



## **Sectoral Integration of Biodiversity in Solomon Islands**

### **Contents**

1. Introduction .....	2
Extent of Integration or Mainstreaming .....	2
National level .....	2
Sectoral level.....	2
2. Environment and Conservation .....	2
3. Agriculture.....	5
4. Fisheries .....	5
5. Forestry .....	6
6. Mining .....	6
7. Energy .....	7
8. Water Resources.....	7
9. Education .....	8
10. Health.....	9
11. Tourism .....	9
Tools and Processes for Mainstreaming and Integrating Biodiversity Issues and Sustainable Use .....	10
Use of Ecosystem Approach in Mainstreaming of Biodiversity .....	11
Use of EIA in Mainstreaming.....	12

## **1. Introduction**

Solomon Islands reported<sup>1</sup> the three aspects of mainstreaming.

### **Extent of Integration or Mainstreaming**

#### **National level**

Mainstreaming and integration of biodiversity considerations continue to be major issues for Solomon Islands even though the need for such an approach or action at all levels has increased significantly. The most urgent need is to institute the most effective mechanisms that will give result to plans and wishes for it to happen where it is most needed. There are current plans and action taken at various levels that allows for mainstreaming to happen and actually requires it to happen but there has been no effective national mechanism to make it an effectively coordinated outcome of decision making.

At the national level mainstreaming occurs more effectively through the periodically formulated national development plans which are formulated about every three years. (There is no sustainable development plan.) The current one is the medium term development plan for the year 2009 -2011. Various relevant biodiversity related activities are integrated into this document which encompassed many of the national activities of the relevant government sectors.

#### **Sectoral level**

At the sectoral level a number of actions have been taken which has improved the Solomon Islands situation in terms mainstreaming and integration of biodiversity considerations at the sectoral level.

## **2. Environment and Conservation**

There have been significant changes to the institutional arrangements of the environment sector which had involved amalgamation of various government agencies into one key ministry within the national government system. This Ministry is now the Ministry of Environment, Climate Change, Disaster Management and Meteorology. The key national agency in terms of the environment and biodiversity issues is the Environment and Conservation Division of this Ministry. This division has now improved its manpower needs and continues to address the challenges expected of a SIDS environment agency. A number of key actions have been taken within this ministry to promote mainstreaming and integration of biodiversity considerations.

These are as follows:

a. National Environment and Management Strategy (NEMS) – Even though already out of date the NEMS still exists and provide some direction for policy and programme development.

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<sup>1</sup> Solomon Islands (2011). Fourth National Report to the Convention on Biological Diversity, Ministry of Environment, Climate Change, Disaster Management and Meteorology, 81 pp.

- b. National Biodiversity Strategy and Action Plan (NBSAP) – The NBSAP was completed in 2009 and guides the country in implementing prioritized themes based on the requirements of the CBD. Twelve themes have been identified with ‘mainstreaming’ being the number one thematic priority. The NBSAP seems to have taken over many of the key objectives of the NEMS.
- c. National Environmental Capacity Development Action Plan (NECDP) 2008-12 – This plan is cross sectoral and is the outcome of the Capacity Development Initiative covering the Rio Conventions. The Solomon Islands identified five main goals with its own respective actions which the country hopes will assist in addressing capacity issues relating to the implementation of the Rio conventions at the national level.
- d. National Marine Turtles Action Plan – This plan provides the guidance for the management and conservation of marine turtles at the national level
- e. National Solid Waste Management Strategy and Action Plan 2009 – 2014 – This plan is the first solid waste management strategy for the country and identified 12 priority activities to be implemented within the five year period. The effects of wastes on biodiversity are a concern.
- f. National Adaptation Plan of Action (NAPA) – Solomon had developed its national adaptation plan under LDC funding and hopes to address impacts of climate change through adaptation measures. Impacts of climate change are significant and this plan is an effort to address those impacts and potential impacts.
- g. National Disaster Risk Management Plan – This plan is the country’s second and is an effort in taking a holistic approach to disaster management. One of the most significant causes of biodiversity losses is through natural and man- made disasters and this plan would hopefully assist in addressing potential impacts of disasters.
- h. Ridges to Reefs Conservation – This effort is part of the work on the Programme of Work on Protected Areas and identified current gaps in legislation, policies and programmes relating to protected areas. The effort identified priority areas for protected areas development.
- i. State of the Environment Report (SOE) – This is the second SOE compiled in the country. This being the first one as required under the Environment Act 1998. The report also includes relevant recommendations for further actions.
- j. Second National Communications (SNC) – The Solomon Islands has completed its SNC as required under the UNFCCC. The report includes examinations of potential and current impacts of climate change on biodiversity and ecosystems and also recommended further actions on adaptation measures.
- k. GEF Small Grants Programme (GEF – SGP) – The Solomon islands formulated its first Country Strategy for the implementation of the GEF SGP for the fourth operational phase of the programme and identified biodiversity protection, climate change adaptation and mitigation and land management as its thematic areas of focus and decided that the whole country be its area of focus.

