

## **Ramsar Advisory Mission No. 59: Tanzania (2008)**

**17-29 February 2008**

### **Mission Report**

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## List of Acronyms

AEWA	Agreement on the Conservation of African-Eurasian Migratory Waterbirds
BTC	Belgian Technical Cooperation
CEPA	Communications, Education and Public Awareness
CMS	Convention on Migratory Species
COP	Conference of the Contracting Parties
DANIDA	Danish International Development Agency
DED	District Development Director
DPG	Development Partners Group
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EU	European Union
FCF	Friedkin Conservation Fund
GCA	Game Controlled Area
IMP	Integrated Management Plan
IUCN	International Union for the Conservation of Nature
LNCG	Lake Natron Consultative Group
LNRL	Lake Natron Resources Limited (a joint venture between Tata Chemicals Ltd. and National Development Corporation)
LNRS	Lake Natron Ramsar Site
NAWESCO	National Wetlands Steering Committee
NCAA	Ngorongoro Conservation Area Authority
NEMA	National Environmental Management Authority (Kenya)
NEMC	National Environment Management Council (Tanzania)
NDC	National Development Corporation
NGO	Non-Governmental Organization
RAM	Ramsar Advisory Mission
SEA	Strategic Environmental Assessment
SSC	IUCN Species Survival Commission
TAWICO	Tanzania Wildlife Corporation
TAWIRI	Tanzania Wildlife Research Institute
TGT	Tanzania Game Trackers
USAID	United States Agency for International Development
WMA	Wildlife Management Area
WWS	Wengert Windrose Safaris

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## EXECUTIVE SUMMARY

The Lake Natron Basin, listed as Tanzania's second Ramsar site in 2001, was nominated as a representative example of a Rift Valley soda lake that is the only significant and regular breeding site for the East African population (est. 1.5 – 2.5 million) of lesser flamingo *Phoenicopterus minor*. This population represents over 75% of the world population of this species. In addition, Lake Natron supports over 100,000 individuals of other waterbird species, including large numbers of Palearctic migrants and an endemic fish species.

Ramsar Advisory Mission (RAM) No. 59 took place from 17 to 29 February 2008 to provide advice to the Government of the United Republic of Tanzania concerning the wise use and future management of the Lake Natron Basin Ramsar Site, with particular reference to the proposed development of a soda ash facility that would abstract liquid brine from Lake Natron and process it at a nearby site.

The RAM held wide ranging consultations with local, district, national, regional and international stakeholders in Dar es Salaam, Arusha, Longido, Loliondo and at a number of villages/locations within the Lake Natron Basin Ramsar Site (Annexes 1 & 2). The details of the issues addressed during the RAM consultations with stakeholders and a full list of recommendations are included in this mission report.

Based on these consultations, the RAM advised the Ramsar, CMS and AEWA Secretariats to write to the Ministers of Environment and Natural Resources and Tourism immediately after the mission (and in advance of this report) to recommend that the review of the ESIA submitted by Lake Natron Resources Limited (LNRL – a joint venture between Tata Chemicals and the National Development Corporation) in September 2007 be suspended. This is because the RAM encountered a significant number of unanswered questions that require further clarification before an informed decision can be taken by the Government of Tanzania on the proposed soda ash facility at Lake Natron (Annex 3).

Following on from the recommendation to suspend the review of the September 2007 ESIA submitted by LNRL, the RAM further recommends that, if a soda ash facility is to be considered at Lake Natron in the future, a new ESIA be carried out on a detailed feasibility study that covers the full environmental, social and economic impact of the soda ash facility and its associated infrastructure.

Further, the RAM recommends that the Government of Tanzania should give priority to the development of relevant planning measures at the local and district levels, including a Ramsar site management plan (or at least, in the short term, a statement of management objectives). One of the options that should be explored during the planning process is the possibility of establishing Wildlife Management Areas (WMAs) in the existing Game Controlled Areas around Lake Natron for the purpose of enhancing community involvement in the management of Lake Natron and its environment, and to ensure that those communities derive benefits from tourism related activities. Should this option be

considered, there will be a need to explore and identify partners who can work with local communities and district authorities in implementation of the WMAs. Some of these could be existing concession holders in the hunting blocks within the area.

At the Arusha/northern Tanzania regional level, the RAM recommends that the Government of Tanzania investigate the scope for a Strategic Environmental Assessment of any economic development policies and plans potentially affecting Lake Natron.

Due to the transboundary nature of the Lake Natron ecosystem, the RAM recommends consultation/information exchange between Tanzania and Kenya regarding the management of Lake Natron's resources. In this regard, the RAM recommends that the Ramsar Secretariat provide technical and, if possible, financial support to the Government of Kenya to explore the possibility of designating those portions of the wider Lake Natron ecosystem which fall within Kenyan territory as a Ramsar site and to collaborate with Tanzania on integrated cross-border approaches to conservation and management of the wider Lake Natron ecosystem.

Finally, the RAM recommends that the Ramsar, CMS, and AEWA Secretariats explore with the IUCN-SSC/Wetlands International Flamingo Specialist Group, BirdLife International and the Tanzanian authorities the potential for a regional project based on the dispersal area of the East African population of the lesser flamingo (Tanzania, Kenya, Uganda and Ethiopia, plus possibly Botswana and Namibia). Such a project is urgently required to provide the information needed to help unravel some of the mysteries which still surround the lives and conservation requirements of the lesser flamingos that breed at Lake Natron.

## INTRODUCTION

The Ramsar Convention gives special attention to assisting Contracting Parties in the management and conservation of listed sites whose ecological character is changing or likely to change as a result of technological development, pollution or other human interference. This is carried out through the Ramsar Advisory Missions (RAM), a technical assistance mechanism formally adopted by Recommendation 4.7 of the 1990 Conference of the Parties (formerly known as the Monitoring Procedure and the Management Guidance Procedure). The main objective of this mechanism is to provide assistance to countries in solving the problems at particular Ramsar Sites related to the maintenance of their ecological character.

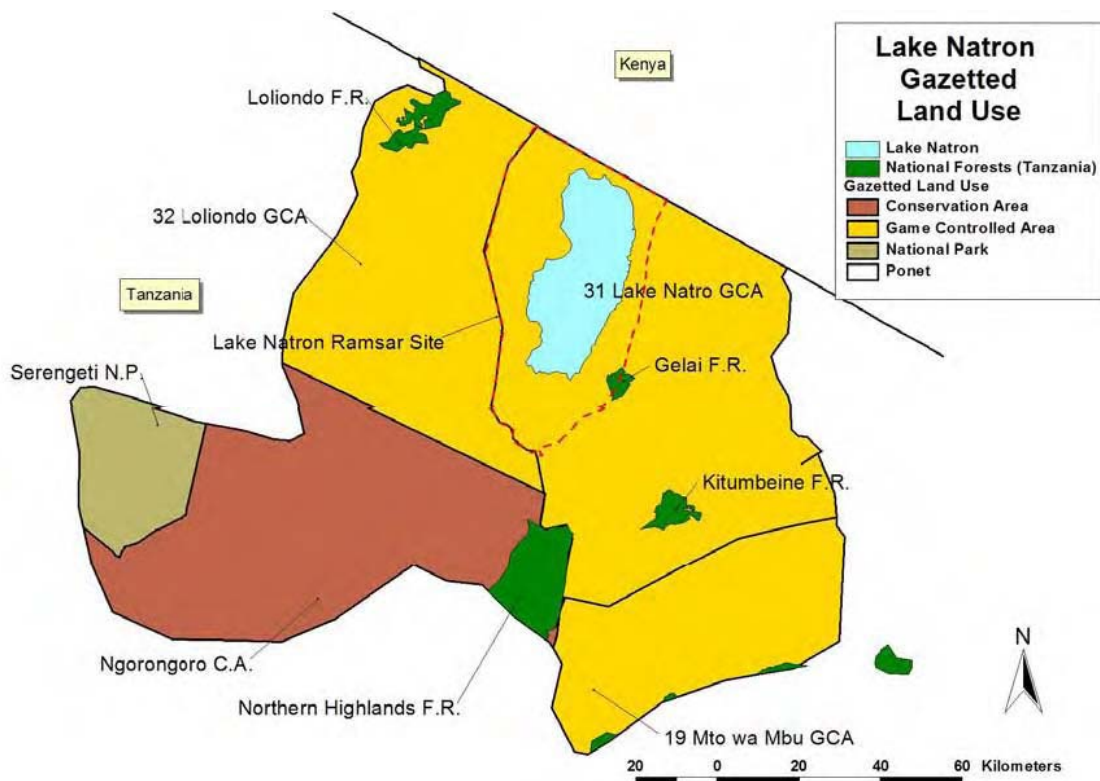
## LAKE NATRON BASIN, TANZANIA (RAMSAR SITE N°1080)

The Lake Natron Basin was listed as Tanzania's second Ramsar site in 2001. It was nominated as a representative example of a Rift Valley soda lake that is the only significant and regular breeding site for the East African population (est. 1.5 – 2.5 million) of lesser flamingo *Phoenicopeterus minor*. The East African population represents over 75% of the world population of the lesser flamingo. In addition, Lake Natron supports over 100,000 individuals of other waterbird species, including large numbers of Palearctic migrants. The fish species *Oreochromis alcalicus* is endemic to Lake Natron and Kenya's Lake Magadi.

Lake Natron extends approximately 58 kilometers south from the Kenyan border with a mean width of 15 kilometers but with a maximum depth of only 0.5 – 2 m. Although the surface area can reach up to 85,000 ha., there is considerable seasonal fluctuation in the surface area of the lake between the height of the dry season (November/December) and the end of the rains (April/May). The lake's principal inflow is the perennial Ewaso Ngiro river which rises on the Mau Escarpment in Kenya and flows southwards along the eastern edge of the Nguruman Hills. Seasonal drainage includes major rivers from the Loita Hills (rising in Kenya) and Loliondo mountains in the north-west, the Gol mountains in the west, the Ngorongoro Highlands to the south and minor streams from Mount Gelai in the south-east. The surrounding land is dry bush dominated by *Acacia* thorn-trees, and inhabited by pastoralist Masai. There are some small villages with seasonal cultivation along the riverbanks on the western side of the lake and a small settlement in the south associated with minor soda-extraction activities and a few small tourist camps. Otherwise the general area is sparsely populated, the lack of fresh water in the dry season controlling the populations of both man and livestock.

