

## **APPENDIX**

### **Key Articles of Legislation**

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The key articles of legislation which have relevance to soil conservation are presented below for several Caribbean countries.

### **ANTIGUA AND BARBUDA**

**Forestry Act (1941)** focuses on the prevention of deforestation and encouragement of reforestation. It requires that a permit be obtained from the CFO to clear land for cultivation, pasturage or other purpose, or to cut, lop or fell any timber or burn any wood or charcoal within the forest reserve. It empowers the Governor General to declare any estate or part thereof to be under the operation of a reforestation scheme, or to make regulations for the management and control of activities in the forest reserves. Provision is also made for compensation to estate owners carrying out afforestation schemes.

**Land Development and Control Act (1977)** provides for the orderly and progressive development of land in urban and rural areas and the preservation and improvement of the amenities of such areas. It requires permission to develop any land but expressly removes the development of land for agricultural purposes.

**Antigua Agricultural Development Corporation Act (1978)** establishes the corporation whose functions are to stimulate, facilitate and undertake the development of agriculture in the State; to develop and manage, on a commercial basis, such plantations and other agricultural land as may from time to time be vested in it; and to administer such agricultural development schemes. It defines agriculture to include forestry, but it does not specify the requirement for good husbandry and soil management.

**Agricultural Small Holdings Act** requires tenants of small holdings to practise good husbandry.

**The Crown Lands (Regulation) Act (1917)** entitles the competent authority to establish conditions for the lease of State lands. This can

therefore be structured to accommodate the objectives of good land management and management policy.

**Draft Forestry and Wildlife Act** if enacted into law it will supersede the existing Forestry Act (1941). It provides, *inter alia*, for the conservation, management and development of forests; protection of water reserves and promotion of proper soil and forest conservation practices.

## **BARBADOS**

In Barbados most of the soil conservation effort has been concentrated in the Scotland District. The Soil Conservation Unit (SCU) established in 1957 to control and reverse soil erosion problems in the Scotland District is perhaps the best institutional arrangement for soil conservation in the Caribbean. The programme is directed and monitored by the Scotland District Soil Conservation Board comprising the Deputy CAO (Chairman), Senior Agricultural Officer, Chief Technical Director, General Manager of the Water Authority, Chief Town Planner and four others nominated by the MOA to include representatives of the agricultural community. Functions include advising the CAO on land utilization to prevent soil erosion. The CAO after consultation with the Board may prepare conservation proposals. The legal authority for carrying out the work of the Unit was provided by the **Soil Conservation (Scotland District) Act (1958)** which gave wide powers to the CAO in consultation with the Soil Conservation Board. The 1991 Soil Conservation (Scotland District) Amendment Act now empowers Government through the Board to enter private lands for soil conservation, can charge the owners for work done and can restrict or dictate the use of the land. The SCU is managed by a soil conservation specialist and a deputy and they are supported by supervisory and field staff.

This institutional structure for soil conservation should be considered as a model for the Caribbean. It has the potential for integrating the inputs of relevant technical sectors and the farming community to achieve the multidisciplinary approach to soil conservation. A successful institutional arrangement requires that the executing or responsible agency be fully aware

and that there is interaction between the relevant Government organizations, research and academic institutions and private interests. The Government's role would be management, public education, regulation and enforcement; research and academic centres would be concerned with data gathering, information processing and dissemination; and the public would voice demands and assist in implementation and awareness. These other aspects can be included in the Barbados model for greater effectiveness.

The Barbados Agricultural Development Corporation was established to facilitate and stimulate agricultural development and to develop and manage government plantations. It provides for soil conservation within the coral region (non-Scotland District) of Barbados by the establishment of grasslands and soil and water conservation works.

Specific focus on the environment is being initiated in some of the territories. In Barbados, an Environmental Unit is located in the Ministry of Labour, Consumer Affairs and the Environment. Proposals have been made to create a Department of the Environment within the Ministry. It would rationalise the current diverse institutional framework for environmental management and formulate an Environmental Act.

