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ICRI
INTERNATIONAL
CORAL REEF INITIATIVE



SUMMARY OF LEGISLATIVE AND REGULATORY MECHANISMS FOR THE PROTECTION OF CORAL REEFS AND ASSOCIATED ECOSYSTEMS

SEYCHELLES

With the support of



Government Offices of Sweden
Ministry of the Environment and Energy

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The summary proposed in this document is an inventory at a given time and might be non-exhaustive.
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GENERAL OVERVIEW

CONTEXT OF THE STUDY

This study is conducted in the context of the implementation of the ICRI Plan of Action 2018–2020, and more particularly in the frame of the first theme, which is to *“promote effective and adaptable solutions to improve the protection of coral reefs”*. The aim of this study is to underline good practices of Seychelles, regarding the direct and indirect protection of coral reefs. Seychelles good practices are to be found in the legislation of the country and also in other means of their implementation of the several international and regional instruments important to this issue. The study is trying to highlight the action of the country, in order to point out the positive elements collected and to potentially identify elements that may be lacking.

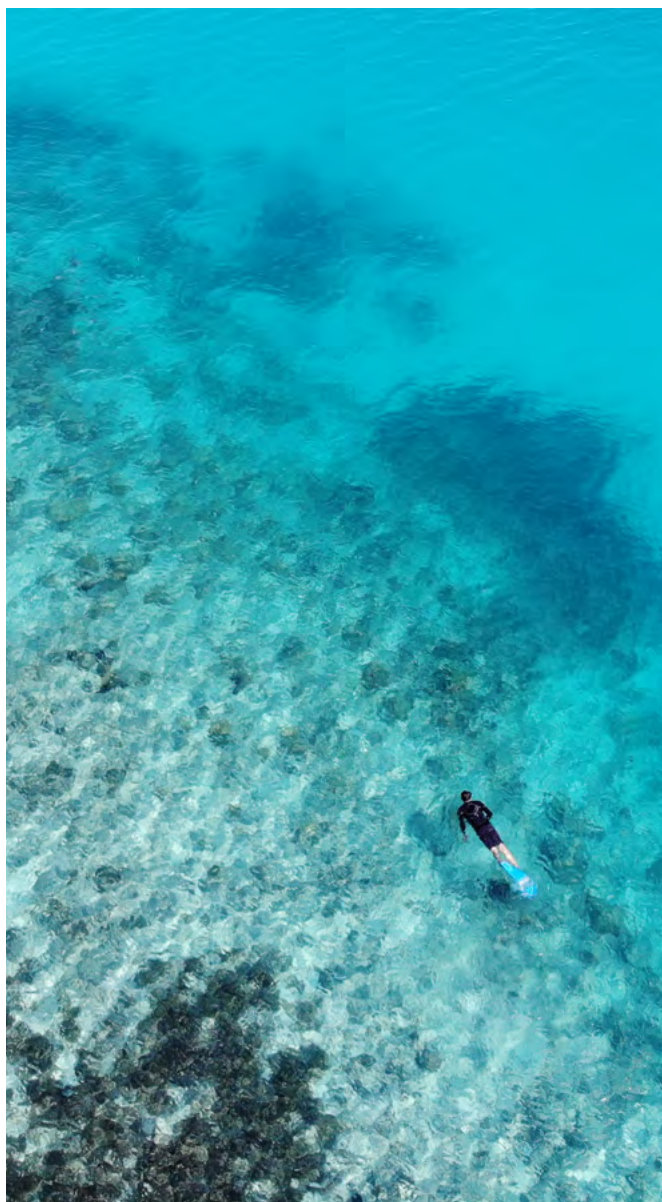


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LAWS AND REGULATIONS DIRECTLY OR INDIRECTLY PARTICIPATING IN THE PROTECTION OF CORALS

The legal framework for the protection and preservation of the marine environment in Seychelles appears, at first glance, rich and well developed. It refers to the main modern principles for the conservation of the environment, with an important focus on prevention. The regulations include the fight against plastics (other than microplastics nor microbeads), which is a rather recent preoccupation in the international community, and the designation of protected areas, which are a necessary tool for coral reefs' protection.

However, nothing yet exists about sunscreen. Air pollution is covered, in the context of global warming and on the application of the Paris Agreement, but there is not a lot of precision in this respect. The authorities have an important power, in general, for the control, implementation and sanction of violations.

Regarding the direct protection of corals and coral reefs, overlooked elements can easily be identified, especially in the sector of tourism, which is very developed in this country. An example of this is the possible extraction of corals as souvenirs (forbidden only in some specific areas qualified as national parks), but also occurring in aquaculture and trade. Moreover, corals are not directly protected through a list of endangered species.

Seychelles' regulations contain very important and interesting provisions for the prevention of environmental damage and protection of the marine environment, absolutely necessary for the conservation of corals. But those provisions are too often only indirect, and the protection of corals is not directly ensured even if they are included or mentioned in the general regulations on fisheries and environment and sometimes protected through marine protected areas (MPAs).

GOOD PRACTICES AND OTHER OBSERVATIONS

A lot of new programs and good practices can be identified for instance in the fields of the blue economy or marine spatial planning. But there is a general lack of data. New regulations, such as the recent ban on plastic straws, are also important good practices to highlight and to continue to develop. Noteworthy, new partnerships have been developed to finance the conservation of biodiversity and the creation of MPAs in Seychelles, which shows a very innovative spirit in the Island.

