussions.
g) Found this of good practical use, brought out actual problems - case h histories.
h) Very useful and educational.
i) Very informative, educating as we are able to review various industries while would normally be not associated with.
j) More time should be given to cover the other reviews so that we are familiar with the process of EIA's in other types of developments.
k) This is the first exercise of its kind that we have come across. I feel more time is required to do an in depth study.
l) Minimal guidance given - assistance could have helped target issue. Presentations a little too drawn out.
m) Visits to actual sites could have made it more realistic. May be for this one it would be impossible given the location of some but may be a future course possible site/projects close by would be identified.
n) More time and exercise may be more beneficial when doing this EIA exercise.
o) No comment
p) Reviews should have a firm and permanent ties between the Developer, Contractor and Government. Stricter measures to be presented to court for implementation of the contract agreements.
q) More time should be spent on this.

Exercise: Case Studies Score of 1.7

a) Please give us a lesser complex problem next time for a case study (Korotogo bypass)
b) Once again it is agreed that going into the field and undertaking a practical exercise is an effective learning experience.
c) Interesting but not enough time was allocated.
d) More case studies to be taken up by participants so that the areas of weaknesses could be improved.
e) Very interesting. Having people play roles was a good indicator of what happens in real life. Exposed me to other points of view.
f) A very good learning process and participation for good submission group members should co-ordinate well.
g) Trips to Namosi and Korotogo should leave at 7.00 am to enable course participants to talk with so many people at different localities seeking their views on the proposed project.
h) Best part of course, brought out difficulties of doing an EIA and public acceptance, acceptance of tribunal, etc
i) The case topics chosen are good since they cover current issues. Would have been better with one on tourism as this is one of the main developments in Fiji.
j) Yes, very high value: there should be more.
k) We should be given the whole picture and expectations before field work/trips. In the two case studies, the focus of the case studies was changed: we were told one thing before the field trip or exercise, another after.
l) Time shortage was a factor.
m) Need more time to study project, evaluate as a group before presentation.
n) Perhaps more time is required for field studies - at least a day.
o) Time was always a constraint but just manageable.
p) It is good that case studies are carried out on real projects. I suggest that meetings with the actual people (community) affected should give clear picture which would help in our submission.
q) Similar to 3 but is extremely valuable exercise.
r) The case studies were good but sufficient time is needed to really look into the problems or issues in relation to the various EIA studies.
s) A good practical exercise. Need to discuss realties and not just a single answer. Practical answers.

The goal of this workshop was to improve the participants knowledge of the contents and components of an EIA, the advantages of EIA as a management tool, the process by which EIA is conducted in Fiji and elsewhere, and the management of EIAs (screening, scoping, reviewing, monitoring, enforcement).

- *Do you think that the workshop accomplished these goals to your satisfaction?*
- *Do you have any suggestions on how to improve the course, so that it meets these goals better?*

a) I think not enough time on enforcement.
Suggestion : Not until the environment strategies statement is put into place.
b) Mostly not
Suggestion : Mentioned in question 1 of this assessment form.

c) Yes
Suggestion : Possibly the utilization of audio-visual (videos) material could assist in getting the point across.
d) Yes
Suggestion : Allocation of more time to field/case study.
e) Yes
Suggestion : Further extensive training courses required.
f) This workshop has been thoroughly satisfactory.
Suggestion : Would be good if possible or if finances allow to keep the participants accommodated together. This would stimulate more time for discussion informally which is often more productive.
g) Yes
Suggestion : Need more time ie course duration period.
h) Yes
Suggestion : To be held at divisional levels. Most of the projects are implemented at divisional or district levels and it is important that representative from all sectors are represented.
i) Yes
Suggestion : Dismember as a group on EIA, possibly include people in course who were responsible for it.
j) Yes
k) Yes, rather well
Suggestion : Yes, allocate one whole day on the field and lecture in the field for the sake of non technical people.
l) Yes
m) Yes
Suggestion : The duration of the course should have been longer to accommodate some part os the course that was left out ie atleast two weeks.
n) Generally yes
Suggestion : Possibly more time (eg 1 extra day) be allocated to the groups for preparation of case study. Extra time required for field exercise especially regarding the proposed Namosi mining.
o) Yes
Suggestion : Perhaps the relevant reading material could be circulated before hand to enable participants become well orientated with course content.
p) Yes, have learnt more on the above subject.
q) Yes, it gives me an insight into the practical side of the EIA process whereas previously EIA is mostly theoretical.
Suggestion : More practical courses on EIA processes should be given ie to be given in stages. Go through the first stage and then the second and so on.
r) Yes
Suggestion : No
s) The important point is that we now know what to expect from a consultant which we have hired to prepare an EIA.
Suggestion : I suggest that we take up an actual government project and prepare TDR for tender. Another session would then evaluate bids and approve consultant to do EIA.
t) Yes
Suggestion : In the case of 4 above, a written statement of the objectives and expectations re the final EIA document and method of presentation/assessment.
u) Yes, very much
Suggestion : Give more time to case studies eg 2 days in the field.
v) Yes, I feel that the workshop has highlighted main areas where any type of development should focus on ie this EIA workshop has opened a new light to a more realistic approach to development.
Suggestion : I would say more time and exposure would be very helpful.
w) Theoretically yes
Suggestion : More workshops or training delivered down to lower management level and workers or staff for government departments as well as the public or communities to participate.
x) Yes
Suggestion : This is a new department and other organisations and companies should be aware of as well and further workshops arranged for them once or twice a year.
y) No
Suggestion : More time should be provided for such courses.

