



Netherlands Commission for
Environmental Assessment

Review of the 'Social Impact Assessment of the Post Tsunami Reconstruction of Vilufushi Island, Thaa Atol, Maldives'

Memorandum by the NCEA

16 January 2007



Advice of the Secretariat of the Netherlands EA Commission

To PWC/Ecorys, ORET-programme
Attn Mr Wiegand and Mr Spit
From Ms Ineke Steinhauer and Ms Trudi van Ingen (technical secretary
and working group expert of Netherlands Commission for
Environmental Assessment)
Date 16 January 2007
Subject Review of the 'Social Impact Assessment of the Post Tsunami
Reconstruction of Vilufushi Island, Thaa Atol, Maldives'
By: Secretariat of the Netherlands Commission for EA
Advice 2007-001

1. INTRODUCTION

In March 2005, FMO invited the Netherlands Commission for EA to advise on the process and contents of the EIA (Environmental Impact Assessment) for a proposed ORET-project for land reclamation of Vilufushi island in the Maldives. The Commission fielded a mission to the Maldives to draft Terms of Reference (ToR) for an EIA-study. These ToR have been published in July 2005. In November 2005, the Commission has been asked by FMO to perform a review of the EIA-report. This advice has been published in December 2005. By the end of 2005, the ORET-application for this project has been approved by FMO, under the condition that a socio-economic addendum would be prepared.

The specifications for the content of this socio-economic addendum were sent by FMO to the Maldives on May 19, 2006 (see annex 1 to this Advice, also annex 1 of the final Social Impact Assessment Report).

The Social Impact Assessment report was sent to the Netherlands EA Commission on December 11, 2006 (see annex 2), with the request to review the report. Below the review findings are given.

2. OBSERVATIONS ON THE SIA

2.1 General Comments

The SIA gives a good description of the pre-tsunami situation at Vilufushi, although some elements are missing (see below). It also gives a description of the present situation at Buruni Island¹ although this was not required in the ToR for this SIA.

¹ During its visit to Buruni in June 2005, the Commission found insufficient rainwater harvesting facilities, poor provision of clean water and contaminated wells for the Vilufushi community at Buruni.

The SIA gives due attention to the concerns of Vilufushi residents related to the impacts of the reconstruction. The biggest concern is that the provided plots are too small for home gardening, fish processing and thatch weaving, an impact especially disadvantageous to the income generating activities of women. The SIA does not give recommendations to solve or mitigate this issue.

In general, the SIA is weak in formulating recommendations to avoid or mitigate negative impacts. For example, the SIA does not give recommendations for the issues of the needs of large extended families. Stating that the Ministry of Planning and Development will review the issue for the large extended families is not really a recommendation.

It is not explained that this SIA is an addendum to an EIA-report that already has been completed, and that reconstruction works were already taking place during the assessment. It is therefore unfortunate that it has taken so long between establishing the ToR for this SIA (May 2006) and receiving the completed SIA (December 2006). This leaves very little time for implementing recommendations to improve the SIA, or to mitigate negative impacts.

2.2. Comments per issue

2.2.2. Plot size

There is no doubt that the Vilufushi community in general see many advantages (reconciliation of the dispersed community, return to the vicinity of their fishing grounds, economic development, and better public infrastructure) and is supportive of the Reconstruction Plan.

It also becomes loud and clear that the major concern is about the plot size (2000 sq ft). Four out of eight negative issues mentioned in table 7.1 are about the plot size (the other issues are all about lack of information), and all concerns about future income generating opportunities in table 7.3 are about the plot size. 85% Of the housing plots previously were larger than 2000 sq ft (page 52). It is even a concern of all stakeholder groups (table 7.4). In the Plan, the size of plots and houses is uniform, based on the national average size of a family (7 persons), which does not take into consideration the big variation in family size (varying from 1 to 26, table 7.1, the majority of families having 8 or more members), and the economic activities undertaken at the home compound (growing fruits and vegetables, fish processing, thatch weaving and rope making), especially by women.

Hence, if the actual housing plan is implemented, women will be seriously disadvantaged compared to their pre-tsunami possibilities in their income generating potential, and they will have less possibilities to supply their families with healthy, nutritious food. The possibility of gardening beyond the compound is mentioned (table 7.1 and table 7.3), but it does not become clear from the Plan (annex 2 to the SIA) where this should be.

This issue is not mentioned in the SIA. Does this mean that this issue is solved now? What has been done to improve this?