HUMAN ACTIVITY DRIVERS OF CHANGE		EXISTENCE OF POLICY OBLIGATIONS
THEME	ACTIVITY	
Climate change	Activities resulting in emissions of greenhouse gases in the atmosphere	Yes
Production from living resources	Harvesting of living resources by large-scale/industrial operators	Yes
	Harvesting of living resources by small-scale and/or subsistence operators	Yes
	Harvesting of living resources by recreational operators	No
	Hunting and collecting of living resources for other purposes (including 'bioprospecting')	No
	Coastal aquaculture (including 'ranching', seaweed cultivation)	No
	All activities related to production from living resources	Yes
Generation of land-based sources of pollution	Production and disposal of plastics	Yes
	Waste treatment and disposal	Partial
	Urban or industrial activities	No
	Agriculture	Partial
	All activities generating marine pollution	Yes
Extraction of non-living resources	Extraction of minerals (e.g. sand, coral mining)	Partial
	Extraction of oil and gas (including infrastructure)	Yes
	Extraction of water (i.e. desalination)	No
Production of energy	Transmission of electricity and communications (cables)	No
	Renewable energy generation (wind, wave and tidal power), including infrastructure	No
Physical restructuring of the coastline, rivers or seabed	Coastal land claim (e.g. mangrove loss)	No
	Canalization and other watercourse modifications	No
	Coastal defence and flood protection	Partial
	Restructuring of seabed morphology, including dredging and depositing of materials	Partial
Tourism and recreation	Tourism and recreation activities (e.g. resulting in anchor use on reefs, vessel groundings, diving and snorkelling)	Partial (in some MPAs)
	Tourism and recreation infrastructure	Partial
	Marine biota souvenirs to sell to tourists, exporters	Partial
Transport	Transport – shipping	Yes
	Transport – infrastructure	Yes

Table 1. Table of Principal Reef Relevant Policy Obligations per Human Activity Driving Changes in Coral Reef Ecosystems, inspired by the *Analysis of Global and Regional Policy Instruments Related to the Conservation and Sustainable Management of Warm Water Coral Reef Ecosystems*. Research Team, Nicholas Institute for Environmental Policy Solutions, Duke University on behalf of the United Nations Environment Programme November, 2018.

	CONVENTIONS RATIFIED BY SEYCHELLES	Signature / Ratification	Entry into force
REGIONAL	Convention of Nairobi for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region	22/06/85 (S) 16/11/94 (R)	30/05/96
	Southern Indian Ocean Fisheries Agreement (SIOFA)	7/07/06 (S) 14/01/08 (R)	14/02/08
	Agreement for the Establishment of the Indian Ocean Tuna Commission (IOTC)	26/07/95	27/03/96
GLOBAL	Convention on biological diversity	10/06/92 (S)	29/12/93
	Cartagena Protocol	22/09/92 (R) 23/01/01 (S)	11/09/2003
	Nagoya Protocol	13/05/04 (R) 15/04/11 (S) 20/04/12 (R)	
	United Nations Convention for the Law of the Sea (UNCLOS)	28/11/84 (S) 16/11/91 (R)	16/11/94
	Food and Agriculture Organization (FAO) (constitution)	14/11/77	14/11/77
	Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, unreported and unregulated (IUU) Fishing		19/06/13
	International Maritime Organization (IMO) (constitution)	13/03/78	13/06/78
	International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC)	26/06/92	18/10/95
	Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter 1972 (London Dumping Convention)	29/10/84	29/11/84
	Convention for the Prevention of Pollution from Ships (MARPOL)	28/11/90	28/02/91
	Convention on Civil Liability for Oil Pollution Damage (CLC)	12/04/88	11/07/88
	International Convention for the Safety of Life at Sea (SOLAS)	10/05/88	10/08/88
	International Regulations for Preventing Collisions at Sea (COLREG)	22/08/88	22/08/88
	Ballast Water Management Convention (BWM)	27/11/07	27/02/18
	Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal	11/05/93	11/05/93
	Montreal Protocol on Substances that Depletes the Ozone Layer	06/01/93	06/04/93
	United Nations Framework Convention on Climate Change (UNFCCC)	10/06/92 (S) 22/09/02 (R)	21/03/94
	Kyoto Protocol to the UNFCCC	20/03/98 (S) 22/07/02 (R)	16/02/05
	Paris Agreement on Climate Change	25/04/16 (S) 29/04/16 (R)	04/11/16
	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	08/02/77	09/05/77
	UNESCO Convention for the Protection of the World Cultural and Natural Heritage	09/04/80	09/07/80
	Convention on the Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR)	22/11/04	22/03/05
	Convention on Persistent Organic Pollutants (POPS)	25/03/02 (S) 03/06/08 (R)	03/09/08

Table 2. Conventions ratified by Seychelles

LAWS AND REGULATIONS DIRECTLY OR INDIRECTLY PARTICIPATING IN THE PROTECTION OF CORALS

Several instruments could have a direct or indirect impact on corals' protection. They are referred to by the themes set out in Table 1 of this report.