## Environment Legislation

One of the main or key processes through which integration or mainstreaming is carried out is through the development of relevant legislation. The Solomon Islands has promulgated the following legislation in recent years: Environment Act 1998, Wildlife Management and Protection Act 1998, and the Protected Areas Act 2010.

The main legislation covering environmental issues in Solomon Islands is the new Environment Act 2008 which has now come into force following the gazettal of its Environmental regulations 2008. The Act provides for an integrated system of development control, environmental impact assessment (EIA) and pollution control; including:

- Prevention, control and monitoring of pollution including regulating discharge of pollutants to air, water or land and reducing risks to human health and prevention of degradation of the environment;
- Regulating the transport, collection, treatment, storage and disposal of waste and promoting recycling, re-use and recovery of materials in an economically viable manner; and
- Complying with, and giving effect to, regional and international conventions and obligations relating to the environment.

The Environment Act has considerable power by virtue of article 4 (1) which states that in the event of conflict between the Act and other acts, the provisions of the Environment Act shall prevail.

Regulations under the Act have been completed and have now come into force. The regulations cover detailed requirements for EIA. The Act has a schedule which list all 'prescribed' developments that will need to undergo some form of EIA. All prescribed developments require a simple assessment through a "screening" or "scoping" process, to see what form of additional assessment is required. Most development projects require a public environment report (PER), while many major projects will also need a second stage of appraisal which include technical, economic, environmental and social investigations presented in an EIA or environmental impact statement (EIS) report.

## Protected areas

The development of protected or conservation areas is a major tool in the integration or mainstreaming of biodiversity. Even though Solomon Islands has not had many legally established protected or conservation areas, the amount of effort shown in recent years in this issue has been very reassuring. The efforts has manifested itself in more than 100 known, managed or secured protected or conservation areas (see table 5 below). These comprise different types of terrestrial and marine ecosystems. Some of the large areas that make up this list already add up to more than 5 % of the total land area of Solomon Islands.

### **3. Agriculture**

The Ministry of agriculture and livestock is responsible for agricultural biodiversity (crops and livestock) issues in Solomon Islands. The sector is one of the largest sectors in terms of area of coverage, population involvement, and national production and income.

The sector is currently implementing the Sustainable Land Management project which is part of the UNCCD enabling activities. This project will address land degradation issues and hopefully identified ways of improving farming in degraded areas in the country and address other biodiversity considerations.

Many other efforts of the country under this sector are addressed under the International Plant Genetic Resources (IPGR) mandate.

The major strategy implemented at present is the Agricultural and Rural Development Strategy which was formulated with major assistance from donors (AuSAID and EU). This strategy covers mostly agricultural biodiversity issues in the rural setting and promotes sustainable use. The main priorities include improving local governance and service delivery, increase growth in agriculture and beyond, management of natural resources and strengthening local and international partnerships. A recent project focuses on the latest invasive species infestation which that of the Giant African Snail. A number of NGOs have also been involved in the sector.

One of the major NGO now involved in this area is the Kastom Garden Association (KGA).

The main legislation in the sector is the Agriculture and Livestock Act, Agriculture Quarantine, Act and related regulations. Solomon Islands is also party to a number of international instruments which also governs major issues.