The western boundary of the Lake Natron Basin Ramsar site generally follows the top of the Rift Valley escarpment south from the Kenyan border but does not include the upper reaches of the Penini catchment in Tanzania and Kenya. The southern boundary goes east from the Rift Valley escarpment to encompass the crater of the active volcano,

Oldonyo Lengai, then turns northeast to the peak of Mount Gelai. The eastern boundary follows the Lake Natron catchment from Mt. Gelai to the Kenyan border. While the entire 85,000 ha. maximum surface area of the lake is included in the Ramsar site designated by Tanzania, the Ewaso Ngiro floodplain and the Emili Swamps are a natural extension of the lake's wetland ecosystem into Kenya and are currently unprotected.



**Figure 1: Gazetted Land Use in Lake Natron Area (from Norconsult's Lake Natron Soda Ash ESIA, August 2007, Executive Summary, p.6)**

## **BACKGROUND TO THE RAM**

Based on information received by the Ramsar Secretariat during 2007 from a number of stakeholders, the Ramsar Secretary General wrote to the Tanzanian Minister of Natural Resources and Tourism on 28 August 2007 to express concern about the possible threats to Lake Natron from the proposed development of a soda ash extraction facility and its associated infrastructure. Similarly, the Executive Secretaries of CMS and AEWa wrote together on 14 June 2007 to the Minister of Natural Resources and Tourism to express concerns over the possible impact of the planned development on the lake's ecosystem, the East African population of the lesser flamingo, and the species as a whole.

In his 28 August 2007 letter to the Minister of Natural Resources and Tourism, the Ramsar Secretary General offered to assist the Government of Tanzania in fulfilling its obligations under the Ramsar Convention through the services of a Ramsar Advisory Mission (RAM). On 30 August 2007, the Minister of Natural Resources and Tourism wrote to the Ramsar Secretary General welcoming the proposed Ramsar Advisory Mission in order to assist Tanzania "to extract soda ash from Lake Natron, while safeguarding the environment, in particular the breeding habitats of lesser flamingo."

It is worth noting that there are DANIDA resources available to produce an Integrated Management Plan for the Lake Natron Basin Ramsar site, and the RAM was seen as an opportunity to help develop a short-term plan for the site as a first step towards a long term integrated management plan.

## **ISSUES CONSIDERED BY THE RAMSAR ADVISORY MISSION**

### **Policy and Legal Issues**

#### **1. Issues related to the Ramsar Convention, AEWA and CMS requirements**

1.1 The RAM explored the ways in which, and the extent to which, the Ramsar Convention's provisions have been, or should be, reflected in Tanzanian policies and plans relating to this case, and in the decision-making process being followed. (The key provisions of the Convention relate to conservation of Ramsar sites, wise use of all wetlands, and international cooperation).

1.2 Part of the Mission's function in this respect is to help interpret Ramsar requirements and guidance as they apply to this case.

1.3 One question at a systemic level is whether Tanzania's laws and policies – i.e. the national Ramsar implementation regime – are sufficient to enable Ramsar requirements to be met. In relation to threats to designated Ramsar sites, these requirements include obligations or exhortations to maintain ecological character (Article 3.1, and see for example COP Resolution VIII.8), to take swift and effective action to remedy threats (see for example COP Recommendations 3.9 and 4.8, and Resolution VIII.8), to carry out Environmental Impact Assessments (implied by Article 3.2, and see for example Recommendation 6.2 and Resolutions VII.16 and VIII.9), and to undertake relevant forms of community participation (see for example COP Recommendation 6.3 and Resolution VII.8). These issues are explored further in the sections which follow below.



1.4 In relation to the latter point regarding community participation, one point made by community representatives was that they were unaware of exactly what their rights are in the present context. There may therefore be actions that could be taken in more general terms to address this issue.

1.5 The Mission met with the National Wetlands Working Group, which has around 35 members, from Ministries and other organizations, including NGOs and the private sector. They serve as a National Wetlands Committee, reporting to the National Wetlands Steering Committee (NAWESCO), a group of 9 Permanent Secretaries from different Ministries, who have responsibility for implementing the (global) Ramsar Strategic Plan. The Working Group has six thematic sub-committees dealing with: community participation; planning and management; inventory and monitoring; CEPA; research and training; and waterbirds/AEWA.

1.6 In its meetings, members of the Working Group have advised that a proper view of the application of Ramsar requirements to the soda ash plant development at Lake Natron would be to halt development of the project until it was clear that all impacts on the Ramsar site would be fully mitigated. However, for reasons that are not fully clear, this view has not been presented as consensus advice to NAWESCO.

1.7 Regarding AEWA and CMS requirements, to date the main way in which they have been dealt with in relation to the soda ash proposal is through the draft Single Species Action Plan for the lesser flamingo.

1.8 The Department of Mining, in the Ministry of Energy and Minerals, has responsibility for the Mining Act, under which mining licenses for sensitive areas are administered. The status of any licenses granted to LNRL is not clear, but any safeguards, conditions and restrictions provided for by this system should be relevant. The Mission was unable to discover details of how this system operates; although it was made clear that protected area status is not necessarily a bar to granting of licenses, since they can be awarded in National Parks and other such areas. It is understood that EIA is required both for exploration and exploitation.

1.9 The adopted Ramsar site management planning guidelines, most recently updated in Resolution VIII.14 and presented more fully in Ramsar Wise Use Handbook 16 (3<sup>rd</sup> edition, 2007), set the framework for the management planning/“Integrated Management Plan” ideas referred to further below and elsewhere in this report. The view was voiced to the Mission by consultees that they see a need for this material to be “translated” or “domesticated” into the Tanzanian context.

1.10 The Mission gained the impression that there was some pressure for a decision to be made on the soda ash proposal even in advance of the Mission report being submitted. The Mission wishes to counsel strongly against precipitate action of any

kind, and would request that good time is given by all the decision-making processes and stakeholders, to digest the report and evaluate the situation in light of the Mission recommendations before taking any further steps.

## **2. Issues related to Tanzania's National Wetlands Policy and Strategy**

2.1 An overarching consideration here is the timing of specific development proposals in relation to the timing of work on relevant policies and plans. Ideally, the best consistency with Ramsar wise use principles would be achieved by a sequence whereby legislation, national policies, local land-use planning frameworks, protected area status and protected area management plans were in place before specific development or land-use change proposals were considered, so that such proposals could be considered in their proper context and against such criteria and standards as might exist in the legal, policy and planning framework.

2.2 It is a feature of the present case that this sequence is somewhat reversed, where the specific proposal has come forward before some of these strategic frameworks are in place. There are dangers in this, not least that a case-specific decision may pre-empt the objectives of plans and policies that are in preparation. IUCN told the Mission that planning in the Lake Natron Basin area at present is “too *ad hoc*”. Conservation plans are not yet in place, and neither is there any economic development plan for the area.

2.3 In such a situation it would be wise, in the interim, to adopt a precautionary approach to any specific proposals, including the proposed soda ash operation.

2.4 Standards and international thinking on the concept of precautionary approaches are now in common currency. As one example, the concept is written in to the text of the Convention on Biological Diversity (preamble paragraph 9). As another, IUCN in 2007 produced *Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management*.

2.5 The concept would be applicable to much of what is involved in implementing the Ramsar Convention. As one example, Section VI of Ramsar Handbook 16 on *Managing Wetlands: Frameworks for managing Ramsar sites and other wetlands* (3<sup>rd</sup> edition, 2006) concerns “The precautionary approach as applied to environmental management”, and contains the following:

- “53. *When considering the carrying capacity of a site for any human use, activity or exploitation (i.e., its sustainability), the best available evidence should indicate that the activity will not be a threat to the features of the ecological character of the site.*
- 54. *Contracting Parties are, when implementing their wetland management planning process, invited to take into consideration the precautionary approach, as established in Principle 15 of the 1992 Rio Declaration on Environment and*

*Development adopted by the United Nations Conference on Environment and Development (UNCED), which affirms that*

*○ ‘In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’.*”

2.6 The baseline statement of the values at stake at the Lake Natron Ramsar site is the formally submitted Ramsar Information Sheet, which dates from 2001. Under Ramsar COP Resolution VI.13, each RIS should be updated every six years. According to the Tanzanian Wildlife Division there has been some talk of doing this, but no new information has been compiled yet. One issue which will need to be addressed is that the current water surface area of the Lake is smaller than in the original Ramsar site map; and it is unclear whether this represents a real reduction, a seasonal fluctuation, or is an issue of the accuracy of the original map.

2.7 There is currently no Ramsar management plan in place for Lake Natron, though the Integrated Management Plan discussed during the Mission and referred to elsewhere in this report will cover the Ramsar site area and will in effect comprise such a plan.

2.8 Ramsar Parties have adopted guidance on management planning for Ramsar sites and other wetlands on a number of occasions, most recently in Resolution VIII.14 in 2002. Consolidated guidance is given in Ramsar Wise Use Handbook 16 (3<sup>rd</sup> edition, 2007). There is no legal requirement for every Ramsar site to have a management plan, but it has increasingly become an expectation. Resolution VII.12 in 1997 urged that management plans should be in preparation, or in place, for at least three quarters of the Ramsar sites in each Contracting Party by the time of COP8 in 2002. Resolution VIII.14 “strongly urged” Parties to establish and implement management planning processes for Ramsar sites that do not yet have such processes and plans in place.

2.9 Full management plans can take time to elaborate. In a situation like Lake Natron, while that process moves forward, in the meantime a wise-use approach could be put in place first of all, building upon an agreed statement of management objectives for the site. This could then be one benchmark against which the compatibility of any specific proposals for the site could be evaluated.

2.10 The need for such frameworks is made urgent by the existence of the soda ash proposal; but it should be noted that the need also exists in relation to other potential threats impinging on the site – mention has been made of oil exploration and road development in particular; and the Ramsar Secretariat had occasion to write to the Tanzanian Administrative Authority in May 2007 about a tourist lodge proposal affecting the site. It is understood that geothermal and hydropower concepts could also arise in future.

2.11 Section 56 of the Environmental Management Act No. 20 of 2004 empowers the Minister for Environment, in consultations with the Minister responsible for land, to declare any area of land to be a protected wetland under this Act. Once so declared, conditions prescribed under section 55(2) of the Act shall apply *mutatis mutandis* to wetlands.

2.12 Section 55 and 56 (5) of the Environmental Management Act 2004 calls for guidelines and special measures for the protection of wetlands.

2.13 The Tanzania Wildlife Policy of 2007 is of key relevance to the present case, although it was adopted after the soda ash development proposal was submitted and after it had entered into the decision-making process. It includes a pertinent clause specifically on mining and Ramsar sites, to the effect that “the government is committed to ensure that wildlife and wetlands areas remain pristine to safeguard in-situ biodiversity and tourism products. Accordingly, all major development activities, including mining are prohibited inside core wildlife Protected Areas and selected Ramsar Sites.”