The Fiji government has invested a considerable amount by sending 28 staff members on this four day course. Do you think this course was a wise use of your time?

a) Sure do. Exposure to conduct EIAs on case studies really enlighten the mind. If only this could go on for 2 weeks to allow participants to do more case studies.
b) Yes, but could have been better.
c) Yes
d) Yes
e) Definitely yes
f) Yes, there are no regrets in coming and the Fiji government should invest more into such programmes to increase environmental awareness. if the government civil servants awareness increases it is bound to flow on to the public.
g) Yes
h) Definitely yes, more courses should be organised where people from all ministries/organisations share their knowledge (technical), discuss problems and ways of solving them. Offer development is an integrated measure.
i) 90% of it. Have some basic information through having read EIAs. This will assist in more critical reviews of future ones.
j) Yes, as I am involved in the management of natural resources which my Ministry has responsibilities over.
k) Very good investment.
l) Yes, but the forestry examples involve small scale projects (logging), testing 6 months to 1 year abd EIAs are not usually undertaken. While I now have a good appreciation of EIAs, workwise the EIAs are not relevant.

m) Yes, it has give a better understanding of the production, assessment, screening and judgement of EIA as the environment awareness is still its infancy in Fiji.
n) Definitely, the workshop has enabled me to gain useful knowledge and method concerning EIAs and current developments in Fiji on the environmental front.
o) Yes very much
p) Yes, role of EIA in the future development of Fiji is vital to monitor resource utilisation, commercial landuse, unncessary exploitation, etc. However the important question is whether these officers will be given the opportunity to effectively put into practice knowledge they have gained.
q) Yes, I work with Town & Country Planning Department which requires as constitutents of major development approvals for the EIA be submitted. By attending the course would assist me in the administration and requirement of a development in so far as to whether EIA is required or not.
r) Yes
s) I certainly think so. With the lending agencies emphasis on EIA, government departments would be hiring consultants to prepare EIA for their projects and I feel that it is good management to have somebody in the department who can make sure that all relevant points or issues have been covered by the consultant.
t) Yes
u) Yes, indeed it was
v) Very useful although some official times for representatives we have are utilised but on the whole better knowledge in decision making for developments.
w) Yes
x) Yes, because being in the field of environment we did not have much materials, books, etc and knowledge on EIA subject.

3.5 Report on Case Studies

The written reports for the case studies are attached as Appendices. The quality of the EIAs is sufficient to show that the participants have a good grasp of the framework of an EIA. All three show that the major issues surrounding each project have been sighted, if not dealt with in depth. The EIAs are attached as they were written, as Appendices 1, 2, and 3.

3.6 EIA Procedures: Summary of Recommendations

The new environmental organizations and EIA procedures proposed by Dr. Watling in his Environment Strategy document were presented at the senior officials meeting, and essentially agreed to by the discussion groups. The details of these proposed organizations and procedures are included as Annex 4.

Annexes

Annex 1: Case Study #1

Namosi Copper Mine

1. Engineering Description of Project

a) Management

By the Place Dome Inc Group (Placer) of companies, the largest producer of gold outside of South Africa and CIS. Place has interests in and manages porphyry copper mines in Canada and Philippines

b) Project Design

open mine:	Waisoi West - 2000 m diameter Waisoi East - 1200 m diameter
operation target:	60,000 tonnes of ores/day 135 million tonnes during project life (27 years)

Options available:

- process to slurry form at Namosi site, then process slurry to separate minerals at a coast port
- transport slurry by truck
- transport slurry by pipe (30 cm diam. poly pipe)
- disposal of wastes (rocks) at Namosi area - into the Waisoi Valley, Waisoi Creek to be tunnelled and put into one of the open mines
- disposal of wastes (sediments) at coastal port - be dumped (tailing pipe)

