

# **Protection of the Cal-Madow Range of Mountains, Somalia**

## ***Proposal for an Environmental Assessment Study***

### **Executive Summary**

The study will set out to collect physical data which, together with information gained from meetings with local community leaders and farmers, will be used to create the framework for a robust social, environmental and economic development programme for the Cal-Madow region.

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### **Principal Objectives**

#### **A] Environmental Assessment and Study**

- i)** protect the Cal Madow Range and its forests by:
  - a)** re-establishing the Cal Madow forest as a national park,
  - b)** the study of endangered wild fauna and flora,
  - c)** the study of gully erosion in the Gebbi area, from Hadiftimo to El-Dofar village which has led to soil degradation in grazing areas, leading to further rural poverty
  - d)** the teaching of sound mountain farming and livestock husbandry,
  - e)** assessing the possible establishment of a National Herbarium and Museum,
- ii)** protect the marine ecosystem and develop sound fisheries in the coastal area, particularly Las Koreh and Elayo including remote settlements and also Geldora Road
- iii)** conserve the large Acacia forests between Xingalool and Buraan (Sool and Hadeed plateaus), traditionally used for charcoal burning,
- iv)** engage the local communities in these projects.

#### **B] Historical Assessment**

- 1) To study Hieroglyphics and ancient man-made mounds in the Eastern Sanaag region which provide evidence of Pharaonic Egyptian settlements in the Cal-Madow, then called Macag.

## **Project Commentary**

The assessment will cover the impact of environmental degradation on social, educational and economic development. Also, it will cover its impact and that of eco-tourism, trophy-hunting and unsustainable harvesting on indigenous species. In turn, this impacts on grazing patterns and the quality and integrity of the local species mix. Hard evidence of climate change will be sought as well as seeking local opinion on this. Efforts will be made to encourage local environment management programmes covering wildlife, vegetation, water and soil conservation. This may lead to establishing good practice guidelines and the control of unsustainable activity. The Cal-Madow has a large farming community but poor road access leads to high produce wastage before it reaches the market. The towns of Hadiflimo, Badhan and others are cut off from the coast due to poor roads. Thus the port of Bossasso must be used instead of the nearer Laskeray.

The project would include a study of the ecological state of the Calmadow mountains, part of the Golis Range Mountains. They will study the flora and fauna and meet the Hasow (peasant farmers) and survey the grazing lands and degrees of deforestation and desertification. They will study the severity of erosion caused by soil degradation, overgrazing and gully erosion. Inland they will study the effects of burning Acacia trees for charcoal for export and visit the Acacia nurseries. It would include a study of the potential fishing prospects in the area, particularly Laasgoray and Elayo.

## **Assessment Study Team Members**

The team will comprise:

|                |   |
|----------------|---|
| Dr Mats Thulin | Department of Systematic Botany, Evolutionary Biology Centre,<br>Uppsala University |
| Matt Rice      | Regional Manager, Africa Programme, Fauna & Flora International,                    |
| Ahmed Hersi    | Taxonomist  |
| Hassan Nure    | Environmental Education & Rural Development expert                                  |

**Itinerary**

| <b>Location</b>   | <b>Days</b> | <b>Total</b> | <b>Activity</b>  |
|-------------------|-------------|--------------|--|
| Nairobi           | 5           | 5            | Arrive and fly on to UN airstrip, Bossasso   |
| Bossasso          | 3           | 8            | meet Puntland authorities  |
| Bossasso-Macag    | 1           | 9            |  |
| Macag - Xeed      | 3           | 12           |  |
| Xeed - Dheen      | 1           | 13           |  |
| Dheen -Dol        | 1           | 14           | 2 hrs walk from Dheen to Dol, central Al-Madow, to conduct flora and fauna assessment and plant collection<br>assess approaches and peak of Al-Madow mountain;<br>meet local community |
| Dol and surrounds | 1           | 15           | travel to western Al-Madow range to Markad   |
| Dol - Markad      | 1           | 16           | meet local community   |
| Markad            | 1           | 17           | collect cars,  |
| Markad- Laskeray  | 1           | 18           | meet fishermen   |
| Laskeray - Badhan | 1           | 19           |  |
| Badham            | 2           | 21           | meet Sultan Said and local chiefs  |
| Badham-Hadaltimo  | 6           | 27           | meet local communities, gully erosion assessment. This will include El-Dofar, Hubeera, Rad, Qoolo, Midigale, Dawh, Awsane  |
| El-Dofar -Dhakar  | 1           | 28           | meet charcoal burners,   |
| Dhakar            | 5           | 33           | assess desertification on Sool and Hadeed plateau<br>visiting Baragh-gol, Xinjalool, Balery, Ceel Buh, damalla-Xajare, Shimbiraade, Carmalle   |
| Badhan to Nairobi | 3           | 36           |  |
| Nairobi           | 4           | 40           | prepare to return to London  |