2.14 Implementation of this new policy now needs to be elaborated, probably by the development of guidance, including on how it impacts on other sectors.

2.15 It is understood that a new law to implement the policy is in draft; but the Mission did not receive a copy of this. However, implementation of this policy can be supported by the Environmental Management Act No. 20 of 2004 which calls for the protection of wetlands.

2.16 Also relevant to the policy context is the draft CMS/AEWA Single Species Action Plan for lesser flamingo (see Box 1, Section 23.9 below). This is due to be signed off at the AEWA Standing Committee in June 2008 and at the Meeting of Parties in September. The CMS does not have an equivalent formal sign-off process for such plans, but they may receive scrutiny through the Scientific Council and be brought to the attention of the Conference of Parties.

2.17 The National Wetlands Working Group produced a draft National Wetlands Strategy, which at the time of writing is being redrafted prior to being transmitted to Cabinet for approval. The Mission has not received a copy of this. In the meantime the Mission was advised that good use is being made of global Ramsar publications and that there are plans to translate the Ramsar Handbook on Community Participation into Kiswahili.

2.18 According to the representatives of relevant agencies who met the Mission team, donors judge the environmental acceptability of specific projects against standards defined in national legislation, such as the Environmental Management Act. In addition and to complement the national laws and policies, donor agencies

such as the EU and the World Bank apply their own safeguards, policies and standards.

2.19 Moreover, donors have made a major investment over the past decade in development of environmental legal framework and related measures in Tanzania, some of which has been motivated by international treaty obligations which the government has accepted. Denmark, Finland, and USAID helped with the development of the Environmental Management Act, and are currently assisting with development of the Regulations that will operationalise the Act. The donor community therefore has a clear interest in seeing not only that any specific development decision is acceptable in its own right, but also that it does not act so as to undermine in any way the assistance that they have given and are giving at the level of national law and policy.

2.20 In a similar way, donors have an investment in other ecological conservation measures in the country (e.g. USAID on critical habitats, catchment management and water resources; DANIDA on Ramsar site designation and management; DANIDA, BTC and USAID on Wildlife Management Areas; DANIDA and USAID on capacity development for implementation of Environmental Management Act), with which any economic development assistance ought to be compatible.

2.21 Overall, the considerations in this section above suggest that it would be desirable at national level to put in place the Wetland Strategy, the law to implement the Wildlife Policy, and guidelines and other elaborations of the Policy, before making decisions on the LNRL Natron project or any other significant proposal that is likely to lead to a change in the ecological character of the Ramsar site. Similarly at the site level, it would be desirable for all relevant planning and protection measures to be in place, including a Ramsar site management plan (or at least, in the short term, a statement of management objectives). At the district level, it will be important for the districts of Longido and Loliondo to have land use plans for all of the villages surrounding Lake Natron to guard against land use conflicts should one or more of the development proposals under consideration be implemented.

### **3. The Montreux Record**

3.1 The Mission Terms of Reference include the following item: “to advise the Government of Tanzania concerning the inclusion of the Lake Natron Basin Ramsar site in the Montreux Record if the Convention text’s article 3.2 applies”.

3.2 Article 3.2 certainly applies, and is part of the basis for the Mission being triggered in the first place (“Each Contracting Party shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference. Information

on such changes shall be passed without delay to the organization or government responsible for the continuing bureau duties specified in Article 8”).

3.3 The Montreux Record is a record of Ramsar sites where changes in ecological character have occurred, are occurring or are likely to occur, and was established in 1990 by COP Recommendation 4.8. It is maintained by the Ramsar Secretariat in consultation with the Contracting Party concerned.

3.4 The Lake Natron Consultative Group (a group of NGOs working on Lake Natron issues), in its submission to the Mission, have advocated adding the site to the Montreux Record. The Record helps to bring attention to challenges faced by Contracting Parties in maintaining the ecological character of their Ramsar sites, and is primarily designed as a problem-solving tool. (At times in the past it has unfortunately been seen in a negative light; but in fact is a potentially very positive form of assistance to Parties – see Ramsar Resolution VIII.8).

3.5 One of the actions that can result from listing on the Record is the initiation of a Ramsar Advisory Mission, in order to gather facts and make recommendations with the benefit of specially commissioned experts and an international perspective.

3.6 In the present case, a Mission has been activated without first listing on the Montreux Record, and so this potential benefit of listing would no longer be a reason for doing so.

3.7 The question is then whether there might nevertheless be other benefits of listing on the Record; and some consultees wondered whether this might now be a redundant step. When asked about this, LNCG saw listing as having merit in bolstering Tanzania’s political resolve to honour its Ramsar obligations in respect of the site.

3.8 In general, throughout the world, the Montreux Record is used in only a minority of the cases that properly merit it, and this has been cause for some concern in Ramsar circles. It could be said that it would have been preferable perhaps for Tanzania to have volunteered listing of Lake Natron at an earlier stage. That said, however, the Government has already positively moved to the next step of having invited a Ramsar Advisory Mission and requested its advice.

3.9 The Mission can suggest nonetheless that Tanzania might still gain some benefit from listing Lake Natron on the Montreux Record. It would be an appropriate way in which to “keep the file open” as context for following through on the Mission’s recommendations, and perhaps for formal Ramsar interest to return periodically to the issue to keep abreast of progress.

3.10 The point has also been made above that there are range of other threats potentially facing the site in addition to the soda ash project proposal, and this fact also would strengthen the justification for listing on the Record.

3.11 As a formalised expression of the significance of the conservation planning needs facing the site, listing on the Montreux Record may also conceivably be of assistance in dialogue with potential funders for the development and implementation of the Integrated Management Plan/Ramsar site management plan.

#### **4. Transboundary and Regional Issues**

4.1 The natural lake and catchment system of Lake Natron is transboundary in nature, straddling the border between Tanzania and Kenya. The flamingo population supported by the Lake inhabits a wide area of East Africa. Impacts on this system are therefore potentially both transboundary and regional in scope; both physically and in terms of economic impacts on tourism etc.

4.2 Article 5 of the Ramsar Convention states: “The Contracting Parties shall consult with each other about implementing obligations arising from the Convention especially in the case of a wetland extending over the territories of more than one Contracting Party or where a water system is shared by Contracting Parties. They shall at the same time endeavour to coordinate and support present and future policies and regulations concerning the conservation of wetlands and their flora and fauna.”

4.3 The present case therefore falls clearly within the scope of Article 5. In that sense, consultations between the Governments of Tanzania and Kenya are material, and this was investigated by the Mission.

4.4 The Ramsar Administrative Authority for Kenya, the Kenya Wildlife Service, reported that they had written to the Ramsar Secretariat about their concerns with regard to cross-border impacts of the soda ash proposal. Seemingly it was the approaches received from Ramsar and AEWA/CMS to both governments that prompted dialogue between them. KWS commented that otherwise little consultation had taken place. Formally, this had consisted only of an invitation to comment on the ESIA. Some consultation on selected aspects was undertaken by the ESIA consultants; but apparently little or none occurred at the level of the respective Ramsar Administrative Authorities.

4.5 KWS further stated that they would expect to be kept informed by Tanzania about the case on an on-going basis, and that they could make valuable input to economic studies. NEMA (Kenya’s equivalent to the National Environment Management Council, NEMC) has written to the Ministry of Natural Resources and Tourism with their concerns; and they too expressed a view that they should have had more consultation, in the context of Article 5.

4.6 A further transboundary dimension is the existence of wildlife corridors in the area, some of which are believed to cross into Kenya, and which therefore raise

cooperation issues in the context of the Convention on Migratory Species and AEWA as well as Ramsar's Article 5.

4.7 Over 75% of the global population of lesser flamingos breed at Lake Natron and some of them then go as far as Lake Nakuru in Kenya and into Ethiopia thus generating millions of dollars from tourism for these countries. Any negative impact on the breeding of the flamingos will have significant impact on tourism development. Preliminary assessment of migration patterns for large mammals shows that some of them cross from Tarangire National Park through Lake Manyara National Park and Ngorongoro Conservation Area into Kenya. The corridors that animals use are on the eastern side of the lake, where LNRL is also planning to relocate its proposed plant and construction of infrastructure such as road and railway link.

4.8 Tanzania belongs to the East African Community that also includes Kenya, Uganda, Rwanda and Burundi. As member of the Community, Tanzania is bound by the Treaty Art 111 and 112 which refer to **Environmental Issues and Natural Resources** and notes that the Partner States among others, (a) agree to take concerted measures to foster cooperation in the joint and efficient management and sustainable utilization of natural resources within the Community; (b) undertake, through environmental management strategy, to co-operate and co-ordinate their policies and actions for the protection and conservation of the natural resources and environment against all forms of degradation and pollution arising from developmental activities; (c) undertake to co-operate and adopt common policies for control of trans-boundary movement of toxic and hazardous waste including nuclear materials and any other undesirable materials; Also Article 112 which refers to **Management of the Environment** notes that Partner states undertake to cooperate in the management of the environment and agree among other issues (a) develop special environmental management strategies to manage fragile ecosystems, terrestrial and marine resources, noxious emissions and toxic and hazardous chemicals; and (b) take measures to control trans-boundary air, land and water pollution arising from developmental activities.

4.9 A further requirement for taking into account transboundary issues is provided in the East African Transboundary Guidelines for EIA, which requires involving member states in EIA for activities that have transboundary implications. Tanzania, being a member of EAC, is bound by these guidelines and would have been expected to involve Kenya effectively during the EIA process.

4.10 A further dimension of input to the present case from the Kenyan perspective is the experience of the soda ash facility at Lake Magadi in Kenya (also operated by Tata Chemicals). The Kenya delegation that came to meet with RAM noted that apart from revenue going to the central government, there have been no tangible benefits to local communities, and some of them have been deprived of their land and face significant environmental impacts (water shortages). The Kenya delegation



wondered whether outcomes would be any different in Tanzania, following the experience in Kenya.

4.11 The Lake Natron Basin Ramsar site at present is wholly confined to Tanzanian territory, and the northern boundary follows the national border. The lake ecosystem however includes areas in Kenyan territory, and it is understood that these would qualify against Ramsar site selection criteria in their own right. The recommendation has been put forward that these areas should be designated under the Convention. This is obviously a recommendation directed towards the Government of Kenya; but the implication is that an integrated approach to protection and management of the site as a whole by both Governments acting in close cooperation would be highly desirable.

## **5. Environmental Impact Assessment**

5.1 The specifics of decision-making processes, the current status of the soda ash application, the ESIA, the role of NEMC and scenarios for finalizing NEMC's recommendation on the project are referred to elsewhere in this report but are summarized here to emphasize key issues.

