

Report Back – NW province Site Visits



Community projects visits

Hartbeespoort Site Visits

27th 28th 29th August 2008

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Somareletsa Sirelesa Conservation Club PROJECT VISIT, AUGUST 27, 2008



This site has the potential to become a fabulous project. There are some concerns, but this will be explained as the report unfolds.

The leadership of the legendary Ms. Grace Masuku (right) is evident. She is a well known healer, and has had books written about her. She is also involved in exciting projects like Freedom Park and the like.



The site is an incomplete DEAT project. This is a key concern, because if IWRM does fund the project, but the funds are used to complete the buildings, then it is suspected that all the funds will be used for this purpose, which will have no water component. It should be made clear that IWRM funding should be used for the purposes that are recommended below. It will be worth interrogating whether the DEAT funding will allow completion of the buildings or not, as it is possible that the contracts for the buildings have been contracted.

Site description:

The site is 60 hectares in extent, (25.144923S 27.113433 E) and comprises (built environment) 5 thatched buildings. The largest is intended to be a traditional pharmacy and a consulting space for an inyanga (right); two are to be guesthouses, for visitors to experience traditional culture; and two are intended as “moral regeneration” programmes for the youth, one for girls, and one for boys.



There is a small dam (right);
an incomplete plant nursery (below);



a disused borehole (right);



and fencing around the site. There is also a set of springs, currently used to water cattle, which is proposed for a traditional health spa.

A roofless building (below) (struck by lightning) was intended for a craft workshop.



There are also incomplete cattle watering troughs (right), as part of the quid pro quo for the cattle no longer having access to the dam and springs in future.

The buildings are not water, nor energy, efficient. The proposed toilets and showers are standard, with a collapsed septic tank (below) serving (currently) two of the buildings. Regardless of the collapsed septic tank, the soil type makes this sanitation no solution at all, and is contaminating the groundwater (below right). No other sanitation is in place.



Rainwater harvesting is also not in the design.

The group intends to propagate and grow both traditional medicinal herbs and vegetables, and run goats and other livestock.

It must be stated that the energy of both the site and the group is very good, positive, and the openness that we encountered was evidence of this.

Recommendations:

That the group be involved in a two day Zero Waste / multiculture workshop, where we can both build capacity, and present options for the site, allowing the community to choose what they think will work;

We suspect that the following options will be required / find favour:

- 1) That a biodigester be built, as the best option for sanitation and water and nutrient capture – it is suggested that this opportunity be used to teach a group on how to build a biodigester – this could also include some unemployed builders, who would then have an additional marketable skill;
- 2) That the nursery and food / medicinal plant gardens be supported;
- 3) That a solar borehole pump and suitable (drip) irrigation be provided (the borehole has been tested, and those test results will be faxed to us);
- 4) That we develop and implement a training programme on growing the herbs and food;
- 5) That we speak to Marne de Langa regarding design and implementation of rainwater harvesting with appropriate tanks – we have a design that is suitable for round roofs - rondavels;
- 6) That aquaculture be practiced in the dam, linked to feed from vermicomposting and chickens, etc.
- 7) That the dam also produce in the form of aquaponics – for food, animal feed, fish feed, etc.

PEOYA BALEMI PROJECT VISIT, AUGUST 27, 2008



Site description:

Peoya Balemi Project is situated north of Brits, (25.581650 S 27.804410 E), headed by Mrs. Katherine Sepipi (076 538 7748) and supported by 6 additional members in the group. The total size of their property is 12.5 ha

They have a dam, which receives water from the local canal system. They receive 1800 cubic litres of water per month and pay R1200-



00 for it. They cannot pump the dam water, as the cable from the transformer to the pump house was stolen. They flood irrigate the portion of land where they are growing vegetables presently. The water is of questionable quality and needs to be tested. Evidence of salt build-up is found in the fields that are flood irrigated.





They have a functioning borehole and a borehole without a pump. The respective yield and water quality is not known to the group. Apparently these documents are with the Landbank and we asked the group that they arrange to send them to us. They also use some overhead sprinkler irrigation with the borehole water on the existing vegetables..

The group has 3 unfinished broiler houses (paid for by the Department of Agriculture, but have no floor, or power connections, infrared heaters, feeders nor drinkers). The houses measure 4m x 20m. Only one house is occupied and that at a very low capacity.

The cost of the bought in feed is so high, that this is a loss making enterprise. They do supplement feed with greens from the garden.

They have 3 heifers but struggle to get them pregnant as there is no neighbour willing to lend them a bull. The cattle roam the property, but



are kept out of the fenced in vegetable production section.



