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## **Good Practices of SEA in Sri Lanka**

**A case study from the Strategic Environmental Assessment study carried out for the Northern Province Reconstruction/development plans in Sri Lanka**

### **Abstract**

*Environmental impact Assessment is a well established process in Sri Lanka since it has been regularized in the country in 1993 through the overall frame work of the National Environmental Act. However with only a few exceptions Environmental assessment done so far in the country have been primarily confined to projects where as major policies and plans are developed without taking environmental aspects in to consideration. Strategic Environmental Assessment (SEA) is a tool effectively used worldwide to evaluate the environmental consequences of a policy, plan or programme and to incorporate these findings into decision making. SEA can supplement and reduce the scope, time spent and cost of project level EIA since strategic choices with regard to location and technologies would have already been taken.*

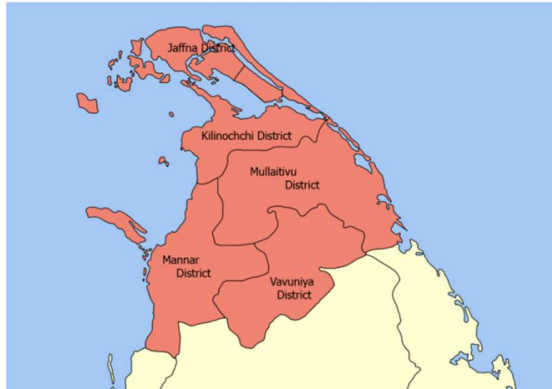
*In Sri Lanka, a cabinet decision was taken in 2006 to direct all government agencies to undertake SEA for all national policies, programs and plans before implementation. Since 2006, several SEA studies have been carried out by the government agencies basically for development plans including district/regional development plans, water resources & irrigation sector development plans and flood & drought mitigation plans of major river basins.*

*This article specially described the SEA carried out for the Northern Province Reconstruction/development plans after 30 years of armed conflict. This study was highly successful as most of the recommendations/findings of the SEA were incorporated in to decision making of post conflict needs of the Northern Province of Sri Lanka*

### **Introduction**

The Northern Province of Sri Lanka encompasses five administrative districts of Jaffna, Kilinochchi, Mullaitivu, Mannar & Vavuniya and is 8884 sq km in extent. The five districts in the Northern Province comprises of 33 Divisional Secretariat Divisions and 3235 villages.

## Northern province – Sri Lanka



The Northern Province is enriched with a vast range of flora, fauna, wildlife and natural resources such as forests, dry lands, wet lands, beaches, estuaries, salt marshes, mangroves and coral reefs etc.

### **Motivation**

Prior to the onset of the conflict, the Northern Province produced a significant share of agricultural and fisheries product including paddy, vegetable, fruits and livestock. However during the conflict, livelihood related to agriculture and fisheries were badly affected hindering the economic growth of the Northern Province. A collapse of governance including environmental oversight has resulted in very weak control on natural resources management, resulting over exploitation of forests with virtually no control over water and air pollution. Tsunami of 2004 too impacted heavily on the coastal region of the Northern Province.

With the liberation of the Northern Province in May 2009 after 30 years of conflict situation, the government of Sri Lanka launched a major development initiative for the Northern Province which is called the “Northern Spring” that involved in new settlements, urban and rural infrastructure and livelihood development in sustainable manner to ensure that haphazard development does not take place in the Northern Province.

In order to support the government efforts towards sustainable development, the SEA study was initiated by the Central Environmental Authority of Sri Lanka soon after the liberation of the Northern Province. It was initiated in collaboration with the Disaster Management Center under the financial and technical assistance of UNDP. SEA was integrated with the Disaster Risk Assessment in order to enhance the integration of environmental and disaster risk concerns in the policy planning process. Hence study was also known as the Integrated Strategic Environmental Assessment (ISEA) for the Northern Province. The Urban Development

Authority(UDA) was preparing a development plan for the Northern Province at the time hence it was the most appropriate time to guide the development plan to prevent haphazard development in the Northern Province.

The study was initiated in 2009 and completed in 2012. However the draft Report was reviewed again in 2014 to amend some of the agency recommendations.