2. Description of Existing Environment

a) Climate

Wet (3,800 mm of rainfall/year)

b) Landuse

Farming (subsistence and grazing) on foothills and near settlements no formal landuse in the main project area

c) Flora and Fauna

Forest structure is distinct (canopy, sub-canopy and ground cover) trees, second growth scrubs (ferns etc) - a sign of disturbed forest; not a rich forest in the commercial exploitation sense, but a suitable habitat for animals and birds, wild pigs, birds (bats, pigeons, parrots) probably no endemic species of flora and fauna

d) Social/cultural

Typified by forest/river dependent village life

3. Resources Required

Requires an independent infrastructural development (highway road, electric power and sea port) machines and manpower (of all relevant skills), water will create labour migration which may leave some organisations disadvantaged because of 'skill drain' for sustainability, hydro-power is preferred

4. Waste Produced

(a) water pollution:

The activity and the climate will certainly see soil being washed in the river system - unfavourably affecting water quality

(b) air pollution:

Activity of machines/equipment will emit waste gases into the atmosphere
Solid waste : excavation and processing will produce a lot of this which have to be safely disposed of

5. Changes In Land Use

Forest owned by native Fijians (mate - Nabukabuka) administered by NLTB leasing arrangements will be stipulated and finalised by NLTB

approvals : logging - by Forestry Department
: roading - PWD
: mining - MRD
: building sturctures - DT & CP

There will be no significant change in the landuse pattern as the forest area is virtually not utilised except for occasional hunting; steepness and susceptibility to erosion and mineral leaching rules out sustainable agricultural use.

6. Changes In Foreshore Uses

Approvals required from Lands Department (vegetation growing on coastline), and from: NLC (use of area under "fishing rights" boundary)

Effects: marine life may be affected by waste disposal into the ocean and development of the port area

7. Biological Effects

A destructive development, and this has to be accepted. Effects on animal life (fauna) is not significant as migration takes place to adjacent undisturbed forests. Adjacent forests have similar structure no significant effects on marine life (small size of port)

8. Social Effects

- Socio-economic improvement of standard of living to the landowners and company employees: reduce urban migration
- Boost in business (direct and spin-off effects)
- Increased foreign exchange earning for the govt., also increasing income through taxation
- People downstream may be losers if water quality is adversely affected from the project
- A change into cash economy (from subsistence) may adversely affect closeness of family ties and nutritional habits (traditional culture)

9. Global Environmental Problems

Emission of waste gases from development activities increases carbon dioxide content of the atmosphere. The destruction of forest (consumers of CO2) aggravate the situation.
Disposal of waste from onshore processing into the ocean floor may affect current pattern.

10. Mitigation

- Silt traps and sediment ponds to control waste dump.
- Slurry distribution pipe to have valves and warning.
- Drainage of roads required.
- Hydro seeking for revegetation.
- Operations to be undertaken to prescribed standards (engineering, safety and health).

11. Monitoring

- Baseline studies to be undertaken by the company to help form well defined terms of reference prepared by Govt.
- Monitoring of all environment during the whole life of the mine
- Performance standards to be set.
- Government to verify results of company tests.
- Examine deep ocean tailing disposal (a new technology).
- Monitor adequacy of lease agreement.
- Monitor post-mining rehabilitation work.

12. Enforcement

Company pays performance guarantee, the amount determined on the whole life of the mine with a review of the bond clause. Review of bond to be done periodically.

13. Conclusions

The province of Namosi is well known for backwardness in all aspects of socio-economic developments. The province will benefit tremendously from the mining project. The nation will also benefit through creation of employment opportunities, infrastructural developments, receipt of additional tax money and increased foreign exchange earnings.

Open mining method would have to be accepted (in spite of its unfavourable effects on the environments) because of low mineral deposits and for reason of financial/economic viability of the project.

14. Recommendations

We make the following recommendations :

1. Careful attention be given to road drainage and control of operation to minimise spillage of earthworks into the streams/rivers as quality of water must be maintained as villages situated downstream are dependent on these.

2. Careful attention be given to proper design and subsequent construction of the coastal port to minimise pollution of ocean.

3. Landowners be adequately compensated for any damages or expected loss in their fishing grounds.

4. All construction developments (roads, houses, pipe line, port facilities) be designed and constructed to standards stipulated in the various relevant Acts.

5. Careful attention be given to disposal of wastes (solid, liquid gas) to minimise pollution and health hazards both to man, land and marine life.

6. Official forum be established where the views of the landowners can be expressed. Priority of employment is to be given to the landowners and that they are made to benefit the most from development of their land and resources.