The other legislative instruments which pertain to agriculture and can be used to support the soil conservation effort are:

- **Cultivation of Trees Act:** promotes and provides incentives for cultivation of approved trees;
- **Tree Preservation Act:** prohibits the cutting down of any tree of a defined size without approval;
- **Security of Tenure Small Holding Act:** provides for terms of tenure and reasonable security for the tenants of land 10 acres or less;
- **Cane Fires (Prevention) Act:** prohibits lighting of fires in conservation areas and the destruction or interference with trees, shrubs and plants in these areas;

- **Land Acquisition Act:** Crown Lands (Vesting and Disposal) Act - make provision in the public interest for compulsory acquisition, vesting in the Crown or disposal of land;
- **Livestock (Control of Strays) Act; Animal Act:** caters for the trespass of animals on land and damage to land.

## ***DOMINICA***

**Forest Ordinance 1959**, the original forest legislation, deals with the designation of forest reserves and the control over forest produce. It authorises the designation of private land as protected forests for water and soil conservation and other public purposes. The Forest Rules (1972) made under the Ordinance specify the actions that are prohibited in a forest reserve and give details for issuing licences and permits to harvest forest produce (including timber and charcoal) and for clearing and cultivation in a forest reserve. The Rules prohibit any exploitation of forest products, squatting, setting of fires, livestock grazing, land clearing and hunting in all Forest Reserves, unless a licence has been issued by the CFO.

**Land Acquisition Ordinance** gives the President the power to acquire any private land for a public purpose by making a declaration to that effect. A Board of Assessment will determine compensation if the sale price cannot be agreed.

**Crown Lands Ordinance (1960)** gives power to prevent trespassing and contains provision for the grant, sale, exchange, and lease of Crown Lands.

**Water and Sewerage Act (1989)** makes provision for a national policy for water and the granting of exclusive licence to the Dominica Water and Sewerage Company (DOWASCO) for the development and control of water supply and sewerage facilities. All existing gathering grounds shall either be retained as forest reserves or protected forests or be declared controlled areas. To protect gathering grounds from deforestation or animals DOWASCO may

request the Ministry of Finance or Ministry of Health to take action, or restrain, impound or shoot such animals.

**Town and Country Planning Act of 1975** is the substantive planning and development legislation. Subject to exemptions made by the Minister, planning permission is required for any land development, excluding the use for agricultural purposes. Zoning of land for various forms of agricultural development is needed. Currently, unsuitable areas are being farmed while more suitable lands are underutilized.

**The Development and Planning Corporation Act of 1972** creates a corporation to be responsible for physical planning. It, however, does not meet and has delegated its functions to a small technical committee under the Planning Division of the Economic Development Unit, Ministry of Planning.

**Dominica Land Management Authority Act of 1973**: the primary purpose is to establish a Land Management Authority to promote agriculture and related activities. The Act is, however, not in use.

**Agricultural Small Tenancies Ordinance of 1953** covers tenancies of cultivated and pasture land under 10 acres but more than 0.5 acres. It lists the several natural resource related conditions to which the tenant must agree e.g. good husbandry to include soil conservation, and fertility maintenance. The Ordinance is not apparently in use.

## **GRENADA**

**The Forest, Soil and Water Conservation Ordinance 1949** amended by **The Forest, Soil and Water Conservation (Amendment) Act (1984)** provides for watershed protection, permanent reservation of lands, designation of prohibited areas and procedures against squatting and illegal grazing. It provides for the declaration of lands other than State lands to be protected forest. The Act also provides for the appointment of a Chief Forestry Officer responsible for the management of all lands belonging to the State.

The forest policy which was followed until 1984, addressed issues relating to forest reservation, forest management, utilization, research, education, private forestry, forest industries and recreation. Forest reservation proposes permanent preservation of a tree crop cover on such areas of land as are required for the prevention of soil erosion and flooding, and the preservation of water supplies. It also proposes lands that are unsuitable for agriculture to be exploited for the economic production of timber crops.