## Costings

| Item  | £ Cost | x Days | Total        |
|---|--------|--------|--------------|
| <b>Fees</b>   |        |        |              |
| Prof M Thulin   | 220    | 40     | 8800         |
| M Rice (Fauna & Flora International)                      | 170    | 40     | 7800         |
| Hassan Nore (Environmental Education & Rural Development) | 160    | 40     | 6400         |
| Ahmed Hersi (Plant Taxonomist)                            | 160    | 40     | 6400         |
| <b>Sub-total</b>  |        |        | <b>29400</b> |
| <b>Travel</b>   |        |        |              |
| London-Nairobi-London                                     | 650    | 3      | 1950         |
| Uppsala-Nairobi-Uppsala                                   | 700    | 1      | 700          |
| Car Rental, daily   | 100    | 30     | 3000         |
| <b>Sub-total</b>  |        |        | <b>5650</b>  |
| <b>Security, 3 people</b>                                 | 40     | 30     | <b>3600</b>  |
| <b>Equipment</b>  |        |        |              |
| Laptops   | 900    | 2      | 1800         |
| Video Camera  | 700    | 1      | 700          |
| Camera  | 100    | 2      | 200          |
| Stationery  | 600    |        | 600          |
| First Aid Kits  | 50     | 4      | 200          |
| <b>Sub-total</b>  |        |        | <b>3500</b>  |
| <b>Contingency</b>  | 2500   |        | <b>2500</b>  |
| <b>Total</b>  |        |        | <b>44050</b> |

## Somali support in the UK

**A] Support Base** The large Somali community (the community) in the UK wishes to initiate projects in northern Somalia which are consistent with the immediate needs of the region and the UN Millennium Development Goals (MDG). The initial survey will lead to the creation of a co-operative forest protection service.

**B] Community commitment** The community is conscious of the challenges involved. Somalia is generally regarded as a 'failed state' but recently its government, re-formed in Kenya, has begun to assemble in Mogadishu, a city whose name casts a shadow over foreign perceptions of Africa's capacity to build and rebuild its institutions. In the north of the country, in the former British Protectorate of Somaliland, a general peace continues. Visitors and expatriates can enter and leave without hindrance by scheduled flights. Small airstrips are located along the northern coast. In the north, drought can afflict the Sool and Sanaang districts. The community is well-placed to initiate and monitor small projects. It maintains constant contact with various communities in these two provinces and with the Warsangeli People. Community representatives visit the region regularly, a rare feature for displaced peoples.

## The Cal Madow

*A supporting commentary by Professor Mats Thulin, Department of Systematic Botany, Evolutionary Biology Centre, Uppsala University*

The Cal Madow area in northern Somalia consists of a coastal plain bordering the Gulf of Aden, a hilly sub-coastal zone of varying width, an extensive block of steep limestone escarpment reaching well above 2000m and an uplifted plateau lying to the south. The plateau dips to the south-east and has substantial areas of gypsum. The climate is influenced by the monsoon winds. The erratic rainfall in the coastal and sub-coastal zone is less than 100mm per year, while the upper part of the escarpment is the wettest area in Somalia, receiving a mean annual rainfall of over 700mm. A major part of the rain probably falls during the winter months, during the north-east monsoon, when mists are also frequent. Rain falling on the escarpment is drained to the north and seasonal streams run across the coastal plain, whilst the plateau itself is in rain-shadow.

The coastal plain is desert or semi-desert with little or no vegetation, while the sub-coastal zone has sparse to dense vegetation dominated by woody species of *Acacia*, *Commiphora* and *Boswellia*. At intermediate altitudes, the slopes of the escarpment are largely covered by evergreen or semi-evergreen scrub with, for example, *Buxus*, *Cordia*, *Dracaena*, *Olea* and *Pistacia*. The upper zone of the evergreen scrub grades into remnants of *Juniperus* forest along the scarp.

The total number of vascular plants in Cal Madow can be estimated to around 1000 but the figure is uncertain as large parts of Cal Madow remain inaccessible and unexplored. Cal Madow is one of the main frankincense producing areas in Somalia. Frankincense trees (*Boswellia frereana* and *B. sacra*) occur on cliff-faces and in rocky gullies in the sub-coastal zone. Myrrh (*Commiphora myrrha*) is also found here and the area has a large proportion of the remaining *Juniperus* forests in Somalia.

Many endemic plants are found in Cal Madow, some examples from the escarpment are *Renschia heterotypica* (Lamiaceae, endemic genus), *Aloe eminens* (a tree *Aloe*) and *Euphorbia mitriformis* (a spiny cushion-forming succulent). Examples of endemics of the sub-coastal zone are *Acacia cernua* and *Jatropha aspleniifolia*. Several endemic plants are also found in the gypsum areas on the plateau, such as *Reseda sessilifolia*.

The Warsangeli linnet (*Carduelis johannis*) is a locally common bird restricted to Cal Madow, and the rare Beira antelope (*Dorcatragus megalotis*) is also found here. With its varied and dramatic topography and highly interesting flora and fauna, the Cal Madow area has a definite potential for eco-tourism.