The group grows a variety of seasonal vegetables on a portion of the bottom land (\pm a sixth of the arable land). The soil is a deep turf soil, for which this region is known for. Some borehole water is used for irrigation through the overhead sprinkler system. The general health of the vegetables was good, although there were some aphids on the cabbage. Small

amounts of chemical fertiliser have been applied, but they can not afford it. Some chicken manure has also been applied.

The vegetables and chicken are sold casually to passing customers and at Mobopane Station.

They were advised to burn the grass and weeds that were growing on the non-utilised areas, so have little material for mulching and composting.



Recommendations:

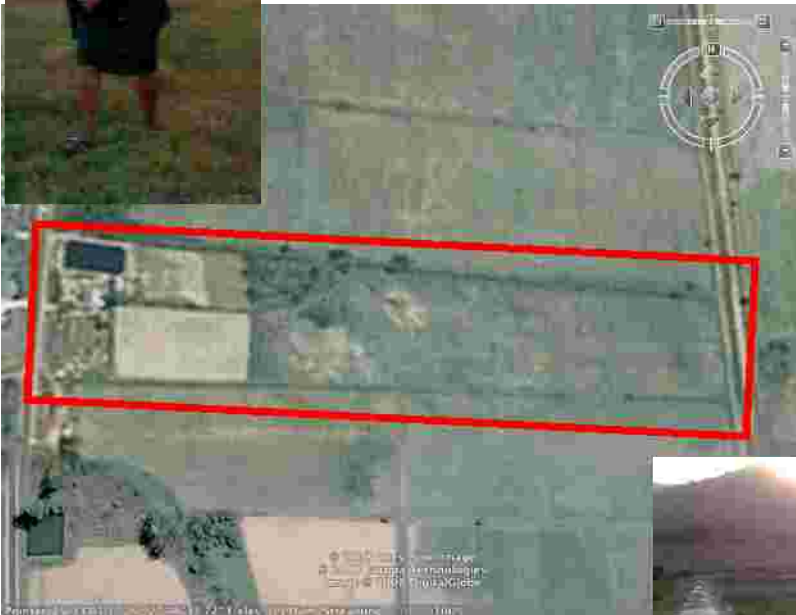
This property and project has all the possibility to become a wonderful model of an integrated farming system. It is therefore our recommendation that:

- Together with Ntshapeu a two-day workshop is held to expose the group to the ideas of Zero Waste, Multi-culture/Integrated Farming/Polyculture. Out of this we can develop with the group what it is that they want to implement.

We suspect that this will be some or all of the following:

- That a comprehensive design and farm production plan is developed;
- That a biodigester be built, as the best option for sanitation, water and nutrient capture – it is suggested that this opportunity be used to teach the groups on how to build a biodigester – this could also include some unemployed builders, who would then have an additional marketable skill;
- That a solar borehole pump and suitable (drip) irrigation be provided (the borehole has been tested, and those test results will be sent to us);
- That we speak to Marne de Langa regarding design and implementation of rainwater harvesting with appropriate tanks – we have a design that is suitable for round roofs - rondavels;
- That the chicken enterprise is reduced to one house and converted to free-range and the other houses be converted to possibly mushroom growing, food drying and processing etc.;
- That aquaculture be practised in the dam, linked to feed from vermi-composting and chickens, etc.;
- That the dam also produces in the form of aquaponics – for food, animal feed, fish feed, etc.;
- That we choose and implement appropriate agricultural practices for all the enterprises;
- That we develop and teach a simple accounting system to understand farm finances;
- That we develop and implement simple record keeping tools to support the above;
- That we develop and implement a training programme on agro-ecology so the food they are growing is done so in a sustainable manner and can be marketed as such.

NTSHAPEU PROJECT VISIT, AUGUST 27, 2008



Site description:

Project is situated north of Brits, (25.551423 S 27.772583 E), close by to the Peoya Balemi Project. There are 5 members in the co-operative and 6 labourers are employed. The total size of their property is 22.38 ha.

They have a dam, which receives water from the local canal system. They receive 1800 cubic litres of water per month and pay R1200-00 for it. They cannot pump the dam

water, as the power at their property is single phase and the pump that was installed by the NDA is three-phase. It would cost the project ± R 53'000 make the necessary power changes.

The dam has been damaged near the top of the dam wall and is leaking.

They flood irrigate most of the portion of vegetables that they are growing presently. The water is of questionable quality and needs to





be tested. Evidence of salt build-up is found in the fields that are flood irrigated.

They have a functioning borehole and a (apparently strong) capped borehole without pump. The respective yield and

water quality is not known to the group and need to be tested. They use some overhead sprinkler irrigation with the borehole water on the existing vegetables.

