The Environmental Performance Review of Mauritania: draft recommendations¹

Note by the secretariat

Summary

The document presents the recommendations of the Environmental Performance Review of Mauritania agreed upon by the Expert Group on Environmental Performance Reviews at its meeting held in Geneva on 9 and 10 October 2023.

The Committee is invited to adopt the recommendations.

Chapter 1: Legal, policy and institutional framework

Recommendation 1.1:
The Government should:

(a) Entrust the Ministry of the Environment with reviewing and updating the legislation on environment, with effective and inclusive public participation and in cooperation with all relevant stakeholders;

(b) Ensure that application decrees are adopted and implemented;

(c) Ensure public access to legislation on environmental matters.

Recommendation 1.2:
The Government should:

(a) Entrust the Ministry of the Environment with reviewing strategies and plans on environmental matters, updating them in line with the National Strategy for Accelerated Growth and Shared Prosperity 2016–2030 (SCAPP) and cancelling obsolete ones;

(b) Ensure that relevant information on the implementation of SCAPP, environment strategic documents and Sustainable Development Goals (SDGs) are publicly available;

(c) Ensure that the environment, sustainable development and climate change are integrated in relevant strategic documents;

(d) Support the Ministry of the Environment in the implementation of environment-related strategic documents, when having to work with other relevant stakeholders, including in raising their environmental awareness.

Recommendation 1.3:
The Government should:

(a) Clarify the country’s environment-related governance system and enhance required capacities;

(b) Strengthen the role of the Ministry of the Environment in environment-related governance;

¹ This document was not formally edited; it will undergo editing before being published.
(c) Continue to review and identify the responsibilities of the relevant institutions involved in the coordination on environment and sustainable development matters, taking into account the on-going developments in this area;

(d) Ensure that training is provided to staff of other institutions involved in environmental and sustainable development issues;

(e) Promote information sharing, cooperation and coordination on environmental and sustainable development issues between and within ministries.

Chapter 2: Regulatory and compliance assurance mechanisms

Recommendation 2.1:
The Ministry of the Environment should accelerate the development and adoption of environmental quality and emission standards and norms, based on international norms and standards, and ensure their implementation.

Recommendation 2.2:
The Government should support the Ministry of the Environment in carrying out a capacity needs assessment of all inspection services relevant to environmental matters and preparing a roadmap with priority measures to enhance the analytical, human resources and financial capacities.

Recommendation 2.3:
The Government should:

(a) Establish a joint platform with relevant databases for all inspection services;
(b) Develop a harmonized enforcement policy, in consultation with judicial organizations.

Chapter 3: Greening the economy and financing environmental protection

Recommendation 3.1:
The Government should:

(a) Consider establishing a national fund to manage the revenues from mining rents, which would contribute to improving the environment and increases transparency in the use of the revenues;
(b) Conduct periodic assessments of the impact of public spending using revenues of these resources.

Recommendation 3.2:
The Government should communicate on the use of funds allocated to the Environmental Intervention Fund and make publicly available the criteria used to determine which projects are eligible for funding via the Fund and information on how funds have been spent yearly.

Recommendation 3.3:
The Government should:

(a) Introduce legislation imposing the consideration of green criteria in public procurement;
(b) Ensure that national guidelines for green public procurement are developed and disseminated across all public authorities and their implementation monitored.

Recommendation 3.4:
The Government should gradually phase out fossil fuel subsidies while ensuring the protection of vulnerable households.
Chapter 4: Environmental monitoring and information

Recommendation 4.1:
The Ministry of the Environment, in cooperation with other relevant public authorities, including regional environmental bodies, and other stakeholders, should:

(a) Establish methodological and procedural standards based on international guidelines, adapted to the needs of Mauritania, to regulate the collection of, access to and protection and uniformity of environmental data and information in the related institutions and the country as a whole;
(b) Consider establishing an environmental information centre tasked with supporting the operation of the Environmental Information System and providing reliable, scientific information to inform policymaking, and support transparent reporting at national and international levels;
(c) Develop an appropriate governance system to ensure that data and information on the environment and sustainable development is shared;
(d) Ensure the use of the Environmental Information System as the data storage for the information generated by all units of the Ministry and all environmental projects in the country;
(e) Ensure allocation of sufficient resources to maintain and update the Environmental Information System and provide regular training of staff supporting operation of this system.