7. Source of power be from hydro-electricity to ensure sustainability of the development.

8. Monitoring of effects of operations on the environment becomes an integral component of the operations during the life of the project. Structures of performance are to be based from existing laws and regulations.

9. Revegetation of the mine site be undertaken either to enhance the appearance of the site or convert it to land fit for agricultural use.

15. Summary

Project Description

This report assesses the environmental and social implications of Placer Dome Inc. Group proposal to undertake copper mining in Namosi (Waisoi Valley). The project involves the open-cut mining and subsequent processing of copper minerals. Mining and initial processing will be undertaken in the Waisoi Valley, slurry will be piped to the coastal part where final processing and ship loading will take place. It is to have an independent infrastructural development (power source, roads, port).

This proposal appears to be consistent with and supportive of regional and planning objectives articulated in Fiji's Development Plan. This EIA reviews the administrative and legislative setting for mineral resource development in Fiji.

The requisite project planning approvals are reviewed. The physical setting for the project is described including climate, vegetation, landuse and water.

Impacts

The project is a destructive development as minerals have to be excavated. This destructiv development will be confined to an area of 22,000 hectares of forest (and 2 hectares of coasta area for port facilities). However, the project will have little significance as the fores commercial value is low, marine life is poor due to copper despite in streams and animals an birds can still migrate to adjacent undisturbed forests.

The project is going to stimulate socio-economic growth in the province of Namosi, a provinc well known for its backwardness in all aspects of development.

Like all developments, a certain degree of environmental pollution is expected in th rivers/streams and ocean. Appropriate mitigation measures are prescribed to minimis detrimental effects of the operations and monitoring mechanisms are stipulated as integra components of the operations for the whole life of the project. Appropriate rate o compensations are prescribed to be paid to landowners whose resources are damaged throug the various activities of the project. A performance bond is also stipulated to be paid by th company.

Annex 2: Case Study #2

The Korotogo Bypass

Background:

The Korotogo part of the Queen's Road is a portion of road not upgraded during construction of the new Queen's road in the 1970-1980's. This has led to a low standard of road service and safety based on heavy traffic through a "poor standard" road.

High capital costs are the major cited reason for not having a bypass constructed to date, coupled with low overall national ranking based on overall traffic density.

Present consideration is based on discussions between Reef Hotel and the Fiji Trade and Investment Board (FTIB) regarding a major redevelopment of the Hotel where requests have been made for a bypass for hotel expansion.

No decision has been made as regards the actual construction although preliminary design and engineering studies on a "proposed" alignment has been made by Ministry of Infrastructure and Public Utilities (MIPU). Decision awaits completion of EIA and re-construction of priorities by government.

Location:

The bypass joins the Queen's road some 1.5 km west of Malevu Village, passes behind Korotogo "Settlements" back to the Queen's road just past Korotogo Village (Figure 1).

Constraints to the EIA:

Major constraints/terms of reference for the EIA include :

a) stability of road,
b) effects on the local, village and regional committees,
c) control of siltation from roadworks, and
d) minimal effects to mangrove.

Further, the following govt. policy points bear noticing :

i) roads to follow minimum specifications of PWD. These may dictate alignment of road;
ii) Govt. policy to bypass all roads that pass through villages, to be implemented as finance is available;
iii) Govt. policy while bypassing, not to go seaward through reclamation fill

Project Description:

a) Design

Construction of some 2.5 km of new sealed road past Malevu to Korotogo (Fig. 1) construction of additional connecting roads from bypass to Korotogo community. Management, design and future upkeep by the Public Works Department (MIPU).

Design and alignment to meet specific standards for public roads and minimal effects on vegetation. The proposed costs for road construction (1992) is $3.5 million. Technical base level studies for alignment in Figure 1 already possessed.

To help offset the presence of hills, additional lanes to meet needs of slow traffic are proposed (climbing lanes).

b) Options

Several options exist during and following the construction of the bypass :

i) Build bypass and close both ends of old road, only open for pedestrian access;
ii) close east end of road (near Reef Hotel), this needs creation of a access road (a) to meet local community needs;
iii) close west end of road at Korotogo bridge, need access road (b) to meet needs of Sarasara community;
iv) keep old Queen's road as is, together with bypass; and
v) upgrade old Queen's road instead; and
vi) leave as is (sleeping dogs lie).

Considerations:

Do we need a bypass? The following provides data :

a) high rate of fatal and other accidents on single-lane bridge at Korotogo. No pedestrian access here!
b) Concern of residents to noise, air pollution and dust in a "tourist" locale;
c) road narrow, blocks access to beach and is a slow speed limit zone on a major highway;
d) 70% of traffic is Suva-Lautoka "through" traffic;
e) Hotels, residences have a compulsory 20 m set-back from road;
f) Analysis of traffic records show that the overall traffic is minor compared to other public roads in Fiji by a large margin.