### **Objectives of the Northern SEA**

The main objectives of this study were;

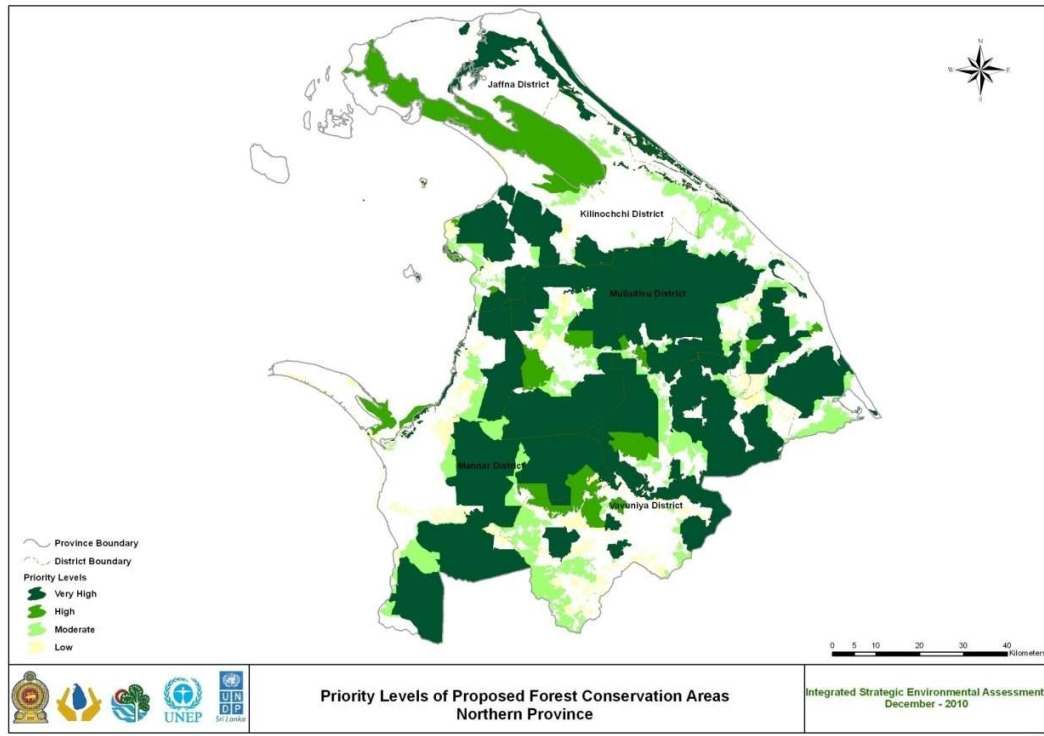
- Identification of the remaining environmentally sensitive areas and the unique environmental features in the Northern Province such as forest & wildlife areas, mangroves, marshes, coastal ecosystems, archaeological and cultural resources which need to be protected or carefully managed.
- Development of a data base of environmental assets which can be utilized for development activities in the Northern Province such as water sources, marine and coastal resources etc.
- Identification and management of significant and cumulative impacts from multiple projects proposed by the reconstruction/development plans for the Northern Province thus enabling the identification of alternatives and approaches for mitigating significant as well as cumulative effects.
- Identification of disaster prone areas in the Northern Province which need adequate precautionary measures/adaptations prior to planning any development activities.

### **Methodology**

Approach adopted was to give a green light to development while safeguarding the natural and archaeological resources in the area so that envisaged development in the Northern Province is sustainable and resilient. Over 25 key government agencies responsible for conservation and development took part in this study. Methodology adopted for this study involved extensive consultation and coordination process with district secretaries and key government agencies covering multiple sectors such as urban development, forest, wildlife, water, mineral, archaeology, marine, coastal, roads, irrigation etc.

As a part of the SEA, number of special studies were conducted. Forest Department carried out a systematic study to assess the forest cover in the Northern Province and to identify and prioritized important forest areas to be managed for environmental conservation. Prioritization was essential since considerable forest area has to be sacrificed for development projects earmarked for the Northern Province.