Recommendation 4.2:
The Ministry of the Environment, in cooperation with the National Agency for Statistics and Demographic and Economic Analysis and other relevant public authorities and regional environmental bodies, should:

(a) Introduce a regulatory framework for the establishment of an air quality monitoring programme, in line with the Law on Combating Air Pollution;
(b) Launch a pilot project as a basis for the creation of a national air quality monitoring network;
(c) Ensure all stations provide measurement data to the Environmental Information System.

Recommendation 4.3:
The Government should:

(a) Introduce the regulatory and operational framework for the establishment of a water quality monitoring programme;
(b) Ensure the measurement of water quality parameters from 10 points at surface waters and 10 points at underground waters, twice a year;
(c) Ensure the measurement of water quality parameters from 10 points at bathing waters, twice a year;
(d) Ensure that all measurement data are shared with the Ministry of the Environment and the National Agency for Statistics and Demographic and Economic Analysis;
(e) Ensure the development of technical capabilities for the analysis of water quality measurement samples.

Recommendation 4.4:
The Government should develop a legislative and regulatory framework on reporting industrial emissions and discharges and establish a publicly available national pollutant release and transfer register.

Recommendation 4.5:
The Ministry of the Environment, in cooperation with other relevant public authorities, should:

(a) Regularly publish state-of-the-environment reports and complement these reports with additional regular publications and information;
(b) Review emerging threats and undertake specific actions and policy measures, based on the state-of-the-environment reports.

Recommendation 4.6:
The Government should require departments to produce and publish annual activity reports on the environment and sustainable development.
Chapter 5: Public participation

Recommendation 5.1:
The Government, in cooperation with the National Agency for Statistics and Demographic and Economic Analysis and relevant institutions, should promote awareness of and accelerate effective and inclusive access to environmental information.

Recommendation 5.2:
The Government should:

(a) Develop and implement comprehensive legislation providing the public with effective access to information;
(b) Organize regular environmental awareness-raising campaigns for the public on the importance of protecting the environment, where and how to access environmental information, and what the public’s rights are to a healthy environment, in cooperation with relevant stakeholders.

Recommendation 5.3:
The Government should:

(a) Enhance the implementation of legislation, procedures and organizational structures providing for effective and inclusive public participation in decision-making on legislation, policies, strategies and programmes related to environmental and sustainable development matters;
(b) Organize regular training for governmental officials and the public on the procedures for public participation in decision-making on environmental matters.

Recommendation 5.4:
The Government should:

(a) Enhance the participation of civil society in the development of policies, strategies and national and regional programmes on the environment and sustainable development;
(b) Support Civil Society Organizations (CSOs) in understanding the tools and processes for evaluating and monitoring public policies for the environment and sustainable development;
(c) Mobilize national and international expertise to support CSOs in technical and professional capacity-building on environmental matters;
(d) Facilitate the organization and funding of training on national and international funding opportunities and enable access to such opportunities.

Recommendation 5.5:
The Government should:

(a) Activate and enhance the cooperation between focal points on environmental matters from each of the departments to exchange information relevant to their sectors;
(b) Ensure the participation of all sectoral departments in decision-making on environmental matters;
(c) Strengthen the institutional capacity of the National Council for Environment and Sustainable Development to enhance its capability to coordinate, monitor and create linkages with other ministries on environmental policies;
(d) Integrate environmental considerations into the establishment of the Open Government framework;
(e) Allocate adequate resources to the Ministry of the Environment and other relevant governmental institutions, to carry out the measures required to implement access to information, public participation in decision-making and access to justice in environmental matters.

Recommendation 5.6:
The Government should ensure that:

(a) Comprehensive legislation providing the public with effective access to justice to bring environmental cases is developed and implemented;
(b) Specialization of members of judiciary in environmental matters is promoted;
(c) There is recurring judicial training on legislation related to environmental matters and its application in practice;
(d) A network of environmental law professionals is established to identify emerging environmental justice issues, exchange good practices, establish synergies and promote mediation and other alternative dispute resolution methods;
(e) Courts and other independent review bodies are equipped with adequate resources to effectively consider environmental cases.