Main sources used:

- the Seychelles Legal Information Institute gather case law, legislation and secondary materials with free access, available at <https://seylil.org/sc/legislation/laws-of-seychelles>
- the website Ecolex – a repository of sources <https://www.ecolex.org/>



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1. CLIMATE CHANGE

ENVIRONMENT PROTECTION ACT

5th September 2016, repealing the 1994 Environment protection Act¹

<https://seylli.org>

Art. 4(d) of the Environment Protection Act, 5th September 2016, the Ministry shall “develop, evolve and where necessary adopt standards for the quality of the environment in its various aspects and for emission or discharge of environmental pollutants from any source whatsoever [...], (g) identify areas in which any activity shall be carried out subject to certain safeguards”.

Art. 14 and following are dedicated to **prevention, control and abatement of environmental pollution**: “The Minister may prescribe standards for (a) quality of air, water or soil for various areas and purposes; (b) effluent limitations for existing and new point sources; (c) emissions of air pollutants from mobile and stationary sources; (d) noise emissions from various sources including construction sites, plants, machinery, motor vehicles, aircraft, industrial and commercial activities; (e) emission of light, vibration and other forms of energy into the environment [added in the 2016 Act]; (f) odours as are required to preserve and maintain public health and the environment; (g) pesticide residues in the environment” (ancient Art 6).

Art. 21(1) is about **air pollution control**: The Minister may, on the recommendation from the Authority, designate air pollution control areas in which all emissions are prohibited and an authorization is necessary to conduct activities.

Art. 27(1) states: “The Authority may [...] recognize national and international developments regarding the **cumulative effect** of any substance, practice or activity on the stratosphere and which may reasonably be anticipated to endanger the environment”.

Part IV also concerns environmental impact assessment, which is mandatory for any “project or activity in a protected or ecologically sensitive area” and its control leads to the delivering and monitoring of an authorization to conduct the activity. The content of the Environmental Impact Assessment (EIA) is clearly detailed.

Part V relates to **enforcement** and the **powers of the administrator** he is able to deliver an enforcement notice (Art. 54), a prohibition notice (Art. 55), a nuisance notice (Art. 56) or a variation notice (amended notice) (Art. 57) and to withdraw those instruments. (Art. 58). He also has the power to declare an environmental emergency after an accident or eminent risk of pollution (Art. 62). Finally, Part VI deals with offences, penalties, liability and procedures, in order to enforce the dispositions of the Act, with the provisions given in the schedules of the Act.

Finally, an environmental trust fund was created in 1994 for the protection of environment, prevention and reduction of pollution.

CONSERVATION AND CLIMATE ADAPTATION TRUST ACT

19th November 2015, Act 18,

<https://seylli.org>

Creates a trust fund in the field of conservation and climate change.

These measures are contributing to the implementation of the Paris Agreement and the other conventions dealing with climate change.

¹ Which was enacted on 1st March 1995, consolidated to 30th June 2012, Chapter 71 of the Laws of Seychelles <https://seylli.org>

2. PRODUCTION FROM LIVING RESOURCES

PROTECTED AREAS ACT

24th November 1967, consolidated 30th June 2012,
Chapter 185 of the Laws of Seychelles

<https://seylil.org>

Art. 3. *"If, as respects any area, place or premises, it appears to the President to be necessary or expedient in the public interest that special precautions should be taken to prevent the entry of unauthorised persons, he may, by order published in the Gazette, declare such area, place or premises to be a protected area for the purposes of this Act, and, so long as the order is in force, no person shall, subject to any exemptions for which provision may be made in the order, be in such protected area without the permission of the prescribed authority or such other person as may be specified in the order".*

Provisions 4 to 12 deal with enforcement, penalties and offences. The schedule is a table listing the twenty-one different protected areas under this Act. One of them, the Protected areas La Gogue Dam, Order 1977 is delimited with some coral reefs, which are benefitting from the protection.

NATIONAL PARKS AND NATURE CONSERVANCY ACT

15th December 1969, consolidated 30th June 2012,
Chapter 141 of the Laws of Seychelles

<https://seylil.org>

Some definitions of Article 2 directly refer to corals: *"'National Park' means an area set aside for the propagation, protection and preservation of wild life or the preservation of places or objects of aesthetic, geological, prehistoric, historical, archaeological or other scientific interest for the benefit, advantage and enjoyment of the general public and includes in the case of a Marine National Park an area of shore, sea or seabed together with coral reef and other marine features so set aside; [...] 'wild life' includes all animals whether on land or in the sea, plants together with the biotopes necessary for their survival and coral".*

Art. 3 establishes the **Seychelles National Environment Commission** which has the functions: *"(a) to draw up national policy for the environment and to keep that policy under review and revise it from time to time as necessary; (b) to keep under review all written laws concerning the environment and its conservation and*

management; (c) to coordinate all activities in Seychelles, including activities of the Government, concerned with conservation or management of the environment; (d) to promote public education and participation in the study and conservation of the environment; (e) to cooperate with other countries of the Indian Ocean region in the conservation and management of the environment and living resources of the region; (f) to cooperate with international organisations for the conservation or management of the environment or its living resources".

Reference is made in this Article to the World Conservation Strategy prepared by the International Union for the Conservation of Nature and Natural Resources (IUCN).