## Priority Forest Conservation areas in the Northern Province



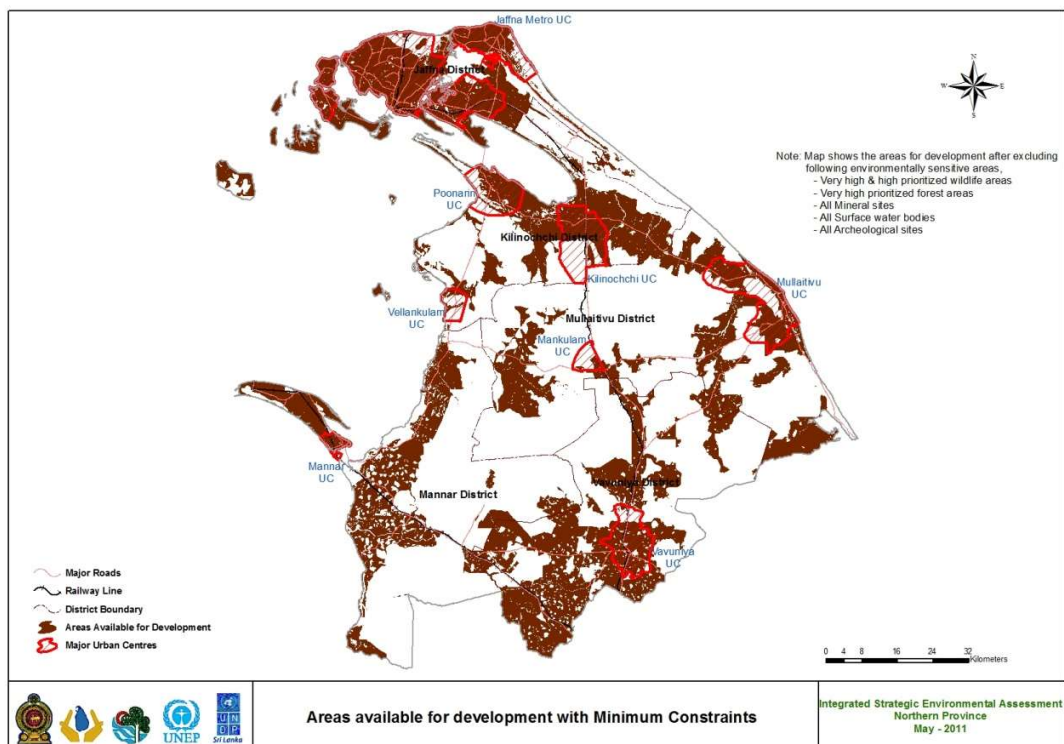
Department of Wildlife Conservation identified and demarcated the boundaries of the existing wildlife conservation areas and identified new areas which require protection. Geological Survey and Mining Bureau (GSMB) carried out a detail survey to identify the sites of mineral availability and quantity for future extractions. Water Resources Board identified and recommended measures to develop, manage, allocate and conserve available surface and ground water resources in the Northern Province. National Aquatic Resources Development Agency conducted a study to assess the status of the coastal and marine environment, biodiversity, areas to be protected and the potential for aquaculture & mariculture development while safe guarding the environment and natural resources in the Northern Province. The Archaeology Department identified many culturally & historically important places and the Disaster Management Center identified disaster prone areas. These studies facilitated the resource mapping and optimum use of natural resources.

The assessment took the form of a multi sector analysis, bringing in all development related and conservation orientation agencies from the inception of the study to provide an opportunity for development plans to be sound and sustainable from the outset. The development plans prepared for the province including the UDA Mega City Development Plan, Resettlement Plan, Road Sector and Irrigation Sector plans were discussed and analyzed. Resource constrains in

the Province such as non availability of surface water, salt water intrusion water quality issues in certain areas of the Northern Province were also discussed and analyzed.

Maps prepared and scientific information compiled during the process and the recommendations from the stakeholder agencies provided a frame work to identify the sensitive areas and to introduce disaster risk reduction in development planning. After taking out the most sensitive forests, wildlife, marine, coastal and archaeological areas, the opportunity map for development projects was developed. The opportunity map developed, provides space for industrial, agricultural, housing and other economic development activities and provision of services.

### Opportunity Map



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### Challenges

- During the assessment several conflicts were identified. The proposed development project especially the Mega City Development Plan prepared by the UDA created significant level of conflict with the proposed forest and wildlife conservation areas. The total loss of forest cover due to the proposed mega city development area is estimated to be 23,351 ha. However based on the need for development, low priority conservation

areas were identified for the mega city development plans by the Forest Department.