Recommendation 5.7:
The Government should carry out an assessment of measures to be taken as a basis for possible accession to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, and seek advisory and capacity building support for this purpose.

Chapter 6: Education for sustainable development

Recommendation 6.1:
The Government, in cooperation with relevant institutions, academia, business and NGOs, should:

(a) Amend the Environmental Code to include environmental education (EE) provisions and adopt by-law(s) to the Law on the Orientation of the National Education System making education for sustainable development (ESD) implementation mandatory at all levels of education;
(b) Carry out a study on ESD integration in the education sector;
(c) Develop, adopt and pursue the implementation of a national strategy on ESD and action plan(s);
(d) Establish inclusive multistakeholder sectoral commissions and/or expert groups on ESD under the existing national platforms, to develop ESD in curricula, teaching materials and initial and in-service training of educators and teachers;
(e) Enable regular training of civil servants to develop their capacities to mainstream environmental and sustainable development concerns into sectoral policies and activities.

Recommendation 6.2:
In support of achieving SDG targets 4.7, 12.8 and 13.3, the Government, in cooperation with relevant institutions, academia and NGOs, should implement ESD in:

(a) Formal education at all levels and integrate it into curricula of all subjects while prioritizing primary and lower secondary education and student assessment;
(b) Initial and in-service training of educators, teachers and school principals and establish a platform for regular training of teachers based on new products and scientific research and innovation on ESD;
(c) Technical and vocational education and training (TVET) and develop and implement TVET on sustainable fisheries and mining;
(d) Non-formal and informal education, prioritizing traditional teaching in Mahadras and establishing a programme on the environmental upgrade of Mahadras and a programme on mainstreaming ESD on a regular basis into radio and television.

Recommendation 6.3:
The Government, in cooperation with relevant institutions, academia and NGOs, should:

(a) Assign the ministry in charge of the environment with knowledge management and research and development as well as with organizing training on the environment, and allocate necessary resources;
(b) Initiate and carry out national campaigns of continuous promotion of environmental and sustainable development issues pertinent for the country.
Recommendation 6.4:
The Government should strengthen:

(a) The science-policy interfaces on ESD, commission research, innovation and development on ESD and ensure timely provision of research outcomes to relevant stakeholders;
(b) The capacity of the higher education institutions and the university programmes and seek cooperation with international champions on ESD.

Recommendation 6.5:
The Government should:

(a) Provide adequate financial resources for the implementation of ESD;
(b) Seek additional sources of support, including from business and the international community, to conduct ESD activities;
(c) Create online platforms for volunteer opportunities and create yearly awards for ESD champions;
(d) Establish a regular source for small grants to public schools and NGOs enabling them to conduct ESD activities.

Chapter 7: Implementation of environmental international agreements and commitments

Recommendation 7.1:
The Government should:

(a) Take stock and finalise the ratification of or accession to:
   (i) Annex VI on air pollution to the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 relating thereto (MARPOL),
   (ii) The 2004 International Convention for the Control and Management of Ships’ Ballast Water and Sediments,
   (iii) The 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes,
   (v) Protocols to the Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention);
(b) Engage in the negotiations of a new legally-binding treaty against plastic pollution and a protocol on marine protected areas to the Abidjan Convention;
(c) Ensure that up-to-date action plans have been adopted for the Convention on Biological Diversity and its Nagoya Protocol, the Minamata Convention and the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing, and implement them fully.