5.2 In their presentation to the RAM, LNRL representatives expressed the belief that they can conduct trials and pilot exercises for the development under the terms of the prospecting license consent which they already have, without first applying for an exploitation license. However it is the Mission's understanding, confirmed by NEMC, that a separate EIA would be required for each pilot trial; a fact triggered by the sensitivity of the receiving environment, rather than by the scale of the activity. Operationally it would not be feasible to carry out trials at a different site.

5.3 The use of a precautionary approach has been mentioned above in relation to the fact that a project proposal is under consideration prior to the finalisation of relevant plans and policies. Precaution is a relevant consideration here too, in respect of appropriate approaches to take in circumstances of significant scientific and technical unknowns, and uncertainties.

5.4 The desirability of carrying out a Strategic Environmental Assessment was raised during the Mission meetings. SEA methodologies typically assess policies, plans or programmes, and enable wide-area, cumulative and synergistic effects of multiple projects to be evaluated, as well as evaluating the environmental implications of strategic policy measures themselves.

5.5 A suggestion was made that an SEA could be carried out as part of the proposed Integrated Management Plan for the Lake Natron site. While this could be a way of addressing tradeoffs between conflicting environmental measures within the IMP, and any unintended environmental consequences of the IMP, the IMP itself is an

environmental conservation measure and so, in the main, might be supposed to be environmentally beneficial. Nonetheless, in line with the Environmental Act of 2004, undertaking an SEA in tandem with preparation of the IMP could be seen as good practice.

5.6 Greater utility from an SEA would come from its application to any development or non-environmental sector policy, plan or programme that has implications for the Ramsar site and the wider lake basin, and it is not immediately apparent whether there is any such measure being formulated to which this would apply. The Development Partners Group (DPG - the donor community in Tanzania) have suggested in their 5 November 2007 letter to the National Environment Management Council that before making any final decision on soda ash extraction from Lake Natron the Government of Tanzania should consider the undertaking of a Strategic Environmental Assessment for overall extraction of soda ash in the country; but it is not clear whether there is any document or agreement which embodies such a strategy.

## **Socio-economic Issues**

This section looks at the socio-economic implications of the proposed soda ash extraction plant and its related infrastructure at Lake Natron, within the region, and globally in terms of its positive and negative effects. The Environmental and Social Impact Assessment (ESIA) for the proposed development has dealt with some of the issues, and there have been various opportunities to comment on the ESIA, including the public hearing for the proposed development in January 2008. This section addresses some of those issues with specific reference to tourism, agricultural development and livestock keeping. Since the ESIA did not undertake a detailed cost benefit analysis of the proposed development, this section makes the recommendation that when the new ESIA for the proposed development is undertaken, it must also include a detailed analysis of the socio-economic and environmental costs of the proposed development, so as to provide sufficient information to decision makers.

## **6. Population**

6.1 There is insufficient accurate population data available for the villages around Lake Natron area. However it was estimated that in 2006 Ngorongoro District had a total of 151,803 people (78,149 females and 73,654 males) (DED, Ngorongoro, 2006). These data do not include Longido District, which was part of Monduli District before it became a fully fledged district. The lack of up to date data in Longido District could be an impediment for effective development. The need for detailed socio-economic and environmental profiles can not be overemphasized. As a new district, with potential for economic development, it is likely to attract more people who will put more demand on the available resources; baseline data will provide monitoring indicators for future planning and management of the resources.

## **7. Administrative and Institutional Arrangements**

7.1 Lake Natron Ramsar site (LNRS) falls partly under Longido District (on the eastern side) and partly under Ngorongoro District (on the western side). The nearest major town or city is Arusha, which is about 167 km from Lake Natron. Several villages are scattered around the lake area. These include Matale B, Gelai Lumbwa, Alailalai, and Magadini (or Londo Losirwa or Esirwa, the location of Engarasero sub – village, an up and coming rural settlement). Other villages are Pinyinyi and Gelai Merugoi (Gelai Bomba).

7.2 The villages are under a local government administrative set-up that is governed by the Local Government (District Authorities) Act No. 7 of 1982 together with its Local Government Laws (Miscellaneous Amendments) Act No. 6 of 1999. The law provides for the administrative structure from the village to the regional level and defines functions of each key position in the hierarchy of administration.

7.3 Each village is led by a Village Chairman who is an elected leader. The Village Chairman belongs to a political party that has won over half of the registered votes from the village electorates. The party that has the majority votes forms the Village Government. The village government consists of at least 25 members drawn from the villages and assigned specific duties in various Committees. There is also a Village Executive Officer (VEO) who is appointed by the government to serve as the main executive officer for all development activities in the village. It is a requirement of the law that gender considerations must be taken into account when forming a village government. Women representatives must be part of the government leaders and in the various Committees.

7.4 While all the villages in Tanzania follow this administrative arrangement, the villages in the LNRS are also influenced by tradition and cultures. The majority of the local people in these villages are pastoralist (e.g. Maasai) or agro-pastoralists (the Sonjo). These ethnic groups have a traditional administrative system that is government by gerontocracy and the rule of elders in age groups. The Laigwanan – the traditional Maasai leader - wields considerable power and influences decisions on almost all matters around the life of the Maasai (the same model applies to the Sonjos). On many occasions however, traditional leaders work very closely with formal village administrations system to achieve village, district and national development goals.

7.5 The area around Lake Natron is designated as two Game Controlled Areas (GCAs) –see Figure 1. The Lake Natron GCA is sub-divided into two hunting blocks, where the northern portion is under Tanzania Game Trackers (TGT) and the southern part under Tanzania Wildlife Company (TAWICO). The two hunting companies operate tourism activities and are responsible for block development. The Ramsar Site boundary cuts across the two districts of Longido and Ngorongoro

but does not follow the district administrative boundaries. The Ramsar site is under the jurisdiction of the Ministry of Natural Resources and Tourism, through the Wildlife Division. There is as yet no management structure on site.

## **8. Ethnic composition and social characteristics**

8.1 The Maasai and Wasonjo are the two main ethnic groups in the Lake Natron Basin. The Maasai are the majority and are also found across the border in Kenya. Movement between the two sides of the border in search of pasture and water is a common phenomenon. The Wasonjo are found in large numbers at Pinyinyi where they keep cattle and undertake small scale irrigation farming. Other minority ethnic groups include Warangi who have migrated from Singida Region, Wachagga and Wapare from Kilimanjaro region, and Waarusha from Arusha region. These ethnic groups are settled in villages where trade, tourism, agriculture are common.

8.2 Poverty is a major problem in the villages around the Lake Natron Basin as reflected in the living conditions, type of housing and poor infrastructure. The community is not homogenous. There are different social categories, which include people with variable levels of wealth and income. Overall however, despite being so poor, the social cohesion among the local communities in villages at the LNRS seems to be relatively strong. There are few cases of conflicts associated with resource use – such as water rights for domestic and livestock use, fuel wood, grazing, artisanal soda ash extraction, hunting and settlement. The proposed soda ash facility would greatly change the social composition in the villages at the LNRS and change the relationships between different social groups due to changes on the access and rights to natural resources that have formed the main base for the relations that have existed in the area up to the present

## **9. Transport and Communication**

9.1 Remoteness and poor road infrastructure have contributed to the seclusion and almost pristine conditions in most of the villages at the Lake Natron Basin. There is no regular transport through the area due to poor roads however, buses cover the stretch between Mto-wa-Mbu and Engaruka; beyond this point, private trucks are used to transport goods and people and, in the villages, donkeys are the common means of ferrying goods – especially grain and water. Distances between villages are large and this limits communication between communities. There are some radio stations in some of the villages but telephones are not available – except in areas closer to Longido Headquarters or to Mto-wa-Mbu.

## 10. Health and Education

10.1 Ngorongoro and Longido are some of the poorest districts in Tanzania with scattered populations that are highly mobile due to pastoralism, the main economic activity for most of the population. Provision of the health and education services is constrained by distances, lack of resources which causes the inability to meet the demand of local populations. The services are understaffed, under-funded, and under-equipped, even where sedentary communities are found, such as the Sonjo communities and some emerging commercial satellite villages. The average distance to the nearest health service in Ngorongoro District is 22 km while the longest distance is 165 km, compared to the national policy requirement of 0 to 5km. This is also the case in Longido district where people have to walk up to 70km to reach the medical services.

10.2 Some local people at Wosi-Wosi, a sub-village of Alailalai in Longido district, support the proposed soda ash plant because they have been informed that the owners would provide the local people with social services that are not available in the area. The local people in this area expect that the developer would provide to them services such as water, health and schools, which would help them overcome the long-standing scarcity and improve their welfare. Sanitation is lacking or in very poor condition in almost all the villages. Latrines are not available or not effectively used where they are available, thus causing the spread of diarrhoeal diseases.

10.3 Health problems that are critical in the villages at the LNRS include malaria, pneumonia, eye infection, acute respiratory infection, diarrhoea, skin infections, sexually transmitted diseases including HIV/AIDs, malnutrition, worms, urinary tract infection and prenatal complications. Ngorongoro district is implementing a five-year plan aiming at reducing these problems, and continues to improve existing health facilities by equipping and supplying them with required drugs and personnel. Ngorongoro district also manages mobile health units in collaboration with NGOs such MAPANDA, CC Africa/Africa Foundation, Ereto/Accord and Ngorongoro Conservation Area Authority, targeting pastoralists in Ngorongoro. There is no information from Longido district to determine whether such a plan is proposed or in place. The proposed new site for the soda ash plant is in Longido district: therefore, it is very important for the district to plan properly how to address health issues associated with mining and manufacturing of soda ash.

10.4 Schools in the two districts suffer from a lack of teachers, books and classrooms. For example in Longido District the teacher to student ratio is 1: 236, which is very high and conflicts with effective teaching processes. Pastoralist communities are slow in sending their children to school, particularly girls. The government policy is to establish boarding schools where children from the pastoral communities can be accommodated during term. Also, the government is mobilizing resources to build schools in each ward.

## **11. Water and Energy Resources**

11.1 Availability of clean and safe water for domestic and livestock use is a problem in the Lake Natron area. Surface water is the main source for domestic, livestock and agriculture purposes. Water is scarce in all the villages in the LNRS, forcing women to walk many kilometers to fetch water. The proposed soda ash plant alone will require at least 106m<sup>3</sup>/hour of fresh water for plant operations and 23m<sup>3</sup>/hour for domestic use, however the source of this water is not known and its implications for the immediate environment and other users in the Lake Natron region have not been adequately addressed. The planning for the freshwater requirements of the soda ash plant and domestic water demand for plant workers should take into account the available reserves and sources, including demand for other users (for example, for environmental flows, wildlife, livestock, households and other potential developments, where known). Pumping this amount from groundwater would impact significantly on water reserves and impinge on other users.

