

**TECHNICAL ASSISTANCE TO THE
PUBLIC WORKS DEPARTMENT
EDF PROJECT # 9.ACP.VA.02 – PWD MAINTENANCE TRAINING PROJECT**

Site visit report to Tanna

12 -14 March 2007

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1 Agenda.

Dates : from 12 to 14 March 2007

Purpose: organize 2007 activities.

Day 1 : arrival at Tanna 11.00, working session with staff, site visit

Day 2 : site visits, office work

Day 3 : site visits, office work take off at 15.00

Mission of André Iatipu and Luc Grandjean

2 Meeting

Purpose of the meeting is to inform division's staff on the PE3.

Attendance :

- Andrew Seiake : Housing and water officer, acting head of division
- Lawrence Kithome : technical assistant (VSO)
- André Jocteur : senior foreman roads
- Komie Roger : under contract
- Robert Daniel : senior foreman Workshop
- Disline Iapoun : finance officer

Meeting started with Chris Beall, Peace Corp volunteer. Chris is giving support in training people, developing training modules, ... and would be pleased to know in which sector there is more likely to have job opportunities so he can direct the trainings accordingly. The reply was that PWD will contract out some very basic works in road maintenance and it could be interesting to have people trained in road works : drainage, safety, ...and even surveying.

Issues discussed with staff only :

- The SC paper is available at the division and after the steering committee held in Vila on March 6th, it has to be considered approved.
- To contract out the works to the communities, communities are missing tools. There is a budget line provided for in PE3 : division has to make a list, to look for quotations on local market for what is available on Tanna and to request purchase from Vila for what is not available on Tanna.
- training in fleet management. There is a need for training in electronics and early diagnosis of failure (oil pressure recording, injector pressure, battery charging rate, ..). MTP-Ta will look if training resources is available within vocational schools or suppliers.
- surveys for inventory : said to be in the computer in Aniwa....
- surveys for maintenance.
 - It is decided to have a look on gravelled road and find a section where pothole patching is needed.
 - survey reports made last MTP-TA visit are ready for commitment.
- surveys for rehabilitation. Staff need to do more surveys for maintenance in order to be trained

and surveys for rehabilitation are more technical (use if a level, bill of quantities involving heavy equipment. MTP-PIA and TA propose to request technical assistance from a consultant based in Vila to survey some section and explain /train people meanwhile. On some short section, surveys could be done with MTP-PIA and TA support. In all case, these surveys will be organised as demo surveys, with people from other divisions attending.

- REDI : no good meeting since long, in Tanna. REDI should be considered dead or dying ?
- TAFEA Tourism Council (TTC): no notes of meeting available. Ron Hartland, TTC chairman is relating on emails exchanges between resorts owners and PWD Vila and volcano "landowners". There is a land dispute for the access
- People who are attending the trainings will be retiring in less than 5 years time. PWD operation section needs to think about successor plan as this endangers the sustainability of the trainings.

3 Site visit to LOWANIKARU hill

After one week of heavy rain, the road section B to the central region has to be considered broken, the surface is impassible if the soil is wet. The road has been damaged by the traffic and vehicle get stuck in mud and only goes through with people pushing.

One problem there is that people having gardens on the road sides are not allowing ditches turns out to drain the water off the road, they are even blocking them after they have been installed.

Traffic to the volcano is now through sections F H and C, which is a very long way.

This road will be upgraded by the MCA project. In the meantime, the situation could be improved, but not fixed, with some loads of gravels spread on the mud.

4 Survey : access to the hospital

With senior foreman road, VSO volunteer, the access road to the hospital was surveyed. This could be considered as training.

The road lacks drainage system and civil works. The survey did conclude that the drainage system has to be build : opening drains on both sides of the road, with covered concrete channels for crossings.

The survey report is joined, in annex. Works for opening the drains will be given to the community, masonry works will be done by Works division mason.



Illustration 4.1.: Hospital gate



Illustration 4.2.: gully crossing the road

Down the hospital road, water has to be channelled to the sea. The road from "Cornamas" junction to Lenakel Coop is already damaged by lack of appropriate drainage system. So, this section, 200 m long, has been surveyed too.

The conclusion is that side drains have to be build on both sides. Due to the nature of the soil, the drains have to be stone pitched.

The survey report is joined, in annex. The works are to be tendered in Tanna.



Illustration 4.3.: road side going down to Lenakel coop.



Illustration 4.4.: very loose soil

5 Lenami bridge

End February, the bridge was surveyed and cleaned. During last week heavy rains the two culverts did flow at full charge, limiting overflow.