Recommendation 7.2:
The Ministry of the Environment should:

(a) Invite the donor coordination group on environment and rural development to provide the Ministry with reports of its quarterly meetings and invite a representative of the Ministry to participate as appropriate;
(b) Encourage the donor coordination group to establish a web platform to share information on planned, current and past projects and their implementation;
(c) Communicate the recommendations set out in this environmental performance review to the members of the donor coordination group.
Chapter 8: Climate change

Recommendation 8.1:
The Government should:

(a) Develop new and amend the existing legislation taking into account climate change;
(b) Address monitoring, reporting and verification of activities related to climate change;
(c) Develop a national climate strategy;
(d) Consider creating a coordinating mechanism on climate change or a climate change body under the National Council for the Environment and Sustainable Development, with a focus on climate financing;
(e) Carry out an assessment of the cost of inaction on climate change impacts in the country;
(f) Consider establishing the required framework for the implementation of Paris Agreement cooperative approaches;
(g) Ensure the implementation of planned actions in the Updated National Determined Contribution 2021–2030 to mitigate the impacts of climate change on land and soil;
(h) Ensure the implementation of planned mitigation and adaptation measures to promote sustainable agricultural practices that also provide economic opportunities to local communities.

Recommendation 8.2:
The Government should:

(a) Finalize and implement the National Adaptation Plan and identify areas for collaboration and coordination among stakeholders;
(b) Increase public awareness on and engagement in climate change adaptation by public information campaigns, outreach and education initiatives, and strengthen public participation in decision-making processes on climate change matters.

Recommendation 8.3:
The Government should enhance capacity for data collection, analysis and reporting by providing training and resources to relevant government agencies and stakeholders, and local communities if appropriate.

Recommendation 8.4:
The Government should:

(a) Promote knowledge exchange and technology transfer to facilitate the implementation of climate change adaptation measures;
(b) Involve vulnerable groups and communities in the design and implementation of ecosystem-based adaptation measures;
(c) Ensure that institutions involved in climate change adaptation planning and implementation are transparent and accountable in their practices.

Recommendation 8.5:
The Government should:

(a) Create an enabling environment for private sector investment in climate change adaptation and mitigation measures, in particular for the development of renewable energy sources and green hydrogen;
(b) Provide financial and technical support and develop new financing mechanisms to support climate change adaptation and mitigation measures, while also promoting public private partnerships.
Chapter 9: Air protection

Recommendation 9.1:
The Ministry of the Environment, in cooperation with the National Organization for Meteorology (ONM) and relevant authorities, should:

(a) Accelerate the process of establishing a transparent monitoring and reporting structure on the implementation of the air quality targets that are set in the National Strategy for the Environment and Sustainable Development and its National Action Plan for the Environment and Sustainable Development;
(b) Ensure that the reported data are submitted to the National Agency for Statistics and Demographic and Economic Analysis;
(c) Secure funding to strengthen the national capacity for transparent reporting on air pollution.

Recommendation 9.2:
The Ministry of the Environment should:

(a) Develop a national system for inventories of air polluting sources and substances, while learning from the related experience of the Parties to the Convention on Long-range Transboundary Air Pollution;
(b) Seek support and assistance to develop a national inventory system.

Recommendation 9.3:
The Ministry of the Environment should adopt:

(a) Regulations to support the implementation of the Law on Combating Air Pollution;
(b) Reasonable compliance deadlines for air quality standards, considering technical and economic feasibility, by applying a differentiated approach to particular pollutants.

Recommendation 9.4:
The Ministry of the Environment, in cooperation with relevant authorities and regionals governments, should:

(a) Continue to set up a national air pollution monitoring network where major acidifying pollutants, PM$_{2.5}$ and PM$_{10}$, heavy metals and POPs are measured;
(b) Ensure that necessary data for the evaluation of SDG indicator11.6.2 in cities are generated.

Recommendation 9.5:
The Government should:

(a) Develop regulations on cleaner car fuels taking into account the 2022 Agreement of the Economic Community of West African States on regulations aimed at providing cleaner fuels for vehicles;
(b) Ensure that the sulfur content of petrol and diesel is decreased from 1,000 to 50 ppm and imported vehicles comply to at least Euro-4 emission standards from January 2025.

Recommendation 9.6:
The Ministry of the Environment should:

(a) Introduce an integrated permitting system for industrial sources (category A) and relevant branches, such as cement, using emission limit values that are based on the application of best available techniques (BATs);
(b) Ensure that emission limit values for air emissions in environmental permitting for individual polluting installations reflect BATs and that BATs to abate air pollutant emissions are applied, as well as general binding rules for equivalent installations, based on technical developments.
Recommendation 9.7:
The Government should consider promoting mercury-free techniques in artisanal and small-scale gold mining and creating incentives for prospectors, such as necessary loans for investments in mercury-free techniques if there would be a total ban on mercury in the future.