The response from relevant organisations is mainly that they cannot do anything (Red Cross, Disaster Management Centre, Ministry of Housing and Urban Development), or that they will look into the issue on behalf of large extended families (Ministry of Planning and Development). Especially the response of the Red Cross is disappointing, because during the visit of the Commission in June 2005, the British Red Cross Head Quarters in Male said that they would take these concerns into account. Has the consultant spoken with the people at Head Quarters?

On page 50, according to the heading (7.5.1.), the report discusses the issue of housing plots being too small for extended families. Actually the size of the plots is not the issue discussed here, but moreover the number of houses planned (250) not being sufficient compared to the demand (pre-tsunami there was already a demand for 300 houses). This is an additional, different kind of problem.

2.2.3 Economic activities

Although section 5.4 gives a good description of (income generating) activities of men and women, unfortunately relevant figures are not given. E.g. in relation to the impacts of the reconstruction project, it would be more interesting to know how many women were using their home compound for growing fruits and vegetables, fish processing, thatch weaving, etc, than the number and kind of shops. If figures would show that, for example 75% of the women need space on their home compound for income generating activities or feeding the family, this would have been an important argument to force others to look into the issue of the plot size (not just for extended families).

2.2.4 Population and housing

In 5.3 some questions remain about land tenure. Was a piece of land allocated on request for free? Did people move to bigger/smaller houses/plots when the family situation altered? Were there any property rights? This information is relevant, also to establish a mechanism to allocate plots in the new situation. The SIA does not provide information on how this will be arranged.

2.2.5 Recommendations in the SIA

The SIA only contains two recommendations:

- to consider building additional houses on a loan scheme (4, page 60) and
- to include transitional support and development assistance such as credit facilities during relocation (6, page 60).

The other 'recommendations' are rather statements. The fifth "recommendation" (that if housing plots are allocated on a loan scheme based on a nuclear family, the home gardeners, thatch weavers, rope makers and the community in general will be content) is not very clear. Does this apply to all the houses or for additional houses on top of the 250 planned? Clearly, this will not solve the issue of the plot size for the 250 houses planned.

Altogether, plot size being a major issue it is deplorable that this is not addressed in a firm recommendation.

2.3 Missing information (ToR, May 2006)

The SIA has failed to provide the following information which was asked for in the Terms of Reference:

- On the new Vilufushi: information about provisions for domestic water supply, waste water disposal and treatments systems, and solid waste disposal systems;
- Measures to be taken to anticipate potential problems at Buruni Island after the departure of Vilufushi residents;
- A monitoring plan on socio-economic developments (population growth etc.)

As to the first bullet, it therefore remains unclear whether there were any problems with the water supply and sewerage system that should be solved after reconstruction. How was garbage disposal organised? Were there any problems that should (or will be) solved after reconstruction?

In relation to Buruni (second bullet), the SIA does not give information on what will happen on Buruni in 2007. Will temporary housing be demolished? What impacts can be expected as a result of less economic activity?

And finally, no monitoring plan has been provided on socio-economic development. Will this take place? And if so, how and by whom?

2.4. Detailed comments

2.4.1 Approach and methodology of the Study

The study has been conducted using a participatory approach, and has made a good attempt to get the points of view of different interest groups of Vilufushi residents as well as of government departments and non-government organisations. Members of the Island Development Committee and the Women's Development Committee have been interviewed in Focus Group discussions, but these Committees were not interviewed separately. Separate interviews could have specified their official points of view concerning the negative impacts of the reconstruction plan, and thus give it greater importance in efforts to address these.

2.4.2 Inconsistencies in data, facts and figures

The reliability and the usefulness of some data, facts and figures is questionable, especially in relation to:

- the total surface area of the original island,
- population size/density of Vilufushi and Buruni and
- data provided in Table 5.1 on Vulnerability and poverty.

This can be a serious shortcoming, especially if conclusions are drawn from it without comparing it with other data or the perceptions of the Vilufushi residents. In annex 3, the Commission gives detailed examples of these inconsistencies and gives some recommendations.

2.4.3. Appendices

A separate appendix with “References” is absent. The picture of the proposed land use plan (annex 2) is too small to read.

3. CONCLUSIONS AND RECOMMENDATIONS

The Commission is of the opinion that the observations on the SIA in 2.2. and 2.3. are essential shortcomings. Therefore, it is recommended to provide additional information on these items. The observations made in 2.4 are less important, but can be repaired as part of the supplementary information.