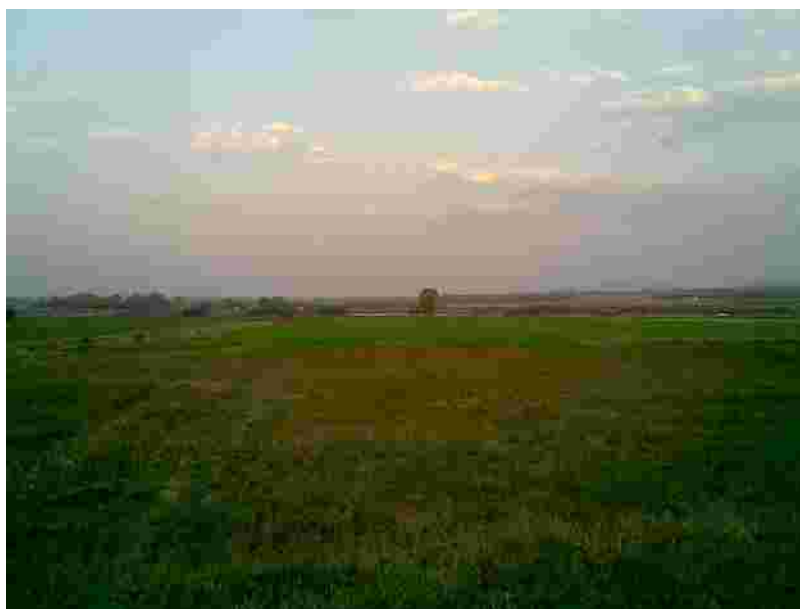
The group has 3 unfinished broiler houses (paid by the department of Agriculture, but have no floor, power connections, infrared heaters, feeders or drinkers). The houses measure 4m x 20m. The houses are standing empty and their chickens are housed in a barn close to the home. The cost of the bought in feed is so high, that at this scale this is a loss making enterprise.

The group grows a variety of seasonal vegetables on a portion of the land below the dam. The soil is a deep turf soil, for which this region is known for. Some borehole water is used for irrigation through the overhead sprinkler system. She mainly uses her chicken manure to fertilise, although some artificial fertiliser has been added.



Anna makes an attempt to collect weeds and chicken manure (also from a neighbouring farm) to compost. However, this is not done correctly and most of the nutrients are dissipated.

About 10 ha of the land on the eastern side, near the railway lines, are growing wheat. Anna tells us, that she paid R 23'000 for seed and R 23'000 for the fertiliser, plus she added an additional 10 bags of urea. It is evident, that Anna will not make any profit from this wheat enterprise. There is evidence of some nitrogen deficiency in the crop and the wheat will need additional top-dressing, which she will do with chicken manure.



Anna would like to bring her 3 cows and 5 pigs to the farm, which are still currently in Hammanskraal.

Around half the property lies fallow at present, some areas have been burnt. There is a large stand of (alien) Spanish Reed (*Arundo donax*) in the western corner of the property, below a grove of eucalyptus trees. This is apparently where in the rainy season the water from the mountains across the road collect. This is a good resource for the farm.

The labourers live in poor conditions and sanitation is inadequate. The overflow of a poorly functioning septic tank is led to the surface and into a separate vegetable growing area.

Recommendations:

This property and project has all the possibility to become a wonderful model of an integrated farming system. It is therefore our recommendation that:

- Together with Peoya Balemi a two-day workshop is held to expose the group to the ideas of Zero Waste, Multi-



culture/Integrated Farming/Polyculture. Out of this we can develop with the group what it is that they want to implement.

We suspect that this will be some or all of the following:

- That a comprehensive design and farm production plan is developed;
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- That a solar borehole pump and suitable (drip) irrigation be provided (the borehole has been tested, and those test results will be sent to us);
- That we speak to Marne de Langa regarding design and implementation of rainwater harvesting with appropriate tanks – we have a design that is suitable for round roofs - rondavels;
- That the chicken enterprise is reduced to one house and converted to free-range and the other houses be converted to possibly mushroom growing, food drying and processing etc.;
- That aquaculture be practiced in the repaired dam, linked to feed from vermi-composting and chickens, etc.;
- That the dam also produce in the form of aquaponics – for food, animal feed, fish feed, etc.;
- That we assist with transport of her livestock to site, as this will greatly add to the fertility of the land.
- That we choose and implement appropriate agricultural practices for all the enterprises;
- That we develop and teach a simple accounting system to understand farm finances;
- That we develop and implement simple record keeping tools to support the above;
- That we develop and implement a training programme on agro-ecology so the food they are growing is done so in a sustainable manner and can be marketed as such.