Recommendation 9.8:
The Government should:
(a) Continue raising awareness on and support the mitigation of the negative effects of the use of air polluting (solid) fuels, such as wood and coal, and inefficient cookware during food preparation, and any other polluting substances;
(b) Promote and subsidize the use of gas and modern equipment in food preparation for poor and vulnerable households.

Chapter 10: Water Management

Recommendation 10.1:
The Government should:
(a) Strengthen the maintenance of and operational practice for water infrastructure;
(b) Improve the access of the population to safe drinking water and raise household connection rates;
(c) Reduce leakage in supply and distribution pipes;
(d) Take action to ensure access to safe drinking water in areas affected and threatened by water shortages;
(e) Carry out preventative and awareness-raising actions among the population concerning good practices in the protection of water resources and the storage and treatment of drinking water.

Recommendation 10.2:
The Government should recommend to the Organization for the Development of the Senegal River the application of a common classification of activities along the river, the establishment of a rigorous monitoring and control protocols and the development of an awareness-raising component for all actors.

Recommendation 10.3:
The Government should:
(a) Assess prevailing policies pertaining to water management, and revise them as necessary;
(b) Conduct field assessments on the regional potential for surface and ground water resources and their quality;
(c) Prepare integrated water resources management plans, with the involvement of relevant stakeholders, including women in rural areas;
(d) Establish regional-level participatory contracts that engage all stakeholders in the management process;
(e) Report on SDG 6 indicators.

Recommendation 10.4:
The Government should clarify roles, responsibilities and competencies on water management and strengthen intersectoral coordination among national authorities involved in water use, protection and management.

Recommendation 10.5:
The Government should:
(a) Set up sewerage systems together with wastewater treatment plants;
(b) Collect and treat the municipal’s wastewater and reuse for non-agricultural purposes;
(c) Take immediate action, with the involvement of local communities, on ending open defecation and setting up a dedicated handwashing facility, with soap and water, and safely managed sanitation services on the premises of each household.
Recommendation 10.6:
The Government should:

(a) Designate or respecify the competent authority in charge of storm water management;
(b) Create storm water collection networks in relevant areas of the country and ensure their maintenance;
(c) Develop storage basins in municipalities that are periodically flooded during the rainy seasons with social-economic purposes outside the rainy season.

Chapter 11: Waste and chemicals management

Recommendation 11.1:
The Government through the National Agency for Statistics and Demographic and Economic Analysis and in consultation with regional authorities and municipalities, and the providers of waste management services, should set up a system to collect data on waste management, at least for municipal solid waste (MSW) and medical and hazardous wastes.

Recommendation 11.2:
The Government, in cooperation with regional authorities and municipalities, should:

(a) Improve waste management services, especially the collection and transport of MSW, ensure stable financial conditions for their performance and ensure funding for their operational and investment costs;
(b) Develop landfills in regions where it is necessary and ensure the proper operation of the existing landfills.

Recommendation 11.3:
For better management with MSW, the Government should:

(a) Actively promote the implementation of the Law on Waste Management;
(b) Establish a clear division of responsibilities between the Ministry of the Environment, regional authorities, municipalities and waste collection service providers, as well as waste producers.

Recommendation 11.4:
The Government should:

(a) Promote separate collection, sorting, treatment and recycling of specific waste streams of MSW, and of hazardous and medical waste within MSW;
(b) Set up a model that is replicable in all settlements.

Recommendation 11.5:
The Government should accelerate the elaboration of a law on chemicals and implement it.

Chapter 12: Biodiversity and protected areas

Recommendation 12.1:
The Government should:

(a) Establish specific criteria for classifying and evaluating ecosystems;
(b) Conduct a comprehensive taxonomic study on biodiversity;
(c) Establish the red list for biodiversity and ecosystems based on criteria of the International Union for the Conservation of Nature (IUCN);
(d) Address the legislative gaps for the protection of the most endangered species and heritage;
(e) Promote and materially and financially support scientific research in taxonomy.
Recommendation 12.2:
The Government should:

(a) Set up a mechanism for the regular collection of data on biodiversity and ensure that they are saved at the Biodiversity Clearing House;
(b) Enhance the operation of the Biodiversity Clearing House and ensure that data and information on biodiversity are available to relevant stakeholders and the public;
(c) Strengthen the mechanism for biodiversity management.