### **4. Fisheries**

The Ministry of Fisheries and Marine Resources is responsible for both oceanic and inshore fisheries even though a large part of its current functions focuses on oceanic fisheries which deal with tuna fisheries. The functions of the ministry are guided by the Fisheries Act 1998. The Act provides the legal basis for a comprehensive and responsive national fisheries management regime. It also provides for the precautionary approach to fisheries management and encourages the long term sustainable management of fish stocks. The Act has a range of provisions that can be used to advance the conservation of the country's marine resources. One of the requirements of the Act to formulate management plans for specific marine species or type of fisheries that can be effective in managing and conserving marine biodiversity. Solomon Islands is also party to many regional and international instruments.

The Ministry continues to be involved in a number of survey and assessment activities focusing on economic marine species. Many of its activities also involved the establishment of MPAs and Locally Managed Marine Areas (LMMA), throughout the country. The LMMA programme in Solomon Islands is

coordinated from the Ministry of Fisheries and Marine Resources. The Ministry is also one of the key government agencies that have been involved in the Convention's enabling activities, which includes the Regional International Waters Programme, and the South Pacific Biodiversity Conservation Programme. They have been key partners in recent Rio convention related programmes and other MEA related programmes. All these programmes all have elements of mainstreaming and integration.

One of the large programmes that currently involve the sector is the Coral Triangle Initiative. This involves many countries, NGOs and Civil Society groups as partners. A number of international, national and community groups are also involved in the sector. Examples include NGOs and Civil society groups, Industry groups such as the large fishing companies, fishermen in communities, and the reef owners. A number of NGOs are involved in some of the well known Conservation area projects such TNC in the Arnavon Islands Marine Conservation Area, WWF and the Tetepari Descendants Association in Tetepari Island and the communities of Rennell Island in the East Rennell World Heritage Site. The World Fish Center is involved in applied research activities and develops potential fisheries products and assists in gathering information for fisheries management purposes.

## **5. Forestry**

The Ministry of Forestry and Research is responsible for forest development activities. Its mission is to promote, conserve and manage forest resources which should continue to benefit the environment and people of Solomon Islands. It is currently struggling to manage the controversial industrial logging operation that is the main cause of biodiversity loss in the country at present. The sector has formulated a number of initiatives in the past to try and arrest the runaway activities of the industrial loggers but has not managed to come up with the desired outcomes.

The sector is responsible for a number of national legislation. The key legislation is the Forest Resources and Timber Utilization Act 1969 and its regulations. The Act is out of date and has been the main stumbling block in efforts to improve the management of industrial logging. One of the other main functions of the ministry is to manage the national herbarium, most of its collection which has been moved to Fiji during the ethnic crisis of 1999-2003. The Ministry is working with some International NGOs to implement a major Forest conservation programme focusing on some of the major unique forest ecosystems in the country.

The sector's main players are the logging industry (who are the main exploiters of the timber), international and national NGOs, and communities working in partnerships to conserve and manage the forest and its resources sustainably. It is important to know that most of the forest resources of Solomon Islands are under the custody of the local communities who own them.

## **6. Mining**

Even though mineral prospecting activities have been going on in some of the main islands of the country since the colonial times, mining is still at its infancy with only one mine in Solomon Islands. This is the Gold Ridge mine on Guadalcanal which has just started gold production again this year after it was

closed down at the height of the ethnic crisis. Mineral prospecting currently focuses on gold, silver, and nickel. There are known deposits of aluminium on Rennell Island in the Rennell and Bellona provinces and Wagina Island in Choiseul province.

The key legislation in this sector is the Mines and Minerals Act of 1990 and the Mines and Minerals regulation 1996. There is also a Petroleum (Exploration) Act and some policies based on Mine closure and Offshore Minerals Policy. A policy on the Continental shelf has also been completed to meet requirements of the UN Law of the Sea.

The main requirements of the Mines and Mineral Act and the Regulation on the need for environment impact assessment on any mining development has been the main effort so far in integrating biodiversity consideration in this sector. Apart from that the Surface Access Agreements negotiated by the prospecting companies and the landowners usually takes care of many biodiversity considerations at the prospecting stages of mineral exploration.