Art. 6 and the following are dedicated to the designation, by the Minister under the proposition of the Commission, of areas *"as a National Park, a Strict Natural Reserve, a Special Reserve or an Area of Outstanding Natural Beauty"*

According to **Art. 10**, *"In any area designated as a Strict Natural Reserve (a) any form of hunting or fishing, any undertaking connected with forestry, agriculture or mining, any grazing, any excavations, or prospecting drilling, levelling of the ground or construction, any work involving the alteration of the configuration of the soil or the character of the vegetation, any water pollution, and generally, any act likely to harm or disturb the fauna or flora, and the introduction of any exotic animal or plant species is strictly forbidden; [...]"*.

The following articles deal with the enforcement of those measures.

Schedule 1 is on the constitution and operation of the Commission

The **list of natural reserves designated so far** shows that some of them specially concern corals protection, as for instance the Ste Anne Marine National Parks (section 16), where **the removing of "any humus, soil, sand, mud, gravel, rock, coral or reef debris for any purpose whatsoever from the sea-bed, foreshore, shore or land within 20 metres inland from the high water mark " is forbidden as well as the "anchor[ing] within the National Park in such a way as to disturb or damage any coral".** The regulation regarding Port Launay Marine National Park adds to those two measures another important one: **"no person in the National Park shall have in his possession, whether obtained in or outside the National Park, a mollusc, or shell of a mollusc, or any coral".**

- In 2017, Seychelles has revised this legislation to improve coordination and communication between the various local authorities and agencies, and to improve monitoring and management methods for protected areas and their ecosystems, through the establishment of an advisory committee. The country wishes to promote the creation of new protected areas and respect its international commitments in accordance, for example, with **Article 11 of the Convention on Biological Diversity (CBD)**.

Moreover, Seychelles currently has three sites designated as Wetlands of International Importance (**RAMSAR Sites**), with a surface area of 44,025 hectares: the Aldabra atoll (which is also a **World Heritage UNESCO site**), the Mare Aux Cochons High Altitude Freshwater Wetlands and the Port Launey Coastal Wetland.

FISHERIES ACT

31st March 1987, consolidated 30th June 2012,
Chapter 82 of the Laws of Seychelles
<https://seylia.org>

Definitions: “**‘aquatic organism’** means any aquatic plant or animal with the exception of birds, and **includes** any fish, crustacean, mollusc, **coral**, echinoderm, holothurian, or aquatic reptile or aquatic mammal and its shell, eggs and other naturally occurring products; [...] **‘fishing’** means fishing, for, catching, taking or killing fish **or other aquatic organisms** by any method and includes searching for fish and placing any fishing aggregating device”.

Art. 2 established the **Seychelles Fishing Authority**, (SFA) which is competent to “prepare and keep under review plans for the management and development of fisheries” (Art. 3), and also to “collect and analyse statistical and other information on fisheries” (Art. 5).

Art. 4(2) “A regulation prescribing management measures may also prohibit the possession, purchase, sale, import or export of any gear or fish or other aquatic organism”.

Art. 12(1)(c) mentions **bycatch**: “Every vessel, net or activity required under this Act to be licensed shall be operated or conducted in accordance with such general operating and management requirements as the Minister may prescribe, and, in the case of a foreign fishing vessel, with requirements made applicable to the vessels by any agreement under section 6, and,

in all cases, subject to any conditions which may be prescribed or be endorsed on the license including conditions relating to: (a) the type and method of fishing or related activity authorized; [...] (c) the target species and amount of fish or other aquatic organisms authorized to be taken, including any restriction on by catch”.

Art. 19 and following: enforcement measures.

Scheduled in this Act with reference to the fisheries regulations is Art. 11(8) related to large nets “**no person shall use any explosive for the purpose of blasting any coral or reef** except pursuant to a permit granted by the SFA with the approval of the Commissioner of Police”, and 11(11) “the SFA may, if it finds that such action is consistent with the preservation of the marine environment, grant a permit to blast any area of reef or coral that is not within an area designated under section 4 of the National Parks and Nature Conservancy Act”.

SEYCHELLES FISHING AUTHORITY (ESTABLISHMENT) ACT

31st August 1984, consolidated 30th June 2012,
Chapter 214 of the Laws of Seychelles
<https://seylia.org>

EXPORT OF FISHERY PRODUCTS ACT

adopted in 1996 and operational from 3rd February 1997, consolidated to 30th June 2012
<https://seylia.org>

The definition of “fishery products” here (Art. 2) does not include corals as it is food-oriented.

Those elements are implementing the FAO agreements and guidelines.

² Same for the Aride Island Special Reserve National Park, the Cousin Island Special Reserve, and the Aldabra Special Reserve, among several others.

³ See D. Laurence, ‘Seychelles revising legislation for protected areas; new areas to be designated’ Seychelles News Agency, 16th June 2017.

3. GENERATION OF LAND-BASED SOURCES OF POLLUTION

ENVIRONMENT PROTECTION ACT

5th September 2016, repealing the 1994 Environment Protection Act⁴

<https://seylil.org>

Art. 4(d) of the Environment Protection Act, 5th September 2016, the Ministry shall “develop, evolve and where necessary adopt standards for the quality of the environment in its various aspects and for emission or discharge of environmental pollutants from any source whatsoever [...], (g) identify areas in which any activity shall be carried out subject to certain safeguards”.