Recommendation 12.3:
The Government should:

(a) Establish an institutional catalyst responsible for ensuring the coordination and mainstreaming of biodiversity management at the national level as well as its integration into sectoral planning processes;
(b) Promote to decision-makers the health, political, economic and social benefits, in addition to the environmental benefits, of integrated biodiversity management;
(c) Establish tools for professionals and decision-makers for identifying and promoting good practices in the management and conservation of biodiversity and natural ecosystems;
(d) Operationalize the long-term strategic approach to mainstreaming biodiversity within and across sectors adopted at the 15th Conference of the Parties to the Convention on Biological Diversity.

Recommendation 12.4:
The Government should:

(a) Conduct a detailed analysis of the network of existing protected areas, parks and reserves and other potential territories;
(b) Identify sites of biological and ecological interest that require protection or restoration and establish an appropriate legal status and management plan for the selected sites;
(c) Strengthen the technical and financial capacity of management for all protected areas, including wetlands;
(d) Examine ways to promote ecotourism and the attractiveness of nature and reconcile the development of touristic areas with the protection of natural resources;
(e) Ensure the integration in decision-making of conservation and socio-economic development objectives through the involvement of local populations (rights-holders).

Chapter 13: Agriculture and the environment

Recommendation 13.1:
The Government should ensure that the Ministry of Agriculture and the Ministry of Livestock are responsible for reviewing each environmental impact assessment or environmental impact notice from the point of view of stabilizing food production and increasing yields and production quality, and require project promoters to monitor and report regularly according to these criteria.

Recommendation 13.2:
The Ministry of the Environment should prepare detailed soil studies which will eventually constitute the detailed soil map at the perimeter scale.

Recommendation 13.3:
The Government should strengthen the training on good practices of people that are responsible for the application, storage and disposal of plant protection products.
Recommendation 13.4:
The Government should:
(a) Develop and implement legislation to award a Mauritanian eco-label to niche agricultural products intended for export;
(b) Develop and implement organic farming rules, which can be based on international experience;
(c) Encourage organic farming.

Recommendation 13.5:
The Ministry of the Environment and the Ministry of Livestock should continue their collaboration with their counterparts in neighbouring countries and inform them regularly of the measures and actions implemented to protect agricultural and natural areas.

Recommendation 13.6:
The Government should develop and implement legislation on sustainable management of pastural lands.

Chapter 14: Fisheries, maritime economy and the environment

Recommendation 14.1:
The Government should provide the relevant officials and employees with adequate training on the population dynamics of the exploited marine populations.

Recommendation 14.2:
The Government should:
(a) Financially support the Mauritanian Institute of Oceanographic Research and Fisheries;
(b) Promote the development of bioeconomic modelling research;
(c) Strengthen the cooperation with neighbouring countries in ocean science.

Recommendation 14.3:
The Government should:
(a) Set up training on species recognition for Ministry of Fisheries and Maritime Economy officials in charge of monitoring catch landings;
(b) Promote the training of managers and develop training guides and training sessions, including online modules, recorded lectures and ready-to-use materials on processing of fishery products into prepared products for human consumption.

Recommendation 14.4:
The Government should give the status of marine protected area to the chain of deep cold-water corals, the canyons off the Banc d’Arguin and the seamounts colonized by corals, the area inhabited by clams, located off the Banc d’Arguin, which would make it possible to get closer to SDG target 14.5.

Recommendation 14.5:
The Government should:
(a) Raise awareness among the population, in particular youth, on the fight against marine pollution from plastic discharges;
(b) Promote respect of the Ocean;
(c) Take steps to make fish available at affordable prices in local markets to encourage their consumption and combat food insecurity;
(d) Introduce a marine environment component in primary level school programmes.