11.2 The main source of energy in the villages within the LNRS is fuel wood for cooking and kerosene for lighting at night. The few tented camps use diesel generators for lighting and fuel wood for cooking. Population pressure and overgrazing are contributing to the scarcity of fuel-wood. The soda ash plant requires 11.5 MW of power and 21 metric tones/hour of coke, coal and limestone. This amount of energy does not include the energy requirement that would be needed by many people who may move into the Lake Natron region in search of associated economic opportunities.

11.3 Illegal and unsustainable charcoal making, particularly on the eastern side of Lake Natron is becoming an issue of serious concern and threatens the vegetation cover and wildlife habitat in the area. Population increase and the development of Longido as a district will put more pressure on energy supplies for domestic needs, thus increasing the demand for charcoal. Also, should the soda ash plant be developed, it will attract more people in the area who will use fuel wood and charcoal during the initial stages of their settlement in the area. This increased demand for fuel wood and charcoal will have significant impact on the environment around the Lake Natron region and affect the habitat for wildlife in the area. Therefore, the soda ash project and other proposed economic and infrastructural development plans for LNRS will increase pressure on these resources and increase scarcity and degradation.

## **12. Land Use and Land Tenure**

12.1 Livestock, agriculture, wildlife/tourism and settlement are the main land uses in the villages in LNRS. Although Lake Natron is a Ramsar site, land ownership is under the respective villages/districts and governed by the Village Land Act No. 5 of 1999, which recognizes customary rights. The village government used to be the

main player in allocating land to various users; however, increased land purchase is also becoming common in areas where local people have extra land to dispose of. However, for tourism purposes, land is allocated centrally by the Wildlife Division through block allocation in consultation with respective district authorities. Land is a scarce resource and the proposed project or plans for the development of the Lake Natron area will have implications for activities such as tourism and agriculture, because more land will be taken up by migrants who will be attracted by these projects.

### **13. Economic Activities**

13.1 The majority of the people in the Lake Natron region depend on livestock keeping, tourism and agriculture as their main economic activities. Agriculture and livestock keeping are done at subsistence level with very little surplus that goes to the market for commercial purposes.

13.2 Income levels vary very much between households and individuals and depend on the economic activities. The majority of the livestock keepers and farmers are poor; but poverty may have different meaning among the pastoralists who measure wealth in terms of numbers of cattle, wives and children. Income values for business centres in some villages can be established and accounted for. For example, in some villages in the LNRS, household incomes were Tshs. 40,000 per annum while in Wosi Wosi, household incomes were Tshs. 25,000/annum. The majority of the people live below the poverty line of US\$ 1 per day (ESIA for Lake Natron Soda Ash Facility, 2007). Income distribution is skewed in favour of men, who also own most major means of income (livestock and land for farming). Some women are involved in petty trade of beads and other ornamental handcraft products in Engarasero village.

13.3 The proposed soda ash plant and several other development proposals at or close to the LNRS will have significant implications for local communities, the Lake Natron area, Tanzania and the global community in general in the form of increased pressure on natural resources, impact of tourism development, agriculture and wildlife and on income levels. The land at LNRS is not fertile enough to produce sufficient food for the local residents. Food security is thus a major concern and food purchase is the main expenditure of any income generated at the household level. Thus after purchasing food, local people remain with almost no surplus to be used for investments. This is reflected in the poor condition of the houses and lack of other basic items for a comfortable life and welfare.

### **14. Livestock keeping**

14.1 The main livestock kept in households in LNRS are cattle, donkeys, goats, sheep and chickens. Livestock keeping is a family business primarily as a reserve to

be used for social functions and occasionally, in exchange for money or grain. A semi-nomadic mode of grazing is common, where livestock keepers maintain permanent homes but migrate with their livestock in search of pasture and water, salt, and protecting the animals from diseases. The livestock sector has not been developed to become a strong commercial sector. There is inadequate information regarding revenues and other benefits obtained from the sector to be able to determine how it will fair if the proposed soda ash plant and other development activities proceed. Problems such as overgrazing, inadequate extension services, animal diseases, poor markets and inadequate water and pasture currently impact negatively on the quality of the livestock.

14.2 The proposed development as well as other plans will have implications for livestock industry in the villages by creating demand for meat, milk and other products but, in the absence of strategies to improve the sector, these developments may not have a positive impact on the livestock economy in the long-term. Similarly, the proposed development may impact on the livestock sector by taking up grazing land, reducing pastures and water and blocking livestock routes, thus impacting negatively on the sector and the livelihoods of the local people and the local economy. Local people and NGOs have expressed their concern and almost total rejection of the proposed soda ash plant because it will impact negatively on their livelihoods and economy (i.e. livestock keeping and tourism). ILKISONGO Pastoralist Initiatives (IPI) noted that the construction of the plant will lead to loss of livelihoods and local people are unlikely to benefit from employment at the plant. The plant as proposed would employ about 152 permanent staff and about 1,225 construction workers. Very few workers, if any, will be from the local communities around Lake Natron.

14.3 The impact on livestock may be complicated during dry season when water becomes scarce. The proposed soda ash plant will extract ground water for industrial production; ground water abstraction will impact on forage and water for animals and diminish the value of the livestock, and cause degradation to the environment. During the dry season, most livestock converge at the perennial rivers for watering, thus causing further degradation of the river banks and the riverside vegetation.

## **15. Wildlife and Tourism**

15.1 Tourism is the second highest foreign exchange earning sector in Tanzania, after the agricultural sector. Tanzania received 644,124 tourists in 2006 earning about US\$ 862 million compared to 612,754 tourists and US\$ 823.5 million in 2005. The changes represent 5.1 % increase in tourist arrivals and 4.7% increase in earnings. The sector supports close to 300,000 people in direct employment opportunities and several thousands indirectly connected to tourism. The government plans to increase the number of tourists to one million by 2010 and efforts to improve facilities, revenue collection and promotion are underway. The



northern circuit, in which Lake Natron also lies, is the main tourist centre that generates most of the revenues.

15.2 The Lake Natron Basin Ramsar site falls within the Serengeti ecosystem, in which destinations such as the Serengeti National Park, Ngorongoro Conservation Area as well as Lake Manyara and Tarangire National Parks attract large numbers of tourists. Several hunting blocks are also located in the northern circuit where hunting safaris are a major attraction and source of income. The sustainability of this sector depends very much on how tourism resources are managed; therefore, wise use of the resources is a prerequisite for sustainable tourism in Tanzania.

15.3 The Lake Natron region is rich in wildlife resources that are important for tourism development. There are two Game Controlled Areas covering the Lake Natron Ramsar site; Lake Natron Game Controlled Area on the eastern side covering the lake and much of the eastern areas and Loliondo Game Controlled Areas, on the west of the lake bordering with Serengeti National Park.

15.4 The Lake Natron Game Controlled Area is further subdivided into two hunting blocks – namely the Lake Natron North, which is leased to Wengert Windrose Safaris of Arusha and managed by Tanganyika Game Trackers (TGT) and Lake Natron South, which is leased to TAWICO.

## **16. Photographic and Eco-tourism**

16.1 Photographic and eco-tourism is taking place in the Lake Natron South Game Controlled Area including around Engarasero village, Mount Oldonyo Lengai and other attractions. Most tourist facilities are located in this southern area. The ESIA for the soda ash plant noted that tourism generates about US\$ 470,000 per annum, without multiplier effects. Additional income is collected at the entry gates erected by Ngorongoro District and collected by the villages, particularly at Engarasero. The village collects about US\$ 39,000 per annum in gate collections on behalf of the Ngorongoro District Council and retains US\$ 7,800 (or 20% of the collections). This village gets an additional US\$ 40,000 per annum from one tented camp located in the village. The other money that is collected is from landing fees and local purchases in various villages that operate tourism activities (e.g. handcrafts). Although the legality of the gate collections is questionable, significant amount of money goes to the district and the villages as contributions from photographic and eco-tourism.

16.2 The figures that the ESIA quoted do not reflect earnings from Kenya's photographic and eco-tourism at Lakes Bogoria and Nakuru that rely on flamingos that breed at Lake Natron. For example, BirdLife International noted in their written submission to the RAM that ecotourism at many protected areas in Tanzania, Kenya, Uganda and Ethiopia depends in part on the East African population of Lesser Flamingos. In the Southern Lake Natron alone, eco-tourism has generated

about US\$ 500,000 per year and is a rapidly growing industry that relies on the pristine environment of Lake Natron to give eco-tourists a “wilderness experience”.

16.3 The proposed soda ash plant will impact on the flamingo environment and consequently on ecotourism in Lake Natron region, East Africa and globally and lead to the loss of the revenue that is now being earned from ecotourism. BirdLife International further notes that at the local level there is concern that there will be loss of livelihoods, land and natural resources to the project, and also indirectly to incoming migrants seeking work.

## **17. Hunting Safaris**

17.1 Besides photographic and ecotourism, hunting safaris are a popular form of wildlife utilization in the Loliondo Game Controlled Area and Lake Natron North. Wengert Windrose Safaris (WWS) and Friedkin Conservation Fund (FCF) operate in the northern Lake Natron GCA hunting block. FCF run community development programmes on behalf of WWS and they have been operating in this area since 1995, contributing to conservation of the area, employment and anti poaching. By 2007, WWS had contributed about US\$ 36,000 to the villages from concessions fees, bed nights and other donations, including student sponsorship. Also, WWS is generating about US\$ 360,000 per annum from various fees and photographic charges from their sister company operating in the same area. WWS has supported elephant research, anti- poaching measures, wildlife census work (with TAWIRI) and monitoring of wildlife migration all at the cost of about US\$ 42,000 per annum. This money is generated from tourism businesses. Direct returns to the districts and the nation are also high and could increase with proper planning and management of the resources. Villages also receive money from hunting companies as aircraft landing fees and 25% of concession fees are returned to them from the Wildlife Division. However, most of the villages do not have clear procedures for charging aircraft landing fees but, the new non-consumptive regulations seeks to regulate these taxes and institute a uniform procedure in levels of taxes that can be levied.

17.2 WWS and FCF businesses and the revenue that is generated from tourism will be affected if the proposed soda ash plant proceeds without adequate understanding of the impacts that it may cause and if measures to mitigate them are not adequately developed and implemented. Its effect on tourism will be felt beyond the Lake Natron region, including other East African countries and the global tourism business.