The need to fix the problem is still topical.

6 Survey : corner USP

On road section A, planned for sectional re gravelling under recurrent budget, at the USP corner, a large gully crosses the road.

Investigating at this place showed that a crossing culvert is completely buried at this place.

Survey for maintenance ended with a contract proposal amounting VT 27120 to open 107 m drain, remove sediments in the inlet, clean the culvert (if still in working condition) and clear the bush at the outlet.

7 Surveys on the south road

Works division is planning rehabilitation works on road to the south. The need for such rehabilitation is not questionable : a rather large population lives in south Tanna and the road could be an alternative to go to the volcano.

Before surveying for rehabilitation far from Lenakel, there is a need to undertake maintenance works, starting from the beginning.

Surveys done :

- Ikwanpir culvert
- cattle grid at Kiasinau
- cattle grid at Yatapang
- gabion work at Yuraren
- cattle grid at Himlaoun
- gabion work and muddy zone at Yakavat
- river crossing concrete slab at Emili
- river crossing concrete slab at Paouligo (Blacksand)
- river Youyan & river Kwanwita

For the last two rivers, there is a need for more technical surveys, using levels. The survey conclusions could be to raise to the riverbed level with gabion works in order to lessen the approaches slopes. This will be done as "demo surveys" during next field visit.

For Ikwanpir, a survey report has been drafted back in the office. On other sites, Works Division has to draft the reports.

8 Office Works

After the surveys and having discussed the acceptable daily yields for one man day, rate for earthworks has been revised.

Description	Unit	Rate (VT)
open drain	m	100
culvert cleaning 100% blocked	m	1000
culvert cleaning 50 % blocked	m	500
earthworks	m³	500
bush clearing	m ²	8
grass cutting	m ²	4

Table 1: rates for labour based works

During the visit, MTP-PIA did draft the contracts. Eight contracts for maintenance works are ready.

Works division is requested to get signature of communities leaders and then request formal commitment. It's recalled that Works division has to tender for a work.

9 Training in using computers.

After last Malekula VSO Volunteer in Tanna, it has been found that works division staff would benefit from computer lesson and practise at Provincial / USP facility.

Works division manager and VSO volunteer are requested to meet with Tanna USP manager (not present during field visit) and see how to organise trainings on word processing, file management, spreadsheet use, use of email and internet.

10 Public lands

The situation in Lowanikaru hill gives an opportunity to talk of land ownership and common interest.

The situation where PWD has to pay someone (= to buy) for sand or boulders laid down in a river bed is rather strange for anybody knowing how it is managed elsewhere.

In many countries, riverbeds, sea shores .. and roads are classified in the PUBLIC LANDS, meaning that, due to common interest and to preserve the possibility for environment management, the state keeps the ownership of some lands.

Water flowing in a river does not belong to anybody in particular, and doesn't change of owner each time it flows on a different private propriety.

Chapter 25 – Public Roads (prohibition of encroachment)¹, Laws of the Republic of Vanuatu – revised edition 1988 gives some indications on the public domain :

- No person shall encroach upon the public road either by placing there materials or movable objects of any sort or by erecting there buildings or permanent construction
- for the purposes of this act, the expression "public road" shall mean any road open to public use whether or not it forms part of the public domain and shall include not only the road-way but also the sides of the road within the limits of the ground occupied by such road.

Public land (From Wikipedia) :

In all modern [states](#), some land is held by central or local [governments](#). This is called **public land**.

¹ also included in the law, some very important text on cattle grids.

The system of tenure of public land, and the terminology used, varies between countries. The following examples illustrate some of the range.

Commonwealth countries : in several [Commonwealth](#) countries such as [Australia](#), [New Zealand](#) and [Canada](#), public lands are referred to as [Crown lands](#).

France : in [France](#), public land ([French](#): *domaine public*) may be held by [communes](#), [départements](#), or the central [State](#).

Ownership of a road does seem to be well understood or accepted in Tanna and Malekula. Communities are claiming right to be the only one being entitled to get works on road section across their territories

Some explanation, on the laws and how works are normally "given" to a contractor could be very useful.

11 Conclusions

11.1 Training

Doing the surveys is a very good opportunity to train people on all technical aspects of road construction and road maintenance.

And there is a need for such trainings.

11.2 Public lands

Undertake extension activities directed to the communities to make them know the laws, avoid any land dispute in the future and make them acquire a sense on the common interest.