The first and the only gold mine, the Gold Ridge mine underwent a comprehensive feasibility study and environment impact assessment for its original Mining License approval. It also has a comprehensive and well monitored environmental management plan for its continual operation.

## **7. Energy**

The energy sector is a key sector in the country that is responsible for power generation. The key government agency is the Energy division which is part of the Ministry of Mines, Energy and Rural Electrification. The division is responsible for the Solomon Islands Electricity Authority (SIEA) which is the established under the Electricity Act. The SIEA is the body responsible for power generation in the country, currently using fossil fuels. The Energy division is also responsible for the fuel suppliers, which at present are Mobil Oil and South Pacific Oil.

A number of proposals in the past to exploit other forms of energy have not come to fruition but a hydropower proposal in the past for the capital city of Honiara underwent an Environment Impact study. Another proposal for a Hydropower development is current and work is ongoing with the feasibility studies already commencing. A full environment impact assessment study is expected shortly.

The use of solar power for lighting and other community based uses is increasing in many communities throughout the country and is a significant development that is good for the environment. A draft National Energy Policy Framework is yet to be finalized for its implementation.

## **8. Water Resources**

The Ministry of Mines, Energy and Rural Electrification also has a Water Resources Division that is responsible for water resources management and utilization. The division is also responsible for the Solomon Islands Water Authority (SIWA) which is also established under an act parliament, the Solomon Islands Water Authority Act. The SIWA is the body responsible for water supply in the capital Honiara and other provincial headquarters.

The division also addresses water and land issues through its EIA requirements under the Mines and Minerals Act 1990. The River Waters Act which is also administered under this division provides for the control of river waters and its equitable and beneficial use thereof. The Act however does not have national application and applies only to designated areas. The division is currently implementing a Water Resources Management project which is part of a regional GEF funded programme aimed at improving water resources management in the region.

## **9. Education**

The education sector is the largest of all sectors in terms of the government national budget in Solomon Islands. At the formal level, the education sector comprises a various levels: early childhood education (ECE), Primary School education, Secondary school education, Tertiary education and a Technical and Vocational Education and Training sub sector. In 2009 there were 512 ECE centres with a total enrolment of 21,045 children. In the Primary level, there were 505 schools with a total enrolment of 115,728 students. In the secondary level there were 193 schools with a total enrolment of 38,445 students. In 2008 there were 27 Rural Training centres with an enrolment of 2,753 students. There were also 2,435 enrolled at the Solomon Islands College of High Education which is a tertiary institution in the same year. Extension centres of University of the South Pacific and the University of Papua New Guinea would enroll another 4-5,000 additional students.

The Ministry has instituted a number of significant policy changes in recent years ranging from early childhood education, basic education and a Tertiary education policy. There is a national education strategy that guides all activities within the sector. Major policy initiatives such as the Fee Free Education and Basic Education policies are encouraging more children to attend school. Major national developments in the sector are currently guided by the National Education Action Plan 2010-2012 whilst developments at the provincial level are guided by the provincial education action plans 2009-2012 which are formulated for each province. The key functions of the ministry are covered under the Education Act and the above key national policies on education.

Environmental and biodiversity topics are mainstreamed and integrated into the national curriculum. The Solomon Island runs a single national curriculum up to form five levels. The form six and seven level are covered under a regional South Pacific curriculum. The new primary environmental science books have been the most outstanding of the new initiatives in mainstreaming biodiversity considerations in this sector. The secondary levels also have their own relevant environmental topics. The only tertiary institution in the country, the Solomon Islands College of Higher Education (SICHE) has various schools that are relevant in mainstreaming biodiversity considerations into the courses they are running. These are the School of Natural Resources, School of Marine and Fisheries and the School of Education. The School of Natural Resources offers courses in agriculture, environment and forestry. The school of education runs teaching courses for early childhood, primary, secondary and technical and vocational training teachers.