17.3 According to WWS, the impacts of the proposed development on their businesses will include:

- Declining numbers and quality of trophy animals such as gerenuk, lesser kudu, fringe-eared oryx, white-bearded wildebeest, Grants gazelle and Thompson gazelle that are the main attractions for the hunters. The proposed soda ash plant

may affect their habitat, increase poaching and impact negatively on the hunting industry;

- The uniqueness of Lake Natron will be marred by the soda ash plant and have a negative impact on ecotourism activities in the area. Flamingos and other water birds will be affected;
- Loss of revenue generated from trophy hunting and ecotourism activities in the area, thus impacting on social and community development activities currently funded through tourism activities in the area;
- Loss of direct and indirect employment associated with tourism activities conducted by WWS;
- Reduction or loss of conservation activities that FCF is doing in the area as part of the WWS commitments to the government on hunting block development.

Further, WWS noted that the proposed development will have far reaching implications in terms of:

- Loss of ecological integrity of globally recognized Ramsar site.
- Loss of biodiversity and the function of Lake Natron as a game management area.
- Increase in poaching and associated human activities with rise in human population in the area. WWS is undertaking anti-poaching measures, but an increase in the population and human activities is likely to lead to more poaching activities.
- Disruption of wildlife movements and possible fracture of the migratory corridors between Lake Natron and the Kenya side of the wildlife areas. The proposed new site for the plant is in the eastern side of the lake that is also serving as the corridor for various species of wildlife.

## **18. The effect of poaching and other illegal activities on natural resources**

18.1 Poaching is a critical issue in the area and an increase in human activities is likely to increase poaching tendencies. Although block owners are required to undertake anti poaching measures and WWS has been doing that, the Wildlife Division has also established a Northern Zone Anti-poaching Unit to deal with this problem. Reports of poaching cases involving poachers from as far as Kenya and Somalia are common and a matter of concern to government. Anti poaching costs will increase with the increasing human activities in the Lake Natron region. In 2004/05, the Northern Zone Anti-poaching Unit spent about US\$ 26,000 per annum to carry out anti poaching in the northern zone, which includes the Lake Natron region. The Northern Zone Anti-poaching Unit estimates the cost of anti poaching to increase to US\$ 60,000 per year if the soda ash plant is built. This will be necessitated by the required increase in anti poaching efforts to 20 days per month from the current 10 days per month.

## **19. Agriculture**

19.1 There is very little agriculture around the Lake Natron region. Most farming is taking place at Selela, Pinyinyi, Monik and a little around Engarasero river. Farmers in these villages have received assistance to improve irrigation agriculture. Rain fed agriculture is also taking place in western side of the lake, around Loliondo. Crops grown include paddy rice, maize, groundnuts, beans, sweet potatoes, vegetables and bananas.

19.2 Agriculture is limited by poor soils, inadequate rainfall, poor farming technologies and problem animals. Therefore farms are small – ranging from 0.5 to 2.5 ha. per household. Almost all production is for household consumption. However, dry season irrigation agriculture is expanding at Pinyinyi village utilizing the water from River Pinyinyi. Crops cultivated include maize, sweet potatoes, cassava, bananas, peas, pigeon peas, green grams, tomatoes, groundnuts, vegetables, rice and fruits. Most of the production is for the market in Kenya, just across the border.

19.3 Most households in Ngorongoro and Longido districts face food shortages; therefore, any opportunity to produce more food will be utilized without regard to environmental effects. The proposed soda ash plant may increase demand for food supply, which may stimulate expansion of agriculture in areas that are relatively suitable, which are invariably around the rivers banks and flood plains. The increased demand for food supply may cause the intensification of farming, which could lead to the use of chemical fertilizers. The chemicals could eventually flow down to the lake and negatively impact on flamingo feeding grounds. Also, expanding irrigated agriculture may divert waters that should be flowing to the lake and increase sedimentation, which may also affect the lake ecosystem.

19.4 Similarly, agriculture may expand around the Sale and in Oldonyosambu following the decision by the Ngorongoro District in collaboration with Ngorongoro Conservation Area Authority (NCAA) to relocate some families that had settled inside NCAA to areas outside the conservation area. These families are relocated because they are undertaking farming, which is limited in the NCAA. These families will continue with farming in areas that are closer to the Lake Natron region. The implication of the relocation on the Lake Natron ecosystem have not been adequately understood but it is likely that this move will impact on the lake and cause negative effect by diverting water away from the rivers that flow into the lake. Such a move will impact on tourism development and the revenue the sector is generating to local economy, Tanzania and globally.

## **20. Stakeholder participation and involvement during the ESIA**

20.1 Adequate and effective stakeholder involvement in the EIA process is a legal requirement in Tanzania (part XIV of EMA No. 20 of 2004) and for projects

that have transboundary implications as required by the East African guidelines for transboundary resources. Consultations with various stakeholders during the Mission visit in Tanzania revealed that there were serious omissions of the key stakeholders during consultations. Stakeholders in Kenya were not sufficiently involved and issues that could impact on Lake Natron from Kenya side were not included in the assessment. The Kenyan experiences of soda ash production from Lake Magadi, and its cost-benefit, could have provided lessons to Tanzania for improving the proposed project at Lake Natron. Kenya tourism benefits from the flamingos breeding in Tanzania, therefore the impact of the proposed soda ash facility at Lake Natron on flamingos and its impact on tourism in Kenya and Tanzania should have been addressed.

20.2 In Tanzania, the RAM noted that several stakeholders including those in Ngorongoro District Council and Longido District Council were not involved in consultations. Similarly, the economic potential of tourism and the effect the soda ash project would have on tourism and livelihoods of the people in the Lake Natron region, East Africa and globally have been grossly underestimated while the economic gains from the soda ash project have only been indicated in terms of several millions of US dollars, albeit without sufficient information. As result of the inadequate participation of key stakeholders, some of the critical issues of concern that may impact on the resources and local communities have not been fully identified and the socio-economic costs and benefits of the proposed development are therefore not sufficiently captured in the ESIA.

## **21. Other threats to the Lake Natron Region**

21.1 There are several other proposals to introduce or improve various infrastructures in the Lake Natron region. For example, these proposals include: the upgrading of the road from Mugumu Township (in Serengeti) - Tabora B - Kline's Camp - Mto wa Mbu through Lake Natron and Engaruka; a rail link from Longido to Tanga or Arusha to Mwanza; the Ewaso Ngiro River (South) Multipurpose project in Kenya, consisting of hydropower plant and agriculture development; TANESCO's plans to develop the waters of the Pinyinyi River for a 30 MW hydropower plant would have very significant changes in terms of living conditions, accessibility, resource use and tenure and opening the Pinyinyi area up to outsiders for investments. Each of these proposals would impact positively or negatively on the local communities, the nation or internationally in terms of agriculture, tourism, wildlife and industrial development.

## **22. Overall Socio-economic Conclusions**

22.1 There is insufficient information regarding the socio-economic costs and benefits arising from the proposed soda ash plant at Lake Natron. In the ESIA, benefits such as employment and revenue to the local economy and the nation are

only indicated at a general level. Few people will ever be employed on permanent basis, while the environmental cost is not properly addressed. The transboundary implications of the proposed development have also not been fully addressed and several key stakeholders were not involved in consultations.

22.2 During its visit to the site, the RAM team was informed about the potential of generating more revenue from tourism in the area, an aspect that has not been fully captured in the ESIA report. Also, the RAM team was informed about the changes the developer has made to the proposed soda ash facility in terms of location of the plant and the proposed technology for abstracting brine from the lake. These changes would require a separate ESIA, including a detailed cost – benefit analysis.

## **MANAGEMENT PLAN FOR THE RAMSAR SITE AND WIDER ECOSYSTEM**

### **23. Issues related to Planning and Protection Status of Lake Natron**

23.1 Although a designated Ramsar site, Lake Natron is not a protected area under Tanzanian law. The whole of the site is covered by a Game Controlled Area under the Wildlife Conservation Act 1978, but this only serves to allow certain uses such as hunting and tourism. The Environmental Management Act No. 20 of 2004 has provisions that could provide for the protection of the wetland if the Minister for Environment so declares.

23.2 National Parks are one form of protected area available in Tanzania; but as currently constituted the provisions for National Parks do not envisage them being inhabited, and hence there would be difficulties in relation to the position of local communities if this option were pursued for the Lake Natron Ramsar site. Moreover, the active promotion of tourism that could be implied by the creation of a National Park could pose problems for the highly sensitive flamingos at the site.

23.3 The Wildlife Management Area (WMA) mechanism under the Wildlife Conservation Act No. 12 of 1974 may offer possibilities. The Wildlife Conservation (Wildlife Management Areas) Regulation, 2005 (Government Notice No. 283 of 2005) provides guidelines and procedures on how to establish a Wildlife Management Area (WMA). The regulations are made under section 19 and 84 of the Wildlife Conservation Act. No 12 of 1974. One provision of such WMAs is the delineation of zones for specific uses including no-use zones, where these are deemed necessary for ecological reasons. The soda ash project ESIA summary states that “There have been suggestions, through the Ramsar process, to strengthen the legal basis for protecting the area by banning hunting in the Ramsar site and changing the status of the Game Controlled Area to that of a Wildlife Management Area”. Although this is stated in the ESIA, it is not correct because, if the WMA is established, it can zone some areas where hunting can continue to be undertaken. Therefore, preparation of a management plan is a prerequisite for determining optimal land uses in the area.

23.4 The Environmental Management Act 2004 provides for Environmental Protected Areas, National Protected Areas, Environmentally Sensitive Areas and Protected Wetlands. All of these options should be considered in devising a suitable legal protection regime for the Ramsar site. Another possible legal provision that could be used, for the designation of a Special Planning Area for wetland areas, is the Land Use Planning Act, 2007 which came into force in 1 April 2008 (see para.23.6 below).

23.5 The question of a legal basis for the proposed Integrated Management Plan has also been raised. Sections 42-50 of the Environmental Management Act No. 20 of 2004 provide such a basis for the Plan itself, provided the Minister for Environment declares the area as a planning area. Also, the Local Government Act has provisions, which can provide a legal basis for the Plan with regard to activities that relate to the areas where the District Authorities have jurisdiction.

23.6 The Land Use Planning Act 2007 came into force on 1 April 2008. Under this Act there are provisions that could be used for the designation of Special Planning Areas for wetlands (see above), which then provides for a land use plan for each area. Similar provision has existed in the past for urban areas, but the scope to apply it to rural areas including rural wetlands is new. The idea of applying this mechanism to Lake Natron was viewed positively by the National Wetlands Working Group.