Art. 14 and following are dedicated to **prevention, control and abatement of environmental pollution** “The Minister may prescribe standards for (a) quality of air, water or soil for various areas and purposes; (b) effluent limitations for existing and new point sources; (c) emissions of air pollutants from mobile and stationary sources; (d) noise emissions from various sources including construction sites, plants, machinery, motor vehicles, aircraft, industrial and commercial activities; (e) emission of light, vibration and other forms of energy into the environment [added in the 2016 Act]; (f) odours as are required to preserve and maintain public health and the environment; (g) pesticide residues in the environment” (ancient Art 6).

Art. 15(a) (ancient art. 7(a)) states: “The Minister may by regulations provide for (a) the **preservation of fishing areas, aquatic areas, drinking water sources and reservoirs, recreational and other areas where water may need special protection**” and **Art. 17** focuses on measures necessary to reach water quality management standards.

Art. 19 relates to the authorization and application that must be granted to discharge effluent, polluting, hazardous substance and waste in ground. The Ministry can then modify or revoke at any time the authorization, for instance if there is a risk of pollution, or “for any other consideration for the protection of the environment” (**Art. 20(4)**).

Art. 25 and following concern the maximum **noise emission standard** authorized in order to preserve the environment and corresponding abatement measures.

Art. 27(1) states: “The Authority may [...] recognize national and international developments regarding the **cumulative effect** of any substance, practice or activity on the stratosphere and which may reasonably be anticipated to endanger the environment”

Art. 30 relates to **land-based sources of pollution**, and Art. 31 on “environmental performance of petroleum and mineral exploration and exploitation activities within the territorial waters and / or the EEZ”.

Part IV is also devoted to EIA, which is mandatory for any “project or activity in a protected or ecologically sensitive area” and its control leads to the delivering and monitoring of an authorization to conduct the activity. The content of the EIA is clearly detailed.

Part V relates to **enforcement and the powers of the administrator** stating that: he is able to deliver an enforcement notice (Art. 54), a prohibition notice (Art. 55), a nuisance notice (Art. 56) or a variation notice (amended notice) (Art. 57), and to withdraw them. (Art. 58). He also has the power to declare an environmental emergency after an accident or eminent risk of pollution (Art. 62). Finally, Part VI deals with offences, penalties, liability and procedures, in order to enforce the dispositions of the Act, with the provisions given in the schedules of the Act.

Finally, an environmental trust fund was created in 1994 for the protection of environment, prevention and reduction of pollution.

The Environment Protection Act is combining the implementation of the UNCLOS and some IMO instruments.

⁴ Which was enacted on 1st March 1995, consolidated to 30th June 2012, Chapter 71 of the Laws of Seychelles
<https://seylil.org>

ENVIRONMENT PROTECTION (RESTRICTION ON IMPORTATION, DISTRIBUTION AND SALE OF PLASTIC UTENSILS AND POLYSTYRENE BOXES) REGULATIONS

30th June 2017

<https://seylli.org>

Art. 3 "The manufacturing, importation, distribution and sale of plastic utensils and Polystyrene boxes for use within the Republic of Seychelles is hereby prohibited".

ENVIRONMENT PROTECTION (RESTRICTION ON MANUFACTURING, IMPORTATION, DISTRIBUTION AND SALE OF PLASTIC BAGS) REGULATIONS

30th June 2017

<https://seylli.org>

Art. 3 "The manufacturing, importation, distribution and sale of plastic utensils and Polystyrene boxes for use within the Republic of Seychelles, which does not fall into the category of exempted plastic bag as specified in the First Schedule are hereby prohibited". The exemption list, in Schedule 1, includes "Any plastic bag which is (a) a bag designed to be used for the disposal of waste; (b) a zip-locked (re-sealable) bag for pharmaceutical dispensing or any other medical use, [...]".

ENVIRONMENT PROTECTION (BEVERAGE CONTAINERS AND LABELS) REGULATIONS,

14th March 2013,

<https://seylli.org>

Art. 3 "The import, manufacture, trade and commercial distribution of polyvinyl chloride (PVC) labels shall be prohibited for the purpose of labelling beverage containers for use within the Republic of Seychelles".

Art. 4 "(1) All beverage containers imported, manufactures, distributed, traded in or use shall be made of PET or glass and labelled by paper or PET film. (2) All PET beverage containers shall have the standard symbol for PET moulded at the bottom or side wall of the container and the symbol of PET shall be clearly indicated on any label used".

A regulation of February 1st 2019 provides for the ban on plastic straws. The sale, use, manufacturing and processing of plastic straws has been banned as of 1 June 2019. Establishments or importers who fail to follow these regulations can be liable to a fine of up to SCR 20,000 or even a maximum one-year prison sentence if non-compliance persists.

BEACH CONTROL ACT

30th July 1971, Chapter 14 of the Laws of Seychelles

<https://seylli.org>

Art. 3 "(1) The Minister may, from time to time, make such regulations as appear to him to be necessary or expedient for the purpose of preserving the natural amenities of the seashore and of preventing danger, obstruction or annoyance to persons using the seashore or bathing in the sea. (2) Without any prejudice whatever to the generality of subsection (1), such regulations may: (a) prohibit the use of pleasure boats within such areas of the inshore waters of the sea as may be prescribed; (b) regulate the speed of pleasure boats within the inshore waters of the sea; [...] (d) require the use within the inshore waters of the sea of effectual silencers on pleasure boats propelled by internal combustion engines; (e) prohibit or regulate fishing by such means as may be prescribed within such areas of the inshore waters of the sea as may be prescribed; (f) prohibit or regulate the engaging in, or playing of, such games or water sports on the seashore or within the inshore waters of the sea as may be prescribed [...] (k) prohibit or regulate the disposal of litter or the discarding of such objects as may be prescribed".