Description of Existing Environment:

a) Physical - Geological - Landuse

Climate is dry, area on rain shadow part of Viti Levu. Experiences strong SE tradewinds and has low to moderate rainfall. Subject to occasional "Lakes" or tidal waves (one in early August, 1992 flooded part of Korotogo Village). The coastal margin is composed of beach deposits, sandstones of the Cuvu Sedimentary arp (Pliocene) resting on basaltic-andesite lavas of the Wainimala formation inland. Landuse is summarised in Figure 2. The eastern approach is largely freehold (Reef Hotel) and utilized in the coastal lowland part for residential, small hotel and resort use. Upland is vacant Talasiga. Southern approach Native Reserve, largely vacant except for settlements (Sanasana and Korotogo), grazing and forest food gardens. Minimal subsistence agriculture.

Flora

60% land is savannah grassland - Talasiga
30% relict vegetation comprising:
gully-vegetation and swamp
coconut palms, kavika, dawa, ivi, moli
mangrove swamp
some unique palms *Veitchia jonnis*.

Fauna

wild and domesticated horses, minah birds, goats.
mangrove fauna: "mana, kuka, qari".

b) Social/Cultural Aspects

i) The following communities or affected groups exist:

a) Korotogo (and possibly Malevu Village) = fixed villages
b) Sanasana settlement = hotel, taxi and iterant workers
c) Small business holdings = including 2-3 supermarkets, restaurants etc
d) Private "high class/retirement" homes/residences
e) Reef Resort
f) Road users to Suva through to Lautoka and vice versa

ii) Cultural areas unpated could be:

a) Cemetary for village at Korotogo
b) Tabao sites (Figure 2)

iii) Agricultural-related sites impacted possibly:

a) Mangrove food reserve
b) Coconut groves
c) Food trees
d) Grazing land

c) Resources Required for Project

Plant, machinery and related ancillary equipment all form part of PWD project and would be from Suva or Sigatoka PWD.

Some 36 skilled and unskilled labour required of which 15 labourers could be local employees. This has to be negotiated with union.

Some 50,000 cu metres of fill required, most to be generated through cuttings on the road to adjust grades and during alignment. All other material including bitumen, cement, drains and culverts to be from Suva.

d) Wastes Produced

i) Road construction - normal for such construction. On the present alignment waste-fill, dust and muds/silts could impact reef (through runoff) and the nearby mangroves. Noise - that generated by construction plant, part of life but minimal. Dust present a hazard but strong SE winds would blow it off settlement areas.

ii) Afterwards - only minimal as traffic bypasses settlements, condition then a vast improvement on present conditions.

e) Changes in Landuse/Approvals

Reef hotel, adjacent small businesses, bird park and recreation areas are on freehold land. Native reserve on west end of project are (Fig. 2).

Lease arrangements:
Reef Hotel giving land free for road only. Native reserve to be leased to state requires Mataqali consent to NLTB or compulsory acquisition. Check conditions on Reef Hotel land acquisition if any.

f) Changes in Foreshore Areas

i) Fishing rights not impacted
ii) Mangrove habitat affected, although proposed by PWD that this be minimized or eliminated.

g) Social Effects

Any consideration of social impacts requires:
i) identification of communities/users
ii) assessment of problems, real or imagined
iii) clear identification of project to community
iv) negotiations?

As community has been partly polarized by previous "public meetings" care is required to acquire true picture of impact on various communities, alleged fears and real issue at hand.

Table 1 shows effects considered in survey. A limited amount of comments is informed and formal community discussions have been gleaned and public meetings are in process of being held.

Table 1 : Effects and Community Fears Considered

Accidents/traffic hazard	Noise and other pollution
Hotel and other tourist development	Shoreline development
Public accessibility - beach, residences, business	
Ease of travel through traffic	Traffic density
Property value	Agricultural land
Residential land	Passing trade
Transport cost	Mangrove
Tabu sites	

Results of the comments together with possible impacts (theoretical based on proposed alignment) are shown in a Options vs response matrix - Table 2.

There are clear winners and clear losers for zone options ie. option 1 (both ends of old road closed). Possible reason for a unclear picture is the non-weighting of:

a) the various presumed effects; and
b) the importance of the various communities with perceived "fixed" demands or "fears": i.e., (i) is loss of grazing land same value as loss of food land reserve and (ii) should a large hotel project have priority over other communities.

A typical small community fears is:

a) the loss of passing trade for small business in Korotogo if 70% of traffic goes to bypass;

On top of this are presumed fixed demands from village:

b) road should go onshore side of village;

Coupled with the Reef Hotel "carrot" to govt.:

c) a major hotel development of 20 m with anticipated returns to economy

The solution may well be one dictated by political will.