23.7 The Development Partners Group has made the suggestion of setting up a Lake Natron Conservation Trust.

23.8 In addition to the discussions underway concerning the proposed IMP/Ramsar site management plan, the question arises as to what planning framework may be necessary for the wider hydrologically-defined lake basin area, parts of which transcend the border with Kenya. More narrowly, if the soda ash plant were to be consented for an area outside the Ramsar site, then a planning regime for a land area which encompasses both the Ramsar site and such adjacent areas as are relevant to the plant would be highly desirable and necessary. Planning for Lake Natron must of necessity take a holistic approach to include all adjacent areas, especially on the Kenyan side. An integrated approach should also bring together all stakeholders and sectors in order to ensure the fusing of issues and strategies for the protection of the fragile ecosystem.

23.9 At a larger scale, some management measures and research efforts might need to be organised in an integrated way in relation to the network of areas used by the Rift Valley lesser flamingo population. Guidance on these issues is provided in the draft IUCN-SSC/Wetlands International Single Species Action Plan for lesser flamingo (for an extract, see Box 1 below). In this context the suggestion has been raised that Ramsar designation of Lake Manyara should be investigated. Other IBAs (Important Bird Areas, as defined by BirdLife International) need to be considered as well: for example, Engaruka Basin might also be considered in the planning area as part of the IBA especially for flamingos and Abdim's Storks, which feed over the whole of the Engaruka Basin. Lake Engaruka is another soda ash lake, which is also highly important for birdlife.



**Box 1:**

**Extract from the draft Lesser Flamingo Single Species Action Plan**

*5. Framework for Action*

*Table 3. Activities by country:*

- *Ensure that all key breeding and feeding sites are maintained in good ecological condition*
- *Designate key sites as protected areas and Ramsar sites, and ensure they are maintained in favourable ecological status*
- *Develop and implement integrated (catchment/coastal zone) management plans for the key sites*
- *Maintain, or restore where necessary, favourable hydrological conditions and water quality for the species*
  - *Ensure that breeding colonies are not disturbed*
- *Prevent human disturbance (especially low flying aircraft) through legislation, planning, zoning and through enforcement of these rules as appropriate*

## RECOMMENDATIONS

The RAM therefore would make the following recommendations based on the information provided during the Mission and discussed in the sections above:

1. The Ramsar, CMS and AEWA Secretariats should request the Government of Tanzania to suspend the decision-making process on the current ESIA, which does not cover recent modifications announced by LNRL to the proposed soda ash project and does not deal with full scope of the project's impact. The RAM recommends that, if a soda ash facility is to be considered at Lake Natron in the future, a new ESIA be carried out on a detailed feasibility study that covers the full environmental, social and economic impact of the soda ash plant and associated infrastructure.
2. If the proposed soda ash facility continues through the Government of Tanzania approval process, the authorities should ensure that specific EIAs are undertaken on any pilot and trial activities.
3. The Government of Tanzania should consider giving priority to the development of relevant planning measures at the local and district levels, including a Ramsar site management plan (or at least, in the short term, a statement of management objectives).
4. The Government of Tanzania should consider completing the development of the Tanzanian Wetland Strategy, the law to implement the Wildlife Policy (2007), and guidelines and other elaborations of the Policy, before making decisions on the soda ash project or any other significant proposal that is likely to lead to a change in the ecological character of the Lake Natron Basin Ramsar site.
5. The Government of Tanzania should investigate the scope for Strategic Environmental Assessment of any economic development policies and plans potentially affecting Lake Natron (and ideally also Tanzania's other wetlands).
6. As far as possible, pending the completion of the measures mentioned above, in all relevant decision-making and management actions, a precautionary approach should be taken in the meantime.
7. The Government of Tanzania should elaborate and translate the Ramsar site management planning guidelines for optimal use in the Tanzanian context.
8. The Government of Tanzania should investigate options for legal protection and regulation regimes for the Lake Natron Ramsar site, including an examination of the scope for and implications of all the potential designations and mechanisms as discussed in the present report.

9. The Government of Tanzania should explore the possibility of establishing Wildlife Management Areas (WMAs) in the existing Game Controlled Areas around Lake Natron for the purpose of enhancing community involvement in the management of the Lake Natron and its environment and to ensure that those communities derive benefits from tourism related activities. Should this option be considered, there will be a need to explore and identify partners who can work with local communities and district authorities in implementation of the WMAs. Some of these could be existing concession holders in the hunting blocks within the area.
10. The Government of Tanzania should consider submitting an updated Ramsar Information Sheet and map for Lake Natron, including an accurate definition of the boundaries of the Ramsar site.
11. The Government of Tanzania should consider adding the Lake Natron Ramsar site to the Montreux Record (a record of Ramsar sites where changes in ecological character have occurred, are occurring or are likely to occur - see section 3 above for additional details), *inter alia* as context for following through on the present Mission's recommendations.
12. Due to the transboundary nature of the Lake Natron ecosystem, the RAM recommends closer consultation/information exchange between Tanzania and Kenya regarding the management of Lake Natron's resources, in line with Article 5 of the Ramsar Convention (see paragraph 4.2 above for additional details).
13. The RAM recommends that the Ramsar Secretariat provide technical and, if possible, financial support to the Government of Kenya to explore the possibility of designating those portions of the wider Lake Natron ecosystem which fall within Kenyan territory as a Ramsar site and to collaborate with Tanzania on integrated cross-border approaches to conservation and management of the wider Lake Natron ecosystem.
14. The RAM recommends that the Ramsar, CMS and AEWAs Secretariats explore with the IUCN-SSC/Wetlands International Flamingo Specialist Group, BirdLife International and the Tanzanian authorities the potential for a regional project based on the dispersal area of the East African population of the lesser flamingo (Tanzania, Kenya, Uganda and Ethiopia plus possibly Botswana and Namibia).

## **Annex 1: MISSION ITINERARY**

### **Saturday/Sunday 16-17/02/2008**

Arrival of the RAM Team and Kenyan Observers in Dar es Salaam

Sunday PM – Initial RAM Team briefing

### **Monday 18/02/2008**

0800 – 1100 RAM core team meeting

1300 - 1330 RAM meeting with Ms. Blandina Nyoni, PS Ministry of Natural Resources and Tourism

1500 - 1800 Meeting with key NGOs and Civil Society Organizations

1800 – 1900 Meeting with Norconsult (T) Ltd

1930 – 2100 RAM debriefing and diner with NGOs and CSOs

### **Tuesday 19/02/2008**

0900 – 1230 Meeting with National Wetlands Working Group

1400 – 1800 Meeting with Lake Natron Resources Ltd (TATA Chemicals Ltd and Tanzania National Development Corporation)

### **Wednesday 20/02/2008**

0900 – 1130 Meeting with Donor Partners Group

1130 – 1230 Consultations with the Kenyan Observers to the RAM

1300 – 1430 Meeting with National Environment Management Committee

1500 – 1600 Meeting with Ms. Blandina Nyoni, PS Ministry of Natural Resources and Tourism

End of Dar consultative meetings

**Wednesday PM/Thursday 20-21/02/2008**

Departure of part of RAM team (P. Mafabi, D. Prichard, B. Childress, S. Dereliev) and preparation for RAM field trip to Lake Natron and Arusha (H. Sosovele, E. Wilson)

**Friday 22/02/2008**

Flight from Dar es Salaam to Kilimanjaro/Arusha

AM Drive to Longido for meetings with Longido District Council Officials

PM Drive from Longido to Lake Natron via Gelai Lumbwa

**Saturday 23/02/2008**

AM Meeting with village representatives from Gelai Lumbwa, Ngare Sero, Alaililai, Magadi, Matale, and Matale B at Moivaru Lodge

PM Drive along western side of Lake Natron via Monik River delta/village to Pinyinyi River delta/village. Meeting with Pinyinyi village representatives

**Sunday 24/02/2008**

AM Drive along eastern side of Lake Natron via Gelai freshwater springs to Wosi Wosi area (site of proposed brine abstraction pumping station, proposed pipeline to soda ash processing plant and preferred site of processing plant selected during ESIA).

PM Meeting with representatives from Wosi Wosi hamlet (part of Ketumbeni Village) and visit to volcanic crater/rock formations on lower slopes of Gelai mountain

**Monday 25/02/2008**

AM Drive to Loliondo for meeting with Ngorongoro District Council officials

PM Drive to Arusha via Lake Natron, Engaruka and Mto wa Mbuu

**Tuesday 26/02/2008**

AM Meetings with NGOs, Malihai Clubs and Mweka College

PM Meetings with Private Sector - Tourism and Hunting Operators

**Wednesday 27/02/2008**

AM Meetings with Arusha Regional Officials/National Wetlands Working Group (NWWG) and Tanzania Wildlife Research Institute (TAWIRI)

PM Meetings with NGOs and CBOs

**Thursday 28/02/2008**

AM Flight from Arusha/Kilimanjaro to Dar es Salaam

PM Meeting with Ms. Blandina Nyoni, PS Ministry of Natural Resources and Tourism

**Friday 29/02/2008**

End of Mission meetings with Wetlands Unit/Wildlife Division

## Annex 2: Individuals/Institutions Consulted by Mission

Name	Title/Designation	Organization/Institution
<b>GOVERNMENT</b>	<b>OF TANZANIA</b>	<b>(DAR ES SALAAM)</b>
Ms. Blandina Nyoni	Principal Secretary	Min. Nat. Res. & Tourism
Mr. B.T. Baya	Director General	Nat. Env. Man. Council (NEMC)
Mr. Ruzika N. Muheto	Dir. Env. Plan. & Research	NEMC
Mr. P. Luteganya	Environmental Officer	NEMC
Ms. Experancia Tibasana	Land Use Planner	Nat. Land Use Plan. Council
Mr. Paul M. Kiwele	Senior Forest Officer	Min. Energy and Minerals
Ms. Grace Ngallo	Assistant Director	Min. P E E
Mr. Vincent M. Shaidi	Town Planner	Min. of Lands
<b>GOVERNMENT</b>	<b>OF TANZANIA</b>	<b>(Longido District)</b>
Mr. W.P. Haaly	DED (Ag.)	Longido Dist. Council
Mr. Jacob O. Lyimo	DFO	Longido Dist. Council
Mr. Stepheno Laizer	DGO	Longido Dist. Council
Ms. Joan Foya	DPLO	Longido Dist. Council
<b>GOVERNMENT</b>	<b>OF TANZANIA</b>	<b>(Ngorongoro District)</b>
Elias Ngorisa	Vice Chairman	Ngorongoro Dist. Council
Masegeri Tumbuya Rurai	Dist. Nat. Resource Officer	Ngorongoro Dist. Council
Denary Gimirey	Accountant	Ngorongoro Dist. Council
Emmanuel L. Ntatiye	Supplies Officer	Ngorongoro Dist. Council
Betekire Rubunga	DGO	Ngorongoro Dist. Council
Octavius Leole	DEO	Ngorongoro Dist. Council
Kanael Mollel	PSc/TSA	Ngorongoro Dist. Council
P. L. Mbowe	DALDO (Ag.)	Ngorongoro Dist. Council
Paul L. Mollel	DCDO (Ag.)	Ngorongoro Dist. Council
Lawrence L. Ledio	Livestock Officer	Ngorongoro Dist. Council
Wipyana E.A. Mkumbwa	DMO (Ag.)	Ngorongoro Dist. Council
Nagea Hamisi	Dist. Engineer	Ngorongoro Dist. Council
<b>GOVERNMENT</b>	<b>OF TANZANIA</b>	<b>(Arusha)</b>
Dr. Simon Mduma	Director General (Ag.)	Tan. Wildlife Res. Inst. (TAWIRI)
Ms. A. Mwautobe	Prin. Research Scientist	TAWIRI
Mr. Julius Norbert	Reg. Nat. Resource Advisor	Arusha Regional Secretariat
Mr. Fredrick Iawombeki	Comm. Anti-Poaching Unit	WildlifeDiv./MNRT
Mr. Frank Mremi	SGW	WildlifeDiv./MNRT