The School of Natural Resources has a separate campus for its environment and forestry field training at Kolombangara Island in the Western province. There used to be an agriculture institute as well in the

Malaita province but this is yet to be revived. There are two university extension campuses in the country. These are the University of the South Pacific and the University of Papua New Guinea extension centers. These extension centres also offer relevant environmental and biodiversity extension courses. Many students from Solomon Islands also attend tertiary institutions in Fiji, Papua New Guinea, New Zealand and Australia and a significant number are enrolled in environmental and biodiversity courses. This has resulted in an improvement in the number of graduates in environment or biodiversity related fields who have taken up positions within the government, private sector and civil society or non government organizations in the country.

In the informal sector, there is no formal programme running but most NGOs, Civil Society organizations and community organizations currently implementing various environmental related projects and programmes are doing various awareness and education programmes through available media. Many of the projects' related community meetings and consultations, surveys and research carried by many of the groups in environmental related work involve a substantive amount of information on biodiversity related issues. One of the recently completed programmes implemented under this sector is the Rehabilitation and Restoration Programme (RARP) which was aimed at the 2008 Earthquake and Tsunami damaged schools in the Western and Choiseul provinces. This project had a major environmental component which involved replanting of trees and other related activities.

## **10. Health**

The health sector does not directly deal with biodiversity issues at present but has some relevant activities and programmes that relate to biodiversity. In terms of environmental issues, however, it has direct connections through the requirements of the Environmental Health (Public Health Act) Regulations. This regulations deal with public health issues and how to deal with them when they occur.

In other relevant aspects, the sector deals with the promotion of biodiversity resources as essential to the promotion of good health and prevention of lifestyle diseases.

## **11. Tourism**

The tourism sector is still at its infancy in the Solomon Islands. In the last decade the country has been promoting the country as an eco-tourism destination despite its many issues with the environment. Most tourists coming to Solomon Islands are nature enthusiasts and most of them are divers and bird watchers. The Tourism division of the Ministry of Culture and Tourism is the key agency responsible for the sector. The Tourism Authority is a para-statal entity assisting with tourism promotion in the sector. The sector has set up policies and guidelines which take account of environmental and a biodiversity consideration as its market niche depends very much on the quality of the environment and its biodiversity resources.

## **Tools and Processes for Mainstreaming and Integrating Biodiversity Issues and Sustainable Use**

The mainstreaming of Biodiversity and sustainable use in Solomon Islands where these have been achieved or actions have been taken has been done through various tools and processes.

a. Legislation – The national constitution, national laws, and provincial ordinances of the provinces provide avenues for mainstreaming of biodiversity. In fact many of the national legislation as explained earlier have included consideration of biodiversity and sustainable use. Many provincial ordinances also cater for some relevant biodiversity issues.

b. Policies, strategies and programmes – There have been many policies, strategies and programmes relating to biodiversity that have been implemented, or are currently being implemented.

c. Budgetary processes/instruments – The formulation of budgets at various levels allows for consideration of biodiversity issues. Budgets would need to consider income from biodiversity based income and sustainable use. The budget processes itself also allows biodiversity based or linked agencies to make submissions for their own programmes in biodiversity issues.

d. National Planning procedures – planning procedures for identification of national priorities, programmes or projects and their formulation and implementation requires various appraisal processes that takes into account biodiversity considerations.

e. Environment Impact Assessment requirements and procedures – The requirements of EIA under the Environment Act now allows environment and biodiversity to be considered in a range of development activities that have been provided in a schedule to the Act as ‘prescribed development’. Due to the requirements of the EIA approval under the Environment Act, other statutory requirements have now taken on board, the EIA approval which is termed a ‘Development Consent’ as condition to their own statutory approval.

f. Monitoring and evaluation requirements – Many programmes, projects and routine activities of many government agencies, NGOs, donor agencies and private sector groups require monitoring and evaluation phases which allows the process to take into account consideration and mainstreaming of biodiversity and sustainable use.

g. Development approvals – There are various types of development approvals which are required under various legislations including the Environment Act which gives a ‘Development Consent’ when a development is approved following the submission of an EIA report. Other statutory authorities have increasingly taken on board environment and biodiversity issues in their approvals processes.

h. Project documentation – The development of projects and programmes in the first place needs to take into account biodiversity issues even if the programmes and projects are not centered on biodiversity issues. Well designed projects or programmes have mainstreamed biodiversity issues into their design.

