Food for thought
Prepared by Jeen

In view of the upcoming water group meeting and the agenda, please find below some considerations per subject on the agenda of the water meeting.

a. Progress of the study and Jeen’s work
Progress is now picking up fast and chapters resources and demand can be completed within a few weeks. I have used this mission mainly to formulate these chapters and to have more insight in the complexity of the situation. Apart from this, I have updated the budget with Gilles, discussed with an expert about desalination and the related cost and have discussed with a national expert about a full scale pilot for treatment of Pondi sewage. I furthermore have started the chapter on water supply preparing a multi-criteria analysis matrix and discussing with the subject coordinators on their specific subject.

b. Planning of the study
As the financing of the additional work on groundwater has been agreed only recently, results will come in end of April. Reason is also that the geophysical measurements to be done, have to wait for drying up of the toplayer. That means that the chapter on resources can only be finalized by end of May. Most of the report can be written without this knowledge. However as groundwater resources currently play and in the future are likely to play an important role in Auroville’s water, completion of the study without this information is not realistic. I therefore propose to shift the deadline for the draft report to end of June.

c. Matrimandir
Developments at Matrimandir are going very quick at present. That in itself is good, however in the course of the process many opportunities are missed in terms of integrated water resources management and discussions are a bit troubled by different agenda’s that do interfere with the process of the pre-feasibility study.

Process
The pre-feasibility study was started to objectively evaluate and conclude on a most suitable integrated water management concept for Auroville and the project area. The study covers also the MM lake and the way in which the lake can or can not function as part of the entire system. Discussions now ongoing and actions planned are surpassing this exercise. This raises the question whether the chapter on MM lake can still be written as foreseen or perhaps should be sped up in order to keep pace with MM developments. The outcome of the chapter may likely be the there is a very limited role for MM-lake in the water resources system, that certain measures are conditional to the success of the lake as real component in the water system. The present discussions on MM and actions foreseen on the short term tend to be contradictory to this. A consensus from the watergroup on how to approach this would be highly desirable.

Particular agenda’s from people that are persuaded strongly are not appreciated by all. Pushing ideas against the obvious opinion of a majority works counterproductive both in the water group and in the entire community.

Gardens
The process of the design of the gardens will soon start. A workshop on the design is foreseen one of these days and from water management point of view, there are no criteria to be given to the designers, if this would be discussable at all. For example, part of the gardens could be designed to function also as rainwater infiltration basin, through landscaping combined with the use of porous surface materials (rock garden). This should be done on the areas with high permeability, which already have been identified. Also the water demand from the garden has been estimated at 300 m³/day and whereas there is a general consensus that this demand is very high. The Water Seminar in September 2004, gave as recommendations to AV to work more on integrated water resources management and control of demand: “there is water enough, just manage the demand and the resources properly”. Why not give to the garden designers as design criteria a maximum irrigation consumption for the entire area and based on the type of garden and the subsoil perhaps even per garden or zone/group of gardens. In itself it will directly effect the water requirement and a secondary effect will be that also people will be made conscious about the water consumption of a garden and its different elements.

Pathways in the gardens and outside the gardens are being constructed without concern of rainwater harvesting and infiltration. These are important opportunities that are being missed. There is no system to collect rainwater on the side of pavements or to infiltrate water below the pavements. Again the water group could agree on recommendations for the MM team.

Lake and filling of the lake
Discussion are ongoing on the lake and the pilots to be carried out. In itself, I believe that there is nothing against construction of the oval channel and using the existing pits with some landscaping to study on a pilot scale the effectiveness of different types of ling, shores and water flora. However, the statement that the inner shores should be vertical or at least steep and should use the gabions proposed by LGA is contradictory to the statement that the different types of shores should be subject to experimentation.

The filling of the lake with rainwater is a logical choice. To fill it with desalinized water is ‘a few’ steps too far for me. I believe that introducing desalination in this way and for this purpose will create an enormous opposition, not only against the method but also against the entire lake and perhaps the MM-team. In this context I do not think that it makes any difference where the energy for desalination (solar or wind) comes from. The method is not appropriate in the local context and is not chosen after careful consideration for integrated water resources management.

I have no objection against filling the MM lake with groundwater from high yielding wells, as long as one can prove that the groundwater balance (preferably from the MM) is even or preferably positive. With other words, if the MM infiltrates the same amount of water as it pumps up, from groundwater point of view I have not much against it. To determine whether it is on the long term sustainable (with a larger lake) will follow from the pre-feasibility study and the work that Sophie Violette and Aude Vincent with HARVEST are doing presently and that will be concluded early 2007.

Roger’s MM-Lake vision
We all know that Roger’s lake vision as I received it in October towards the end of my mission is an impossible one. His demands are contradictory and esthetics in his perception can simply not be combined with a significant role in water resources. What to do. Let him discover this at the end of the feasibility study? This is not realistic because the fact that his proposal is contradictory is by now well spread. The fast development around the MM in my view necessitates a different approach, but which?
d. **Budgets**

Gilles and undersigned have prepared a budget overview. Attached you will find the original budget and the revised budget. As you can see, the budgets for Harvest and Dirk have been increased.

Harvest has been faced with an enormous jump in cost of pump tests that could not have been foreseen. Included are now also the geophysical investigations that are required to analyze the situation of the aquifers around the Pondi Sewage farm and in the coastal area.

Dirk has involved a German expert in desalination cost and renewable energy that he shares with another organization. Also expenses for long term local staff have been included for ......

A brief discussion was held by Gilles and Jeen with Carel last Thursday as agreed. It was agreed that we would request Michael to continue financing the work of LGA, Dirk and Jeen. The received funds (€ 38,500) for the pre-feasibility study are enough to cover the revised budget estimate from the others (€ 39,000). Michael would be reimbursed from the budget for the feasibility study which will then have to be increased with this amount. In view of the work to be done, involvement of foreign experts and financing from A4A, it is believed to be feasible.

c. **Project formulation for Aqua for All**

Attached you will find a draft letter for Toby Neumann and a concept project brief with supporting information for your consideration. This project brief was prepared by Jeen and Gilles keeping in mind the results of the discussions with Toby in NL and in AV. We need to discuss and agree how to approach Toby and with what.

Those that can not be present at the meeting are invited to give their written comments that will be used during the meeting as well if received in time.

Warm regards,

Jeen Kootstra