<b>COMMUNITY</b>	<b>REPRESENTATIVES</b>	<b>(VILLAGE/WARD/HAMLET)</b>
Emanuel Laizer	MWL (???)	Lumbwa, Longido Dist.
Michael Lenaisandi	Chairman	Alaililai, Longido Dist.
Mwasuvi Olosinigi	Chairman	Mangadi, Longido Dist.
Sangau Alaigwanani	VEO (???)	Alaililai, Longido Dist.
Yona L. Kekan	MWL	Engare Sero, Ngorongoro Dist.
Njake Lekashu	VEO	Matale, Longido Dist.
Steven Losieku	Chairman	Gelai Lumbwa, Longido Dist.
Kipara Lemoot	Chairman	Matale B, Longido Dist.
Christopher Ndurwai	Chairman	Engare Sero, Ngorongoro Dist.
Joshuai Lekipa	Chairman	Pinyinyi, Ngorongoro Dist.
Japhet Moita	Village Chairman	Pinyinyi, Ngorongoro Dist.
Ezekiel Ndotunoti	Representative	Pinyinyi, Ngorongoro Dist.
Estar Orimaoi	Representative	Pinyinyi, Ngorongoro Dist.
Naliwo Kaisasi	Representative	Pinyinyi, Ngorongoro Dist.
Moleli Kilugula	Village Chairman	Wosi Wosi, Longido Dist.
Loiputari Kimbwa	Representative	Wosi Wosi, Longido Dist.
Muhimo Kiriambata	Representative	Wosi Wosi, Longido Dist.
Ole Sinjia	Representative	Wosi Wosi, Longido Dist.
Ole Kimka	Representative	Wosi Wosi, Longido Dist.
Lengume	Representative	Wosi Wosi, Longido Dist.
Lemindya	Representative	Wosi Wosi, Longido Dist.
Lemapi	Representative	Wosi Wosi, Longido Dist.
Letema	Representative	Wosi Wosi, Longido Dist.
<b>LAKE NATRON</b>	<b>RESOURCES</b>	<b>LIMITED</b>
Mr. A. C. Mwakibolwa	Director - Projects	Nat. Development Corp. (NDC)
Mr. A. S. Mwandwanga	Project Engineer	NDC
Mr. M. Ramson	Project Engineer	NDC
Mr. U. P. Dave	Manager – New Projects	Tata Chemicals Ltd.
Mr. Rahul Singh	Dep. Manager – New Proj.	Tata Chemicals Ltd.
<b>NORCONSULT (T)</b>	<b>LIMITED</b>	
Ms. Flora Ismail	EIA Team Leader	Norconsult (T) Ltd
<b>DONOR</b>	<b>PARTNERS</b>	<b>GROUP</b>
Asukile R. Kajuni	Prog. Manager	USAID
Jema J. Ngwale	Prog. Off. - Environment	Royal Danish Embassy
Isabell von Oertzen	Advisor - MNRT	Belgian Tech. Coop.
Matteo Mode	Coordinator	UNEP
Gabriel Batulaine	Env. & Nat. Res. Specialist	Finnish Embassy



<b>OTHERS - NGOs</b>	<b>PRIVATE SECTOR</b>	<b>AND UNIVERSITY</b>
James O. Ngana	Researcher	Inst. Of Res. Assessment, U of Dar
Neil Baker	Author	Important Bird Areas in Tanzania
June Jao	Journalist	Env. Journalists Assoc.
Paul Nyiti	Conservation Officer	Wildlife Con. Soc. Of Tanzania
Kate Linnegar	Research Coordinator	Friedkin Conservation Fund
Keith Roberts	Manager	Friedkin Conservation Fund
Stephen Mariki	Conservation Director	WWF Tanzania
Abdulrahman S. Issa	Country Director	IUCN Tanzania
Mike Ole Mokoro	Prog. Officer	Ilkisongo Pastoralist Initiatives -IPI
Joseph Ole Saningo	Director	IPI
Ken Mwathe	Coordinator	Lake Natron Consultative Group
Ednah Mndeme	Lawyer	Lawyers Env. Ass. Tan. - LEAT
Lusekelo Philemon	Journalist	JET
Edward Sandet	Comm. Dev. Officer	Friedkin Conservation Fund
Emmanuel Eliphas	Driver	Friedkin Conservation Fund
M. Allard	Operations Mgr.	Wengert Windrose Safaris
Marc Baker	Director	Olivers Camp Ltd.
Damjan Kranjc	Anthropologist	VLRT
Nyangabo Musika	Coordinator	Malihai Clubs
Reginald T. Mwaya	Lecturer	Mweka College of Wildlife Mgmt.
Charles Foley	Asst. Country Dir.	Wildlife Conservation Society
Andrew Williams	Coordinator	Tan. Natural Resource Forum
Katherine Snyder	Country Director	Sand County Foundation
Jamboi Baramayiegu	Field Officer	Ujamaa Comm. Resources Trust

## Annex 3: Joint Ramsar, CMS and AEWA Letter to Government of Tanzania



Ramsar Convention on Wetlands  
Convention on the Conservation of Migratory Species of Wild Animals  
Agreement on the Conservation of African-Eurasian Migratory Waterbirds

H.E. Hon. Minister of Natural Resources and Tourism  
PO Box 9372  
Nyerere Road, Ivory Room,  
Dar es Salaam,  
United Republic of Tanzania

Fax 1: +255 22 2123158

H.E. Hon. Minister for Environment  
Vice President's Office  
P.O. Box 5380  
Dar es Salaam  
Tanzania

Fax : 255 22 2128749

11 March 2008

Ramsar Ref: 11-03-TZ/R-C-A/MIN/08  
CMS Ref: 106.3  
AEWA Ref: 08-159-LL

Your Excellencies,

**Subject: Reports on possible threats to the Lake Natron Basin Ramsar site and Ramsar Advisory Mission to Tanzania**

The Convention on Wetlands (Ramsar, 1971), the Convention on Migratory Species (CMS) and the African-Eurasian Waterbird Agreement (AEWA), extend to you its deep regards. We greatly appreciate the efforts of the United Republic of Tanzania towards the implementation of these three Multilateral Environmental Agreements in Tanzania, especially through the efforts made in the past by your Government to conserve waterbirds and their habitats within your territory.

We also congratulate you on your appointments to the offices of Minister for Environment and Minister for Natural Resources and Tourism.

We wish to take this opportunity to express our appreciation to the Government of Tanzania for the support provided to Ramsar Advisory Mission (RAM) 59: Lake Natron Basin Ramsar Site during its fact finding mission to the United Republic of Tanzania from 18-29 February 2008. In fact this was a very special mission taking into account that for the first time ever the three multilateral environment agreements mentioned-above worked together in a common Advisory Mission. This clearly shows the importance given to the subject of this RAM Mission by these MEAs.

With support from the Wetlands Unit in the Wildlife Division, the RAM was able to carry out extensive stakeholder consultations in Dar es Salaam, Arusha and in the Lake Natron region and will be submitting its findings and recommendations to the Government of Tanzania in due course.

During its consultations with local, regional, national and international stakeholders the RAM encountered a number of significant unanswered questions that it feels will require further clarification before an informed decision can be taken by the Government of Tanzania on the soda ash project proposed by Lake Natron Resources Limited (LNRL). Among the issues requiring further clarification are:

- Major changes to the project design and location were proposed by Lake Natron Resources Limited during the Public Hearing on the ESIA convened by the National Environment Management Council on 23 January 2008 and during the consultations with the RAM team in Dar es Salaam. LNRL indicated that these changes would require a new ESIA to be carried out;
- Current ESIA does not include an assessment of the impact of the road/rail access to soda ash processing plant and pumping stations from the nearest existing road/railhead;
- Additional consultations with local and district stakeholders, particularly with officials in the newly established Longido District office, will be required due to proposed changes in location of processing plant and road/rail access;
- Insufficient economic information was available in the ESIA to carry out full cost/benefit analysis of proposed soda ash facility and infrastructure;
- Insufficient information was available for the ESIA to assess the impact of the proposed level of brine abstraction on the hydrology and chemical composition of Lake Natron.

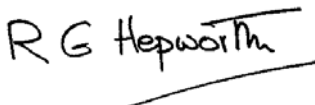
Therefore, the Ramsar Convention, CMS and AWEA Secretariats are of the opinion that the NEMC review of the Environmental and Social Impact Assessment submitted by LNRL in September 2007 should be suspended until further notice. The Government of Tanzania should require LNRL to clarify their intentions in regard to the status of the 2007 submission and the more recent proposals put forward at the January 2008 hearing. In relation to the latter, LNRL should commission a new ESIA based on a detailed proposal covering all aspects of the abstraction, processing and transportation of the soda ash from Lake Natron to the nearest existing road/railhead, as well as to address all transboundary issues related to the proposed development.

We look forward to a continued engagement with the Government of Tanzania in its efforts to fulfil its commitments as a signatory to the Ramsar Convention, the Convention on Migratory Species and the African-Eurasian Waterbird Agreement with a view to conserve Lake Natron as breeding ground for the Lesser Flamingo of major international importance.

Please accept, Your Excellencies, the assurance of our highest consideration.



Secretary General  
Ramsar Convention



Executive Secretary  
CMS



Executive Secretary  
AWEA