Subsidiary legislation: Beach control regulations, 7th August 1978 **Art. 16:** "The Minister shall take into account the traditional interests of fishermen when considering what beach and inshore activities shall be permitted within the inshore waters of Seychelles. He shall also have regard to the **requirements of conservation, the preservation of the ecology and the tourist resources of the country**".

4. EXTRACTION OF NON-LIVING RESOURCES

MINERAL ACT

15th October 1962, Chapter 129 of the Laws of Seychelles, consolidated 30th June 2012

<https://seylli.org>

States a prohibition of prospecting or mining without authority.

PETROLEUM MINING ACT (POLLUTION CONTROL)

1976, Chapter 168 of the Laws of Seychelles, consolidated 2012, not yet in force

<https://seylli.org>

This Act defines the liability for oil pollution by licensees, persons to whom an exploration licence is granted under section 6 of the Petroleum Mining Act or a company that is a party to a petroleum agreement under section 9 of that Act. The extent of the liability incurred under this section in respect of any discharge of petroleum may be limited (whether as to the amount or otherwise) by Regulations made under the Petroleum Mining Act. The Act also defines liability for costs of measures

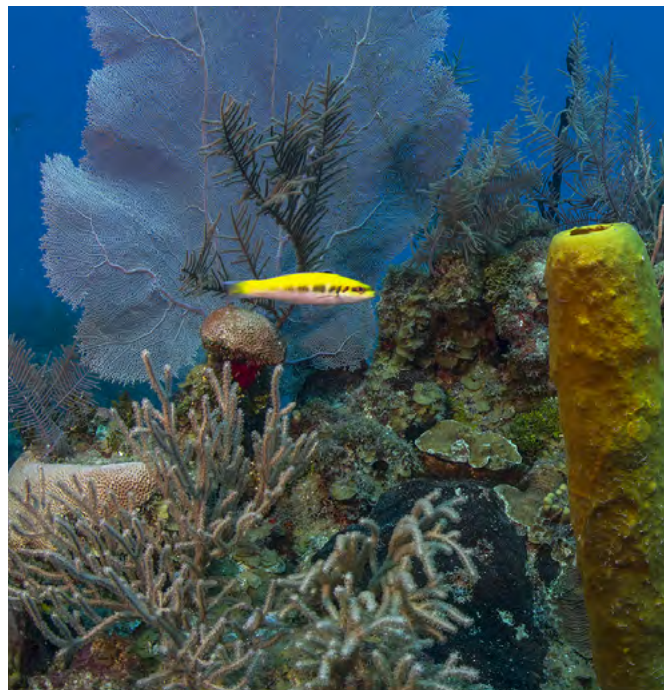


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PETROLEUM MINING ACT

26th July 1976 Chapter 167 consolidated 30th June 2012

<https://seylli.org>

Art. 4: obligation to hold a licence.

Art. 16(2) *"In particular, and without prejudice to the generality of the power conferred by subsection (1), regulations made under this section may provide for all or any of the following matters [...] (k) the taking of measures to avoid pollution".*

Petroleum Mining (Petroleum Drilling) Regulations, 12th March 1980

Art. 6. *"(1) Drilling operations shall be undertaken in a safe manner and in accordance with the regulations in force at the time in question, and in such a manner that risks to persons engaged in the drilling operations are reduced to an absolute minimum. (2) The work shall not to an unreasonable degree interfere with shipping, aviation and fishing, and particular care shall be taken to avoid risk of damage to underwater cables or other underwater installations; special care shall be taken to avoid damage to animal and plant life and precautions shall be taken to avoid pollution of the air, sea, seabed and its subsoil".*

See also art 55, 59(4) on prevention, and Art. 65, 68, 71.

- The parties to the **regional Nairobi Convention** for the Protection, Management and Development of the Marine and Coastal Environment of East Africa held an expert workshop in late November on the management of the marine environment by the rapidly developing oil sector in the Indian Ocean . The development of this sector represents both an important economic opportunity and a particularly high environmental risk in return, requiring extensive environmental risk management and planning, as well as the identification of and compliance with common standards.
- Those Acts are also an implementation of the IMO Conventions dealing with the oil and gas production and transport.

⁵ Expert Meeting on environmental management of the oil and gas sector development in the Western Indian Ocean, 28th November 2016, Stone Town (Zanzibar) (see the website of the Nairobi Convention).

5. PHYSICAL RESTRUCTURING OF THE COASTLINE, RIVERS OR SEABED



Photo: © The Ocean Agency

ENVIRONMENT PROTECTION ACT

5th September 2016, repealing the 1994 Environment Protection Act⁶

<https://seylil.org>

Art. 28 on the Declaration of a coastal zone and its protection if they are sensitive, or "dedicated to the preservation and rehabilitation/conservation of coastal biodiversity"

Art. 29 is consecrated to coastal zones and the realization of an **Integrated Coastal Zone Management Plan**, based on a report and survey, including "(a) an inventory of all structures, roads, excavations, harbours, outfalls, dumping sites and other works located in the Coastal Zone; (b) an inventory of the state of the coral reefs, mangroves and marshes found within the coastal zone [...] (g) an estimate of the quantities of sand, coral, sea shells and other substances being removed from the Coastal Zone [...]".