**The Land Development (Control) Act 1968** amended by **The Land Development Control (Amendment) Law of 1983** relates to the carrying out of building, engineering and mining or other operations on any land. It is broad enough to encompass silviculture but not agriculture. A draft agricultural land development policy which makes recommendation on a range of issues addressing the protection, use and development of agricultural land and land zoning, is under consideration by the Government. Approval of the policy is a necessary precursor to the formulation, approval and implementation of legislation for the development of agricultural lands.

**The National Water and Sewerage Authority (NWASA) Act 1990** established NWASA with full power and authority over all waters. Section 38 requires catchment areas to be retained as forest reserves and imposes on the CFO the responsibility for their protection, conservation and maintenance.

The other relevant legislative instruments are:

- **Agricultural Fires Act:** requires a licence to set fires;
- **Agricultural Small Tenancies Ordinance:** defines the rules of good husbandry and observe the rules;
- **The Crown Lands Ordinance:** establishes the conditions for the alienation of State lands.

## **JAMAICA**

**The Watersheds Protection Act 1963** was enacted in 1963 to provide for the protection of watersheds and adjoining areas. It established a Watershed Protection Commission with power to acquire, hold and dispose of property and to do all things necessary for the purpose of the Act. It empowered the Commission to undertake watershed work. Between 1963 and 1974, areas to be treated and works to be undertaken had to be declared for approval by the Commission.

In 1974, the Natural Resources Conservation Division (NRCD) of the Ministry of Agriculture and Forestry was established and in June 1991 "**The Natural Resources Conservation Authority (NRCA) Act**" was enacted to amend the 1963 Act. In 1983 all 33 watersheds in Jamaica were made 'declared watersheds' so that work could proceed in all of them, and in 1985, NRCD was required to undertake purely investigation and monitoring. The investigation was to be carried out in conjunction with the Forestry Department which would undertake implementation.

The new Act of 1991 is wider and provides for Environmental Impact Assessment (EIA). There is also provision for increased penalties and stricter monitoring to control such activities as charcoal burning, mining of sand and marl, and logging. However, lack of staff for enforcement, deficiency in training, public awareness, and education are major shortcomings.

The Rural and Physical Planning Division (RPPD) of the Ministry of Agriculture is the custodian of agricultural lands and an important agency for ensuring appropriate land use. It undertakes land reform using the physical capability of the land as the main criteria. It updates the data base of land resource and provides data to many sources concerned with land use.

The Soil Conservation Department (SCD) was established in the Ministry of Agriculture in 1973 under the 7 year FAO project entitled "**Forestry Development and Watershed Management in the Upland Regions**" which began in 1968 (FAO, 1990). In 1980, the SCD was amalgamated with Forestry as the Forestry and Soil Conservation Department.

Land Authorities (LA) are also important institutional arrangements for carrying out soil conservation. They have conducted soil conservation on public and private lands in collaboration with SCD (FAO, 1983).

## **ST. KITTS**

**The National Conservation and Environmental Protection Act (NCEPA) 1987** is the centre piece of federal legislative regulation of forestry matters and provides for the establishment of protected areas e.g. national parks, nature reserves, marine reserves, botanic gardens, historic and scenic sites. It deals particularly with Forestry, Soil and Water Conservation in six sections and, in this regard, it:

- prohibits cutting and felling of timber without the consent of the Director of Agriculture;
- confers power on the Minister in consultation with the National Conservation Commission (NCC) to make regulations for
  - establishment of forest reserves and the prohibition of the grazing of livestock in such reserves;
  - national exploitation of forest resources;
  - conservation of threatened species of flora;
  - promotion of reforestation;
  - regulation of charcoal burning;
  - procedures and exemptions in regard to felling or cutting of timber.

NCEPA mandates the Minister of Development in consultation with the NCC to *"provide regulations for soil conservation including the identification and*

*protection of critical watershed areas and natural drainage systems and the encouragement of scientific farming techniques by means of physical and biological soil conservation designed to prevent soil erosion".*

All ghauts (natural drainage channels) declared a protected area are "to be managed in the public interest as stable and production natural drainage", with ancillary power of the Minister, in consultation with the NCC, to make regulations requiring "special land use rehabilitation, management and conservation measures".