A more realistic view may be got by the weighting of effects; the option of the construction of a bypass with old road left open at both ends is probably then a best alternative. This needs more further evaluation, and a thorough analysis of both social and economic costs and benefits.

Mitigation:

a) Constructional effects

The effects of capital road works near a coastal area are well known. With proper design and mitigation detrimental environment effects can be minimized.

a) dust - regular watering of road during construction phase to lay down dust
b) mangrove - minimize encroachment by design of road install fill barriers when skirting mangrove to minimise runoffs into these areas
c) erosion - stagger cuttings, employ low angle slopes and revegetate immediately
d) noise - is expected to be minimal

b) Cultural

Avoidance of Tabu and other sites, i.e., agricultural/food garden areas. Some areas of agricultural/fruit groves may be affected - compensation.

c) Flora

Avoid or minimize disturbance to relict forest and especially unique palm trees.

d) Special

The mangrove swamp acts as a storage area during food, hence rare/nil floods on Korotogo Bridge. This may not be the case for bridges upstream. Special design construct in dry season to avoid siltation/dirty runoff.

Global Effects:

Nil envisaged. Increased tourist development in a restricted area like Korotogo in future may have additional social/cultural, water supply and ecological (sewage) problems.

Monitoring:

Required only during construction and immediate post-construction phase.

Enforcement:

A community liaison officer and NGO - Environment Monitoring Unit be tasked to enforce mitigation measures during construction.

Conclusions and Recommendations:

1. Issue is complex -

   a) according to PWD road bypass is of a low priority w.r.t. to other in Fiji, low traffic rates
   b) it is however within part of a longer term aim of PWD and govt. to bypass villages and upgrade major roads
   c) The issue has been brought to a head by Tourist Development Issue, ie Reef Hotel Development

Weighing other factors, the decision to build may be a political one. If built for one other reasons, the following should be borne in mind:

i) The views of the varied communities should be considered, imagined terms alleged and if required compensation paid. This is to prevent any blockages of road after development.

ii) In the long-term an upgraded present road or a bypass is necessary and would be an advantage.

iii) Mitigation factors recommended above in Section 1 be enforced during construction phase and special engineering designs implemented to minimize effects to flora, reef/nearshore and communities utilizing or living near road.

iv) Recognise the need for monitoring of environmental changes - proper enforcement of conditions placed on project be carried out.

Annex 3: Case Study #3

Caubati Low Cost Housing Subdivision

Background: Policy Statement of the Housing Authority

The purpose of Housing Authority is to produce and finance through long term mortgages, shelter for families who would not otherwise have available to them the kinds of living accommodation they would both desire and afford.

General policies:

a) Target Beneficiary Group

The Housing Authority operates in such a manner serving families whose total family income falls between the 20th and 90th percentile of the National distribution of family income as determined by the Official Government, statistics with loans up to put not exceeding $50,000. However, for the purpose of determining the loan eligibility of a family, only income of those members who would own the property jointly shall be taken into account. This simply means the income of the head of household, spouse and a maximum of two adult children living at home shall be taken into account provided that the maximum amount which the H/A may lend on any one loan shall not exceed the aforesaid amount of $50,000.

b) Financial Self-Sufficiency

H/A operates on a fully "self-sufficient" basis without govt. subsidies whilst it does not seek profit for the "sake of profit" it is required to price its properties and services so as to be financially viable, including ensuring the full recovery of all direct and indirect costs, preserving its capital base to meet the housing needs of future generations. H/A is committed to vigorous prompt legal action against accounts in default.

c) Products and Services

H/A concentrates on producing services sites and houses in size and at costs affordable by the population segment it serves, along with upgrading substandard communities and financing mortgages for lots and houses. It is committed to being an efficient producer of shelter and financing. However, greater emphasis is being placed on new lots and houses.

d) Co-ordination with Other Authorities

H/A works closely and co-operatively with zoning and other regulatory agencies to ensure that standards set allow the provisions of affordable shelter to all members of its target beneficiary group and co-ordinates its site development with PWD, FEA, NLTB/NLDC, Town & Country Planning, Ministry of Housing, Local Authorities and various city councils.

e) Deregulations

H/A establishes mortgage covenants to ensure that its mortgagees are secure and that its target group of families benefit from its products and services but will otherwise be guided by principles that purchasers of its properties: are free to enjoy and use their property as they please, have the duty singly and collectively to care for their property including "communal" land and are subject to regulations established by national and local authorities. H/A seeks remedies through the courts whenever its mortgage covenants are violated.