⁶ Which was enacted on 1st March 1995, consolidated to 30th June 2012, Chapter 71 of the Laws of Seychelles
<https://seylil.org>

6. TRANSPORT

HARBOUR ACT

23rd July 1932 Chapter 90 of the Laws of Seychelles
<https://seylil.org>

Art. 3 on Port State's control *"The Minister may make regulations to provide for (a)(i) the control of traffic in the harbour, of wharves, landing places quays, buoys, lighters, small craft, plying boats, motor boats employed in the harbour for the transport of persons and goods, and the tariff for such boats; (ii) the prohibition, control and regulation of persons and goods entering or leaving the Port Security Area".*

Harbour Regulations (3rd February 1933) **Art. 45** ***"No coral or ballast or other obstruction to vessels shall be placed upon any of the reefs or anywhere in the inner harbour without permission of the Harbour Master, and except in such places as he may point out. All coral or ballast so piled upon the reefs shall have a mark or flag, to be determined by the Harbour Master, clearly visible above high-water mark and shall be removed within 15 days under pain of forfeiture".***

- Regarding the time of adoption of these regulations, the aim wasn't the conservation but the security of the Port State, but it also leads to preservation. Application of IMO conventions and FAO Port States' measures agreement.

PORTS AUTHORITY ACT

1st October 2004, consolidated 30th June 2012
<https://seylil.org>

Ports Authority is established by **Art. 3** of the Act.

Art. 6 *"Subject to the provisions of this Act, it shall be the duty of the Authority (a) to regulate, control and administer all matters relating to the safety and security of the port and its facilities; (b) to promote the development of the infrastructure relating to the port; [...] (h) to act in collaboration with other public authorities and entities for the prevention of marine source pollution, protection of marine environment and to respond to marine environment incidents; (i) to advise the government or any public authority on any matter relating to merchant shipping and the prevention and control of marine pollution [...]"*.

MARITIME ZONES ACT

1st July 2000, Chapter 122 of the Laws of Seychelles
<https://seylil.org>

This Act is a transposition of the dispositions of the UNCLOS (ratified by Seychelles in 1991).

See for instance of relevance here **Art. 17(2)** defining a non-innocent passage notably as *"any fishing activities or extracting of living and non-living resources; any act of pollution calculated or likely to cause damage or harm to Seychelles, its people, resources or environment..."*

And in exercising the right of innocent passage, a foreign ship shall *"comply with the prevention of the infringement of fisheries laws and regulations of Seychelles"; and "the preservation of the environment of Seychelles and the prevention, reduction and control of pollution"*.

OTHER INITIATIVES AND GOOD PRACTICES FOR THE PROTECTION OF CORALS

AT THE NATIONAL LEVEL, DIFFERENT INITIATIVES HAVE BEEN LAUNCHED. HERE IS AN OVERVIEW OF SOME OF THEM

Elaboration of **Seychelles National Biodiversity Strategy and Action Plan, 2015–2020**:

This report funded by the UNDP-GEF and the government of Seychelles is aimed to plan for national biodiversity conservation programs as far as Seychelles' marine and terrestrial biodiversity are concerned.

According to the report, *"Seychelles was the first country in east Africa to establish a network of MPAs but at the time of their selection [...] they were primarily chosen for touristic utility, as opposed to biodiversity criteria, as at that time the marine environment was still of a relatively homogeneous high quality. Subsequent human development activities and impact, and notably the 1998 ENSO-related coral-bleaching event have changed that scenario. Furthermore, unlike the terrestrial scenario where nearly 50% of the landmass lies within the PAN [inland Protected areas network] the existing MPAs in Seychelles constitutes less than 1% of the country's EEZ. The Seychelles Government has recognised this short fall in the marine domain and, mindful of its international commitments, has initiated a marine spatial planning process with the ultimate objective of designating 39% of the EEZ as protected. Half of that area, or 15% of the EEZ, is to be designated as strict no take zones"*⁷.

A useful table summarising the existing protected areas, their status and their key threats has been established. Climate change, tourism development, poaching and lack of management are among the principal threats identified⁸.

A strategic plan is elaborated in the report, which is the main contribution of it: thirty-one projects have been launched, related to protected areas, fisheries, aquaculture, forests and are taking place between 2014 and 2020. For instance, Project 20 deals with climate change biodiversity impact profile assessment and aims at coral reef restoration⁹.

The **Seychelles Sustainable Development Strategy 2012-2020**

also includes programmes aiming not only at operationalizing the fight against climate change¹⁰, but also against the degradation or bleaching of coral reefs and at fostering the conservation of critical habitats as well as raising awareness and education for conservation. The study highlight diverse "critical success factors" for the conducting of conservative policies, which are: political support, ownership by stakeholders, effective implementation framework, capacity, integration into national planning process and periodical audits¹¹. The emphasis is also placed on knowledge management.

Marine spatial planning initiative:

The *Marine Spatial Plan of Seychelles' EEZ* has been launched in 2014¹² and should be finalised by 2020. It is mainly inspired from the report of the UNESCO IOC, on *Marine Spatial Planning: A step by step approach, toward ecosystem-based management, 2009*¹³. Marine spatial planning is a useful tool to study all the issues at stake regarding the conservation of corals, and the difficult combination between economic and conservatory activities at sea. The European strategy in this field could also be of interest for the country.