Visit to Hartbeespoort Dam

We began by meeting with Louis Crowkamp, of Vermiculture Africa, who is responsible for the vermicomposting of the collected water hyacinth.

He is doing really good work, and is converting the hyacinth to a valuable product. He is very passionate about this project, and is worthy of our support.



He has constructed some pine beds for the process, and other than the fact that the wood is treated with a harmful chemical (on which we will make recommendations) the system is sound.



Recommendations:

- 1) That an assessment that I will do will indicate the type of support the project needs. It is clear that the approximately 40 cubic metres processed daily is at the level of a “holding pattern”, and will require both ramping up of production, as well as additional and different types of processing of the hyacinth.
- 2) That simple support be immediately provided – for example, watering cans for the wetting down of beds, currently (as seen on the previous page) done with hand splashing from a bucket.
- 3) That suitable alternative materials be identified for construction of the beds – alternatively, that a drained bed system be discussed with Louis as an alternative. Horizontal and possibly vertical options will also be discussed.
- 4) That potential for other hyacinth value adding process be assessed and reported on, for implementation.

Meeting with Ubuntu Water

We also met with Julius Van Der Merwe of Ubuntu Water, who is responsible for many monitoring projects. We have had limited followup discussion, but this will increase soon. We believe that identification of sources of pollution will prove critical to the success of the pollution avoidance programme in the planned toolkit.

Algae



While time ran out to discuss the algae project, we will research this issue and see what can be done to support this further. A meeting around this (and other) issues will take place in future.

Meeting with Peet Venter and Seakle Godschalk of Environmental and Sustainability solutions.

Copies of the integrated licence were received, and will be scanned for comment and possible additions.

Information regarding 43 projects in and around the dam will be sent by Seakle Godschalk for our perusal, so that we are up to speed on what is happening currently. This will then inform the way forward.

The IZWA will also scan the draft guidelines, and make input into this process as well.

Conclusion:

From the community perspective, it has become abundantly clear that the model being used for emerging farmers is both unsuitable and unsustainable. Depending on feed prices, it appeared that the average feed bill per chicken, for example, was in the order of R20 – and the chickens being sold at R25 – R35, meant that between R5 and R15 was seen as profit; however, the input costs excluded water and labour, as well as stock losses. It would be prudent to assume that these are actually loss-making enterprises.

In the case of Sister Anna (Ntshapeu), she was advised by the DOA to plant 10 hectares to wheat – according to her, this cost in the region of R50 000 – she has yet to pay the person who assisted her with the ploughing; water; labour; etc – and the current wheat price, married to the condition of the wheat that we saw, implies that she would be lucky to produce 2 tons per hectare (total 20 tons), and at a price of R3000 per ton (assuming the quality is good), her gross income will be in the order of R60000 – R10000 for the cost of ploughing, water, labour and profit margin. Clearly untenable.

It would be extremely valuable to develop and implement some basic financial training for all community projects, as this level of financial literacy was also evident in the Western Cape projects.

Another factor is the “package deal” approach used for (for example) chicken farming. A standard shed is delivered, without floors or electricity or water, and this is seen to be adequate. The unused state of these sheds speaks for itself. No attempt is made regarding local relevance, economic sustainability, and the like. It will prove valuable in the long term to see if some interventions cannot be made with the Department of Agriculture.

The use of expensive fertilizer is also an issue, as prices have increased dramatically over the last year or so, and signs are that this will not drop in the near future. Local systems to build soil fertility are more urgent than ever.

The above confirms that the approach being used by IWRM is a far superior one, and should become the model for all agricultural interventions in future.

Hartbeespoort Dam Projects:

It is recommended that the vermicomposting project be considered for support. We shall investigate what is required, and forward same.

Otherwise, recommendations as per above will be implemented.

Questions for clarity:

- 1) How does our proposed process link up with existing plans for projects?
- 2) Given that communities have been granted funds, have all these funds been allocated, or will the budgets need reshuffling once the consultative and practical assessments are complete?
- 3) Can funds be made available (if necessary) from additional sources, should the existing amounts not be adequate?

Way forward:

The IZWA will design, develop and implement, a training programme for the community projects.

The relevant documentation (guidelines, etc) will be perused and commented upon as they are made available.

The research will be ongoing towards supporting existing projects, with a draft financial plan being developed for discussion and decision.

Acknowledgements:

Thank you to all who made these visits possible. It was great seeing people from the workshop again!

The team from SANGOCO and Tshiamo Matabane did sterling work.

Future visit Recommendations:

Ideally, we should all be familiar where each project is; however, it may assist in the meantime, to have the GIS locations logged. This will assist with future efficiency.

Report prepared by IZWA

Muna Lakhani
Thomas Linders