The Commission finds that out of these issues, the plot size problem is the most serious one, also from a sustainability point of view. The issue has been raised frequently and unanimously. Will a reasonable standard of living be possible on a sustainable basis if there are no possibilities for fish processing or home gardening in future? Will people return at all to plots of 2000 sq. ft. whereas the average used to be 3000 sq. ft.?

The Commission is of the opinion that it should be possible to address the issue of the plot size without violating budgets, laws, rules, regulations, principles or other arguments of organisations for doing nothing about the problem. Providing the support of a good team of facilitators (from Red Cross and relevant government departments and/or an independent facilitator), the community could make their own plan, based on certain conditions and limits, e.g.:

1. 250 houses will be built;
2. The total area of the plots will not exceed $250 \times 2000 = 500000$ sq ft (so bigger plots will have to be compensated by smaller plots);
3. Plot sizes can vary between 600 and 4000 sq ft (regulation of Ministry of Housing and Urban Development);
4. The plots will be situated in the areas intended for housing; the Reconstruction Plan remains unchanged for the other destinations;
5. The new plan should not exceed the existing budget.

Knowing the pre-tsunami situation, the community should be capable of proposing an alternative with variable plot sizes (the technical drawing up of the plan could be done by the relevant organisations) that is more conforming to the needs of the residents. With extra houses (pre-tsunami there were only 227 houses on the island) there should be some space to divide some large extended families or to place them side by side. This way solving the problem (or at least satisfy the majority of households) should not cost much extra time and effort, or money. If the community should not be able to come up with an alternative (provided that they are facilitated in the best possible way and given sufficient time), the original plan could be implemented. Surely, the Red Cross could find a way to include this in its Terms of Reference. The “house for a house” principle stays intact this way, and different plot sizes are according to government regulations, so this ensures consistency of government regulations.

Annex 1

Reconstruction of Thaa, Vilufushi ToR Socio-economic Impact Assessment

Overview of the specifications to the La Mer Proposal, as discussed on Thursday, May 18, 2007, between

- Mrs Aminath Lateefa, consultant La Mer
- Mr Christian Veraart, Boskalis
- Mrs Trudy van Ingen, advisor to the Netherlands Commission for EIA
- Ineke Steinhauer, Netherlands Commission for EIA
- Anton van Elteren, FMO

The study will consist of three main sections:

1. Description of socio-economic data of the pre-tsunami situation:

- Demography: total population, population structure, sex ratio, density and growth, and population pressure on land and marine resources;
- Economics: income situation and distribution, economic activities of both men and women (e.g. fisheries, home gardening, fish processing), fishing methods, seasonal changes in activities; land use planning, land tenure and land allocation, public transport and accessibility to other islands;
- Social and living conditions: social cohesion and stratification, present inequities, political and power structures (formal and informal), services quality and accessibility (water supply, waste/water disposal, energy supply, social services such as health and education; living conditions (e.g. size of plots, houses and households; (in)formal social organization of the inhabitants, including role of women.

To a large extent the socio-economic baseline information described in the EIA-report (chapter 7) can be used.

Information that needs to be added (see Advisory Review of the EIA, page 6):

- *Economic activities of women (e.g. fisheries, home gardening, fish processing)*
- *Pre-tsunami land & natural resource use*
- *Pre-tsunami practice of land tenure and land allocation*
- *Social cohesion and stratification*
- *Pre-tsunami inequities*
- *Informal political and power structures*
- *(In)formal social organisation, including role of women*

2. Description of socio-economic impacts in the follow-up phase, including recommendations to avoid or mitigate possible negative impacts:

- Size and allocation of houses and plots, including possibilities of home gardening, and in relation to compensation for losses;

- Impacts on food and nutrition security (fisheries, agricultural activities, supply of food);
- Social services like health and education;
- Impacts of resettlement: risk of conflicts between Vilufushi residents and “new” residents;
- Employment and economic opportunities and diversification;
- Increased demand for natural resources and services; domestic water supply, waste water disposal and treatment systems, solid waste disposal systems, energy supply etc.;
- Impact equity (economic activities, employment and income);
- Social destabilisation of the island community;
- Measures to be taken to anticipate potential problems at Buruni island after the departure of Vilufushi residents;
- Monitoring of socio-economic development (population growth etc).

Emphasis should be put on the issue of size and allocation of houses and plots, which is a major concern of especially women of Vilufushi, given the large differences in number of family members living in one house, and the need for the possibility of home gardening for part of the women. What are the concerns and the wishes of the women and to what extent have or will the relevant government departments and the Red Cross adapt the existing plans for these concerns?