NCEPA directly prohibits without requiring the making of regulations, unauthorized cultivation, cutting, burning or clearing of land or vegetation, grazing of livestock, construction of structures, removal of sand in any area of special concern.

With regard to water resources, NCEPA requires the Minister in consultation with the NCC and the Water Boards to make regulations to conserve and develop the nation's water resources or reduce soil erosion and thereby meet the present and future water needs for domestic, agricultural, commercial, industrial and other beneficial uses. It provides for the donation or exchange of land of an owner for designation as a protected area, and for the prohibition of unauthorized wilful damage to any tree, shrub or grass planted or laid out. Finally, NCEPA prohibits the unauthorized deposit of waste, rubbish or litter in a protected area or forest reserve.

The extensive regulation-making powers of NCEPA are yet to be exercised except in relation to the Brimstone Hill Fortress National Park Regulations 1991. Regulations to supply the detailed prescriptions of the Act have not been enacted. This Act has the promise of becoming a model for the other Caribbean States.

A major omission of the NCEPA is the failure to grant permission to enter estate owner's land to execute required works without the owner's consent. There is also no tax waiver on land being reforested. These provisions were included in the Forestry Ordinance of 1904 which was repealed by the NCEPA.

The multiplicity of other legislative instruments in St. Kitts relate to land tenure, land use, and agricultural development. These instruments can be summarised as follows:

### **Land Tenure**

- The Limitation Act - provides for a time limit for acquiring possessory title to land;
- The Prescription Act - provides for a time period for the acquisition of easements of water or watercourse or use of water;
- The Land Acquisition Act - provides for compulsory acquisition of land by the Crown;
- The Title by Registration Act.

### **Land Use**

Some of the relevant legislation include **NCEPA, The Town and Country Planning Act, The Agricultural Development Act, The Land Development (Control) Act, The Building Act, The Planting of Sugar Canes Prohibition Act, The Frigate Bay Development Corporation Act, The SouthEast Peninsula Land Development and Conservation Act.**

### **Agricultural Development**

The dominance and history of agriculture in the economy of St. Kitts is evidenced by much statutory regulation of agriculture. There are at least 12 Acts which deal with agricultural activity but none of the Acts addresses soil conservation specifically. There is need to revise the multiplicity of statutes in order to eliminate duplication and overlap of jurisdiction and to clarify the hierarchy of decision-making authority where duplication is unavoidable.

## **ST. LUCIA**

The major relevant legislation relating to agricultural land management is as follows:

**The Land Conservation and Improvement Act** which empowers its Board to **inter alia** (1) advise the on matters relating to the general supervision of land and water resources; (2) advise the Development Control Authority and any other agency involved in land use on matters concerning land conservation and improvement and (3) offer, in conjunction with government agencies, **technical advise** in field and land management to land owners and/or occupiers.

**The Agricultural Small Tenancy Act** which is restricted to land not more than five acres in one or more parcels. This area of land could be controlled for proper soil and water conservation practices. The tenant is required to follow good husbandry practices defined generally to mean the application of measures for soil conservation, maintenance of soil fertility and the preservation of the capital value of the holding.

**Forest, Soil and Water Conservation Ordinance:** under this amendment act, there are possible incentives to encourage the allocation of private lands for protected forest. Compliance with the rules by owners of the protected forest entitles the owner to remission of any land tax that may exist and monetary compensation or compensation by exchange of land.

**The Crown Land Act** which authorises the Government to make rules and regulations concerning the sale, occupation and allocation of government lands. The Forestry Department has drawn up a policy for Crown lands, which was revised by the management of the CIDA Forestry Project and submitted to Cabinet.

**The Town and Country Planning Act** which is a broad policy instrument in terms of land development and does not specify the development of farm lands.

**The Water and Sewerage Authority Act** which is concerned with water conservation and protection of water gathering grounds. Under this new Act the Authority may request the Chief Forestry Officer to take action to protect any water gathering grounds that may appear seriously threatened by deforestation.

While the above policy instruments may have served as a useful means of achieving their stated objectives, they are only broad policy measures and are not specific to the utilization and management of agricultural lands. It is therefore evident that a policy on agricultural and management is of utmost importance.