- The proposed development also coincided with the existing settlement areas. However additional areas were identified suggesting the needs of re-settlement for such parties.
- The development areas identified in the western coast of the Northern Province lacked good quality ground water. However the rest of the area in the Northern Province identified for development is available with good quality ground water at a satisfactory rate of extraction.
- SEA also revealed that most of the sites having mineral resources were also located within the forest areas. About 75% of the proposed forest and wildlife conservation areas including elephant corridors and few archaeological sites overlapped with the mineral resources. However this could be resolved by identifying the sites with least destruction when the requirement arises.

### **Opportunities**

- The study identified both land and marine areas suitable for development activities including ecotourism potential areas, industrial sites, fisheries, mariculture etc.
- Sources of ground water and mineral stocks which can be utilized for development process were also identified.
- In order to open up new lands for development the forest areas were prioritized and low priority areas were made available for development.
- Water bodies and catchment areas, river and stream reservations were included as conservation areas therefore these will be protected. Sand dunes, Coastal vegetation areas were considered as priority conservation areas where development programs would not have any significant impact. The proposed road network has low impact on priority conservation areas.
- Disaster prone areas were also identified and mapped and could be useful in planning of development projects.

### **Recommendations**

- The study strictly recommended adhering to the Opportunity Map provided in the report during the site selection for new development projects. Any new development which will be established in the Northern Province should

strictly avoid the environmentally sensitive areas identified by the study and should be compatible with the opportunity map.

- Coastal sand dunes should be preserved as they perform a very important function by supporting the recharge of the ground water table and act as a barrier against tsunamis. Erosion prone areas within the coastal zone should be identified and indicated. All future development plans in such areas should be undertaken with adequate mitigation measures.
- Required measures should be taken to control and minimize salt water intrusion into inland surface waters including rivers.
- Ground water sources should be protected since surface water is scarce in the Northern Province. The quality of ground water should be monitored regularly to ensure that water quality is maintained within acceptable levels. In addition the excessive application of pesticides and fertilizers should be discouraged through awareness programs and extension programs for farmers.
- Irrigation projects proposed for the Northern Province by the Ministry of Irrigation and Water Management should be encouraged as these projects provide water to irrigate both existing and new lands.
- Resources maps identified by the GSMB should be further refined to identify minerals which could be extracted with minimum damage to the environment.
- Suitable industries should be identified in order to promote industrialization in the Northern Province. All such industries should be sited within industrial Estates with the required infrastructure including waste treatment.

### **Major outcomes**

- As the outcome of the SEA, the physical boundaries of the forest areas which are essential to conserve under the Forest Department were identified and gazetted under the Forest Ordinance.
- The Department of Wildlife Conservation identified most sensitive wildlife areas and also gazetted under Flora and Fauna Protection Act.
- The UDA developed a large number of Development Plans for Killinochchi, Mullaitivu, Mannar, Vavuniya, Vellankulam, Jaffna and many other cities in addition to the establishment of Regional Center in Mankulam. These plans were modified in accordance with the findings of the SEA.
- The Department of Archaeology was able to explore about 260 archaeologically and historically important sites and 200 places were already declared under the gazette notification.
- The Sri Lanka Tourism Development Authority recognized the areas identified by the ISEA as suitable for tourism promotion.
- National Water Supply Drainage Board (NWSDB) has demarcated an area for the erection of water impounding reservoir in connection with "Per Aru" river to provide potable water to Vavuniya District.

**Conclusion**

A major problem in Sri Lanka is that most government agencies develop and implement plans in isolation. SEA gives the capacity for provision of planning in consultation with different government organizations thus leading to an integrated decision making. The Northern SEA is a good example for participatory approach by the key government agencies offering an added value to the sustainability of the country. This is a win –win situation whereby Sri Lanka was able to achieve the development goals while preserving the environment.

**Reference**

Report of Integrated Strategic Environmental Assessment- October 2014

*(A multi Agency Approach coordinated by the Central Environmental Authority and by the Disaster Management Center supported by the UNDP & UNEP)*