Mortgage Financing:

a) Eligibility

Mortgage financing is made available to all citizens who meet H/A's family income and credit standards eligibility standards for the purpose of purchasing a single family, owner occupied residence and lots.

b) Allocations of Mortgages:

Mortgage loans and property sales are allocated from chronologically ordered waiting list established for that purpose maintaining an ethnic balance in the allocation sequence. Applicants are free to specify where they wish to purchase subject to ability to pay credit and income eligibility is determined prior to being placed on the waiting list.

c) Security

Individual loans are secured by a first mortgage on the property.

d) Credit Standards

Applicant family income and ability to pay determines the size of loan for which a family is eligible. No more than _ of the family income is allocated to mortgage repayments to determine maximum eligibility after down payments. Credit applications contain affidavits certifying the statements thereon are true, that no other residence is owned and that the applicant intends to occupy and use the property as a permanent home. Legal remedies are taken when false affidavits are discovered.

Engineering Design of Project

The governments development plans require H/A to develop sites in consultation with govt. and other regulatory agencies observing three main issues ie ensuring affordability, facilitate density and presenting attractive Housing Estate Developments. With this in mind the Caubati site was made available to H/A in 1987 for development under the World Bank Funding.

Caubati site is located some six kilimetres from Suva, off Kings Road and opposite to the AG Primary School in Kinoya. Caubati is one of several subdivision projects selected as part of programme funded by the World Bank. Criteria for selection are as follows:

i) It can be developed within cost constraints to serve families within the 20th - 90th percentile of income groups
ii) It is close to existing service eg Kings Road, bus routes, water and sewerage, etc.
iii) Being state freehold land there were fewer impedences to development

a) Management

Planning and design of the project will be undertaken by Housing Authority staff and selected specialist consultants. Construction will be by contract following public tender administered by the H/A. On completion there will be handover to the various service authorities eg FEA, P & T, PWD. Public reserves will be handed over to the Rural Local Authority. The H/A will arrange sale of land and will also maintain the parkland.

b) Project Design and Construction

Off-site Services :
Under the terms of World Bank loans the Fiji Govt. has undertaken to furnish the provision of off-site services. These will include:

- Water - extension of trunk water main from Newtown
- Sewerage - extension of trunk sewerage up Wainivula creek
- Electricity - extension from Kings Road
- Roads - upgrading at Caubati Road between Kings Road and the entrance to the subdivision
- Telephone - connection to the Valelevu exchange

On-site Services :
Roads, water, sewerage, electricity and telephone will be constructed in accordance with the standards defined by the respective service authority. All of the above services will be available to each lot. The estimated cost to construct the 509 lots is $3.5m.

Lot Sizes:
Residential 'D' classification normally allows for lot sizes in the 200-400 m2 range. However, in the case of this development it is proposed to construct about 100x100 m2 lots.

Following a series meetings with Town & Country Planning and interested service authorities approval in principal has been received for this new concept. The H/A will be constructing terraced style two storey housing on these smaller lots. These will be offered for rental or sale.

c) Construction Considerations:

i) Erosion

Earthworks will be carried in stages and will generally reduce slopes and therefore erosion. During construction sediment traps will be constructed upstream of the main creek. Natural drainage paths will be maintained as far as practical. Where cut and fill is to be carried out, topsoil will be stripped and stored for later use.

ii) Retained Housing

Approximately a dozen houses will remain intact and inhabited during construction of the development. Services to these houses will be retained but diverted as necessary during the course of construction.

iii) Trees

Selected mature trees will be spared the clearing process. Generally these will be trees greater than 10m in height where no change in ground level is proposed or there is no conflict with road pavements.

d) Landscaping

On completion of earthworks, topsoil shall be spread on lots where level alteration has occurred.

2. Description of existing environment

Climate

Caubati is located on the eastern side of Viti Levu inhere rainfall is high and subject to considerable variations. The wet season extends normally from November to April. Some extremely highly rates of precipitation have been recorded. Its location close to Laucala Bay and and prevailing South East Trade Winds play a large part in moderating the temperatures experienced which is at an approximate average of 77oF per day. High humidity all year round is experienced.

Topography

The subject site is generally undulating with some areas of very steep gradients north and east of the site. (The slopes varies from 1.2 (50%) to 1.20 (5%). Wainimarama creek flows through the development site and will be the eastern and north eastern boundary of Caubati phase I.

Soil

The whole Nasinu area covering Caubati is covered by the Suva series consisting marl and tuff with limestone intrusions. Soil texture is stable soapstone with alluvial deposits.