- i. Direct project implementation – In the implementation of policies, strategies and statutory functions, opportunities arise for the consideration of biodiversity issues in the process.
- j. Guidelines for implementation – In many cases, there have been guidelines for implementation especially in large multilateral programmes that provide further opportunities for mainstreaming of biodiversity issues on site.
- k. Education and awareness – The mainstreaming in school curriculum and public media awareness are also examples of tools that assist in mainstreaming. In fact the raising of awareness allows and influences others to mainstream biodiversity issues in their programme activities.
- l. Training in tertiary institutions with environment and biodiversity graduate qualifications – The simple act of training and graduating with biodiversity related qualification is mainstreaming into the sources of human resources.
- m. Partnerships with many stakeholders especially with NGOs and Civil society groups and resources owners in the formulation and implementation of projects and programmes allow real opportunities into mainstreaming biodiversity issues on site.
- n. Establishment of PAs – The establishment of protected or conservation areas are a real and tangible example of the mainstreaming of biodiversity issues into development and livelihood of peoples and communities.
- o. Committees and Advisory bodies – Many committees and advisory bodies deal with biodiversity and related issues. These include the advisory committee under the Environment Act, the Minerals Board under the Mines and Minerals Act, the Town and Country planning board, the Tourism board, and Fisheries Advisory Council.
- p. GIS – There is an increase in the number of organizations that have developed some form of GIS in their organization. This system naturally is based on biodiversity considerations and assists in the further mainstreaming of biodiversity issues in the application of the systems.
- q. Land use plans – There seems to have been no land use plans formulated within the last few decades in the Solomon Islands. Where there are land use plans, however, they would take into account of biodiversity and sustainable use considerations for such a plan to work.

### **Use of Ecosystem Approach in Mainstreaming of Biodiversity**

The use of the ecosystem approach as a management approach in biodiversity or sustainable use programmes in a routine or systematic manner has not been seen much in Solomon Islands at a national level or even at departmental or provincial levels. Much of the examples of mainstreaming reported in this report however have taken into account and are based on many elements of the ecosystem approach.

Many activities undertaken these days have considered all elements that are part of the ecosystem approach and have thus integrated much of the requirements of the approach. Many relevant programmes have been funded by donors and other bilateral partners including NGOs whose requirements actually form parts or elements of the ecosystem approach and have thus met all requirements of the ecosystem approach by the time they are implemented on the ground in Solomon Islands. Many people now involved in many of the activities being implemented have become members of the new generation of people who have become familiar with the requirements or elements of the ecosystem approach and have hence assisted in integrating essential elements of the approach in many of the activities where mainstreaming has shown to be working.

### **Use of EIA in Mainstreaming**

The use of EIA in mainstreaming has been one of the most effective procedures thus far due to the legal requirements under the Environment Act for 'prescribed development' which covers most major developments to undergo some form of EIA. The Environment Act requires that 'prescribed development' activities undergo some form of EIA and developers have to carry out an assessment which include on site investigations to produce the required EIA report. The reports which are submitted follow established guidelines laid down in the regulations to the act and usually require an environmental management plan which contains mitigation measures for identified potential impacts.

The Mines and Mineral Act also require an EIA for development of mines. This allows mineral developers to mainstream biodiversity considerations into their activities. Other agencies have now required similar reports or the same EIA reports in their own approval process due to the legal requirements of the Environment Act. As the 'prescribed development' under the Environment Act covers most development activities, most developers would now be able to carry out EIA and would thus do more consideration of the biodiversity issues in their development activities than they do in the past.

It is a general experience from Solomon Islands that developers are now willing to adhere to EIA requirements because it helps them predict possible future scenarios in their development and if their development activities is going to be viable or not. It also helps them to know in advance what they should do in times of errors or disasters and does give them a whole lot of other economic and social benefits. Many now realize that doing EIA is good management practice and helps them to think more about the sustainability of their development activities than they do before.