⁷ GoS (2014) *Seychelles national biodiversity strategy and action plan 2015–2020*, J. Nevill, J. Prescott, N. Jivan Shah, M.M. Jeremie (Eds.), www.cbd.int, pp. 45-46.

⁸ Ibid., pp. 46 and following.

⁹ Ibid., pp. 62 and following.

¹⁰ Ibid., p. 20.

¹¹ See the website dedicated to this initiative available at: <https://seymsp.com/>.

¹² Available at <http://unesdoc.unesco.org>, p.98.

Seychelles' Blue economy strategic Roadmap:

The Blue Economy Strategic Roadmap priority number 3 is aimed at “Securing healthy and productive oceans”, which includes protecting marine and coastal assets through MPAs, and addressing ocean risks such as pollution or ocean acidification.

A report has been elaborated in this respect, *Seychelles' Blue Economy, Strategic Policy Framework and Roadmap: Charting the Future (2018–2030)*¹⁴. This Roadmap is referring to the sustainable development

goals of the United Nations, the Aichi Target number 11 of the Convention on Biological Diversity and also the Paris Agreement of 2015, in order to develop an integrated approach and lead to sustainable development. This report also refers to the marine spatial planning initiative and to some innovative finance initiatives of the country.

Some non-governmental organizations have an important interest and role to play in the region, as is the case for The Nature Conservancy¹⁵.

AT THE REGIONAL LEVEL, TWO ORGANIZATIONS DESERVE BE MENTIONED HERE

The SIODFA (Southern Indian Ocean Deepsea Fishers Association),

a non-governmental organization composed of four industrial fishing companies, which developed a programme specially dedicated to **Coral Bycatch**: a coral bycatch form, for use by members, was developed especially for the fishing of orange roughy, “which involves bottom contact with the gear”¹⁶.

Parties to the Southern Indian Ocean Fisheries Agreement (SIOFA),

which is the relatively new regional fisheries management organization for the South Indian Ocean, is competent in the high seas regarding fisheries so only indirectly regarding Seychelles' corals. During its meeting of 2018, the SIOFA mentioned its work on bycatch¹⁷. It also adopted conservation measures including some elements on bottom fishing and on bycatch on a regular basis¹⁸.

New partnerships for financing the protection of marine biodiversity have been experimented in Seychelles:

Seychelles announced in February 2018 the creation of **two new MPAs, covering 210 thousand square kilometres, under a debt-for-conservation agreement with The Nature Conservancy, the Grantham Environmental Trust and other charitable trusts**. These protected areas were extended in December to 26% of the Exclusive Economic Zone (EEZ) of these islands, the country having committed itself to increasing EEZ from 0.04% to 30% of its into protected areas and wishing to step up its fight against IUU fishing. The areas designated in 2018 off the islands of Aldabra, Amirantes and Fortune Bank cover the same area as the United Kingdom, but are only half of what the State has planned to designate by 2022. The counterpart to the collaboration of these entities in the creation of protected areas is that certain economic activities remain authorized in certain parts of these areas. For example, mining activities are allowed in Seychelles' MPAs¹⁹.

¹⁴ Available at: seymsp.com

¹⁵ See, for instance, www.nature.org

¹⁶ See the website of the SIODFA.

¹⁷ Report of the Fifth Meeting of the Parties to the Southern Indian Ocean Fisheries Agreement (SIOFA), Thailand, Phuket, 25–29 June 2018, 278 p, notably p. 61, 84, 100 and others.

¹⁸ See <http://apsoi.org/cmm>

¹⁹ S Ernesta, “Seychelles expands protection around two islands to counter improper fishing”, Seychelles News Agency, 2nd December 2018.



Photo: © Yen Yilee

The Nature Conservancy's action in the Seychelles is thus part of a genuine logic of *"financialization of ecosystem services"*, with the creation, as part of a *"Blue Economy"* policy, of a **debt swap system** aimed at enabling the State to buy back part of its public debt with public and private funds in exchange for carrying out activities related to the conservation and the fight against the effects of climate change²⁰.

Seychelles is thus the first State to launch a *"blue bond"*, a financial instrument designed to support sustainable maritime and fisheries projects. More than \$15 million has been raised from international investors. The grants and loans will be made through the Blue Grants Fund and the Blue Investment Fund, managed by the Seychelles Conservation and Adaptation to Climate Change Fund and the Development Bank of Seychelles respectively. A World Bank team is also involved in the implementation of this project²¹.

²⁰ See Maria Damanaki, Karin Erika Kemper, *"Innovation Drives Seychelles Blue Economy Approach"*, The Nature Conservancy, *Global Insight/Perspectives*, 23rd Mars 2018. See also Rob Weary, *"Rising Tides: Debt-for-Nature Swaps Let Impact Investors Finance Climate Resilience"*, The Nature Conservancy, *Global Solutions*, June 2016.

²¹ The World Bank, *"Seychelles launches World's First Sovereign Blue Bond. Bond will support sustainable marine and fisheries projects"*, Press release, October 29, 2018.

Photo: © The Ocean Agency

SUMMARY OF LEGISLATIVE AND REGULATORY MECHANISMS FOR THE PROTECTION OF CORAL REEFS AND ASSOCIATED ECOSYSTEMS

SEYCHELLES

With the support of



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