3. Recommendations

The results of the SIA will be presented with clear recommendations as required to make the follow-up phase compliant with applicable standards.

Methodology

- *In addition to the planned consultation with the relevant government departments and the Red Cross, the role of the UNDP and of other organisations (NGO's?) needs to be checked.*
- *For the planned focus group discussions, it is important to interview the local leaders (male and female, formal and informal) separately, and also to get the views of different interest groups (e.g. fishers, fish fryers, businessmen, shopkeepers) separately.*

Annex 3

Examples of inconsistencies in data, facts and figures

Example 1: Inconsistencies in total surface area of Vilufushi

Paragraph 5.1 of the SIA indicates that the total land area of the original island is 13.5 ha, while the EIA-report mentions 16 ha. Section 6.2.1 subsequently states the surface of Vilufushi being 14 ha, while it was 16.5 ha (all in) according to the EIA-report (page 99). Because the sources of these figures are not given, it is not clear which one is accurate. Because precise calculations were necessary for the reconstruction proposal, allegedly the 16 ha is the correct one.

- It is recommended to synchronise these figures.

Example 2: Inconsistencies in numbers in relation to population size and density

Section 6.2.1 gives a figure of 1262 Vilufushi residents (pre-tsunami), while in section 5.3 a number of 1882 is given, which is more consistent with the number given in the EIA report (1883). With the given numbers in table 6.2 the calculated population density should be 90 persons/ha and not 93. The EIA report gives a density of 114 persons per hectare. Likewise, the population of Buruni is 229 persons, while according to the EIA report (page 98) Buruni had 578 in 2000. Did half of the population leave? Why? In table 6.5 the total population of Buruni island is 561, but with people working or students in Male or on other islands, there are only 329 people left on the island.

- It is recommended to provide the correct figures.

Example 3: Table on Vulnerability and poverty of Vilufushi in the national context (5.1):

This section compares and discusses the Human Vulnerability Index (HVI) of the Maldives, Thaa atoll and Vilufushi in 1998 and 2004. According to the text the composite HVI is composed out of 12 living standard indices, while there are 13 indices given in table 5.1 (recreation HVI being the 13th one), this is confusing. It is probably because the figures are copied from the "Vulnerability and Poverty Assessment", 1998 and 2004 (Ministry of Planning and National Development)" report, and this gives this recreation index too. But then this should have been explained or discussed. Furthermore it is not clear how the composite HVI is calculated. Adding up the separate indices gives different figures (which is not explained by leaving out the recreation HVI), e.g. for 2004 3.7, 4.0 and 4.0 for the Maldives, Thaa Atoll and Vilufushi respectively. Calculated this way the differences between the three are less significant than suggested in the text (page 17). Worse, the Assessment report gives Vilufushi a 2.7 as composite HVI, and not 3.5, which makes Vilufushi better off than the Maldives average (2.9) or Thaa Atoll average (3.2), a conclusion contrary to the one given in the SIA. The difference could be

explained by a weighted calculation of the different indices, but again, this is not explained in the text. The difference could also be explained because not all the figures are copied correctly from the above mentioned report. For example the income poverty index of the Thaa atoll was 0.48 in 1998 and not 0.29, and 0.08 in 2004 and not 0.14 (page 233 of the Assessment report), the electricity index for the Maldives in 2004 was 0.01 and not 0.1 (page 236), 0.44 for Thaa atoll in 1998 and not 0.23 (page 239), etc.

Other figures are questionable, e.g. the transport index went from 0.0 to 1.0, meaning from an ideal situation to the worst possible situation. This seems to be contradicting paragraph 5.5.5 at page 24 where the suggestion of regular transport possibilities is given (but frequency is not mentioned) and the EIA report, where it is stated that “accessibility to the Atoll capitol and to Male used to be good with frequent sailings to both destinations” (page 100). It could be that, according to the indicators used for transport, the index figure is correct, but in the SIA this is not compared with the perception of the island residents on the transport situation pre-tsunami.

Because the “Environment index” is mentioned (as not being improved), this should have been explained. From the Assessment report it appears that it is not an index for the natural environment but an index based on what kind of fuel is used for cooking, number of families without a toilet, whether toilets are connected to the sea or a septic tank, population density, level of beach erosion and how garbage is disposed of.

The drinking water index seems to have deteriorated since 1998 (from 0.28 to 0.38). Isn't this an issue to mention, so that special attention could be given to this issue after the reconstruction?

- It is recommended to give an explanation to the questions raised above and to give a clear conclusions with a correct justification.