An Act entitled "**Land Conservation and Improvement Act, 1987**" to provide for land conservation and the establishment of a Land Conservation Board was placed before Parliament as a Bill but has not been passed as yet. It is believed that the political implications of the Act and the proposals for formulating and implementing Protection Orders may be obstacles. The proposed Act is fairly comprehensive and would provide for proper land use and the protection against soil erosion and other forms of land degradation.

## ***ST. VINCENT AND THE GRENADINES***

**Ring's Hill Enclosure Act 1791** and **Land Acquisition Act 1947** both empower the competent authorities to acquire land for public purpose subject to compensation.

**The Agriculture Act 1954** requires owners to practice good husbandry, which has been expressed to involve the terracing of steep land, soil conservation and preservation of vegetative cover and forests on slopes and ridges. The Act authorizes the CAO to take over the supervision of agricultural land whenever the owner/occupier is not perceived to be practising good husbandry.

**The Agricultural Small Tenancies Act 1957** regulates tenancies of 10 acres and less and requires tenants to practise good husbandry in order to

maintain the capital value of the land through employment of protective and conservationist practices. This Act and the previous one, if properly employed, can become important policy instruments for good soil management.

**Central Water and Sewerage Authority (CWSA) Act 1978** vests every body of water in the Government to be held in trust for its citizens and confers control on the Authority. The Act identifies various functions of the Authority, some with implications for activities in the forestry sector and for protection of the water resources. It empowers the Authority to purchase by private treaty or to acquire compulsorily any land or interest in land, or other property in accordance with the provisions of the Land Acquisition Act. Private forests can be acquired for watershed management or water resources conservation.

**Crown Lands Act and Regulations 1983** pertain to the declaration, reservation and protection of Crown Lands.

**Forestry Resource Conservation Act 1992** makes provision for the establishment of a Forestry Department headed by a Director with specified functions which relate to the conservation, management and development of forestry. It clearly requires the Director to promote agroforestry in agriculture and proper soil and water conservation practices, and to prepare at intervals not exceeding ten years a national forest resources conservation plan. The Act declares certain areas forest reserves and empowers the competent Minister to declare other areas forest reserves for the sustained production of timber and water, the conservation of soils and the preservation of flora and fauna. The Minister is accorded power to regulate or prohibit the use of chemical or organic compounds used for agriculture; to control soil erosion and sedimentation; to establish standards and land classification systems to guide land use in erosion-prone areas; to manage and protect water resources, watersheds, streams and rivers.

**The Town and Country Planning Act 1992** repeals **The Town and Country Planning Act 1976** and is designed to enable the orderly and progressive development of land, the proper planning of town and country areas, and the control of development including change of land use. The Act establishes the Physical Planning and Development Board. The Board may

prohibit the destruction of trees, forests and woodlands and has the power to require the submission of environmental impact assessments.

### **Implementation of Legislation**

It is evident that all territories have adequate legislation and institutional arrangements which provide the policy framework for regulating soil conservation and other aspects of soil management. The deficiencies, limitations and constraints to the implementation of legislation are:

- (i) multiplicity of legislation with overlapping jurisdiction and no clear hierarchy of authority;
- (ii) failure to develop regulations to give effect to the legislation;
- (iii) inadequate penalties for breaches of the legislation which do not deter violation;
- (iv) lack of political will to implement because of political expediency;
- (v) failure to provide adequate budgetary allocations to support implementation;
- (vi) inadequate technically trained staff to monitor and enforce compliance with the legislation;
- (vii) inadequate and insufficient educational programmes and public awareness activities;
- (viii) lack of incentives to farmers to encourage compliance;
- (ix) need for technical assistance to farmers in tree crop cultivation, soil conservation and other soil management techniques, crop production and marketing.

Existing legislation can address a range of activities which influence soil conservation e.g. illegal fires, forest preservation, squatting, uncontrolled grazing, poor crop husbandry practices. The legislative framework exists. However, the implementation of the legislation, management planning, and soil conservation technology appropriate for the Caribbean are required for successful soil conservation. Appropriate soil conservation technology and the methods of implementation are presented in Volume II.