Flora and Fauna

The site falls within the Suva peri urban area (and has lost its exotic natural vegetation and fauna due to the settlement of tenants) on the site and disturbance by human activity. Present vegetation is mostly introduced fruit trees, coconut shrubs and grassland. It has totally lost any flora and fauna that need to be present except for mature trees that could be retained if they are clear of development works ie road, ... and service areas.

Landuse

The total 32 ha of H/A low cost subdivision is used as a rural residential area with subsistence farming and squatting the surrounding areas are mostly developed for residential uses. These are the Director of Lands Subdivision most of the site, the Sundance subdivision and Director of Lands Low Cost Subdivision ..... of the site. H/A Kinoya subdivision on south east and H/A subdivision east of the site and Belinda subdivision and Caubati Solomon settlement west of the area proposed.

3. Resources employed

- Planning (inhouse)
- Construction (outside) tenders invited internationally {tender won by (CTIE CC)}
- Materials - cut and fill balanced, all on site
- Sustainability - roads, sewer drains - handed over to govt. agencies for further upkeep
- Mitigation - concern for extensive earthworks design
- Landscape - designs with stabilising earthworks - unavoidable to achieve buildable sites - in process - trees uprooted - to be replaced, land are revegetated by respreading rich topsoil
- Monitoring - during and after - by developer - contract documents safeguard the project -completion to adhere to designs specifications

4. Waste produced

This subject will be considered in two phases - firstly during the construction phase and then on completion of the development.

a) Construction Phase

- Water Pollution: The main risk is from a increased sediment load due to the extensive earthworks being carried out. It is proposed that sediment traps will be constructed to minimise soil loss.
- Air Pollution: No impact of significance is envisaged here.
- Solid: A central work facility will be provided during construction. As cut and fill have been decreased there will be no rock or soil waste for the site.
- Noise: Construction equipment will be in operation during normal working hours only - Monday - Friday.

b) Completion

- Water Pollution: The provision of a piped water borne sewerage system will reduce the level water pollution of nearby creeks. Urbanisation will increase slightly the volume of runoff.
- Air Pollution: No impact of significance is foreseen.
- Solid: Garbage collection services will be provided by the Rural Local Authority.
- Noise: No issue of significance is foreseen.

5. Changes in land use

The site is a crown freehold land (Lot 1 DP 6756) under Director of Lands, leased to H/A for a period of 99 years with effect from 1st October 1987.

The 32 ha presently used as a rural residential subsistence and squatter site will be developed into 2 phases for high density residential development viz residential "D". During the construction phase as well as the operational phase the access already partly constructed by Arthur Jennings as part of the Belinda Subdivision will be used and any damage to the road has to be rectified and improved by H/A in the course of the development before PWD takes over as maintenance.

The H/A after completing the development will sub-lease the plots to individual lot owners for 99 years. Preliminary discussion on relaxation to certain requirements of Town Planning has been carried out and a formal subdivision proposal required under the subdivision of Land Act is submitted with the EIA report.

6. Social Impacts

To address the social impact we decided to split the target groups into 2 ie people residing surrounding the subdivision and those that reside within the subject area.

People within the surrounding areas:

There is a Fijian settlement adjacent to the subdivision. There was fear of a reduced area, and an uproar from this settlement based on fear that their settlement would also be included. This was, however, settled by H/A and Director of Lands who confirmed that the area is out.

Residents alongside Caubati Rd

Positive Arguments
- New subdivision would bring new infrastructure and/or upgrade existing ones ie roads and extension to sewer system
- Readily available markets from the new population for nearby farmers

Negative Arguments
- Introduction of new population - fear of security to properties
- Also a need of proper health care.
- Nearest police and health stations are at Valelevu which serves a wide area
  Suggested mitigation : a police post and a nursing station to be put forward to the government.

Occupants of the subject area prior of subdivision

This again was split into 2 target groups ie those not being reallocated and those temporarily reallocated. Mostly squatters or holders of TALO. Employment mostly around Suva - permanent/casual.

a) Those not being reallocated (4) mostly earnings within H/A criteria.

Positive Arguments
- allocation of a fully serviced block within the subdivision with a 99 years lease - security of tenure

Negative Arguments
- new environment altogether ie from rural to a more densely populated one. This would only be a short term problem and long term benefit out-weighs it ie a fully serviced block with a better security of tenure compared to an annual tenancy.

b) Those temporarily reallocated (20 families)

Allocation of a fully serviced block within subdivision and a better security of tenure.

Negative Arguments
- Prices of blocks beyond their reach
- What as for casual workers

Suggested Mitigation

H/A will provide financial assistance through housing loans. Also terrace housing.
As for casual workers this needs more time to work on and further consultations needed ie Hart and Govt.

Annex 4:

Proposed Environmental Assessment Procedures for Fiji