Recommendation 14.6:
The Government should reactivate the coastal zone monitoring network.
Recommendation 14.7:
The Government should:

(a) Elaborate a strategy to minimize land-based pollution caused by industry and agriculture;
(b) Minimize use of plastic in coastal areas;
(c) Enforce the ban on the use of plastic bags;
(d) Conduct clean-up campaigns on the coastline, which would support the achievement of SDG target 14.1.

Recommendation 14.8:
The Nouakchott Region, in cooperation with the Ministry of the Environment and the Ministry of Hydraulics and Sanitation, should:

(a) Restore and vegetate the weakened and breached sectors of the coastal dune;
(b) Sensitize and inform the population of Nouakchott of the dangers, and the means of protection, in the event of a breach in the dune belt.

Chapter 15: Industry, mining and the environment

Recommendation 15.1:
The Government should:

(a) Consider the possibility of introducing a national system for the classification and management of the country’s mineral resources using methodologies and approaches recommended by the United Nations Framework Classification for Resources and the United Nations Resource Management System;
(b) Seek financial and technical assistance from the international community for the development of such a system.

Recommendation 15.2:
The Government should:

(a) Create industrial zones that would offer advantages in terms of services and infrastructure;
(b) Promote cleaner technologies in all industrial branches;
(c) Finalize the development of a national system of environmental standards;
(d) Strengthen the capacity of the Environmental Police for effective environmental control of industrial and extractive activities.

Recommendation 15.3:
The Government should require:

(a) Industrial and mining operators to establish wastewater pre-treatment units in facilities that do not have them, while promoting the reuse of effluents with zero discharge;
(b) The development of an emergency plan for major industrial and mining projects as a condition for granting the environmental feasibility.

Recommendation 15.4:
The Government should:

(a) Develop and adopt a new, modern, transversal regulation on hazardous facilities, in line with international standards, and designate the authority responsible for its implementation;
(b) Mobilise financial and technical resources to facilitate the operationalisation of the new regulation on hazardous facilities.
Recommendation 15.5:
The Government should ensure that the Ministry of the Environment, in cooperation with the Ministry of Petroleum, Mines and Energy:

(a) Requires an environmental and social impact assessment for the establishment of new gold ore processing centres, with an environmental and social management plan and an environmental closure and rehabilitation plan;
(b) Requires a strategic and social environmental assessment for the new artisanal mining development zones;
(c) Develops and implements closure and environmental rehabilitation plans for the Chami and Zouerate centres;
(d) Carries out a scientific study on the impacts of mercury on the environment and on the health of artisanal workers and populations living near gold processing centres;
(e) Develop a roadmap to reduce and eventually ban mercury use;
(f) Promote the effectiveness of techniques without the use of mercury.

Recommendation 15.6:
The Government should:

(a) Introduce the obligation to carry out an environmental and social impact assessment with an environmental and social management plan as a sine qua non condition for obtaining a permit for small mines and artisanal mining tailings processing companies (category F);
(b) Strengthen the environmental monitoring and control of category F companies, particularly with regard to the management of tailings dams and the use of cyanide;
(c) Conduct a scientific study on the environmental and health impacts of cyanide use in the extraction of gold from artisanal mining tailings, already rich in mercury, and promote the effectiveness of environmental-friendly techniques.

Recommendation 15.7:
The Government should:

(a) Adopt and implement a national strategy for the development of environment-related research and innovation;
(b) Substantially increase the State's contribution to research and innovation according to established priorities;
(c) Identify measures to stimulate private sector investment in research and innovation.

Chapter 16: Energy and the environment

Recommendation 16.1:
The Ministry of Environment should:

(a) Develop a template for a standardized report that integrates selected indicators to be monitored at thermal power plants;
(b) Ensure data consistency and comparability across all data collected and analysed, drawing upon established reporting standards and governance mechanisms that are internationally recognized.

Recommendation 16.2:
The Government should introduce mandatory environmental self-monitoring for thermal power plants and reporting for to the authority in charge of environment.

Recommendation 16.3:
The Government should:

(a) Develop an integrated energy strategy;
(b) Develop an integrated generation-distribution system with medium-large power plants, including solar, wind power and gas replacing heavy fuel oil;

(c) Develop a decentralized energy system, employing solar, wind, biomass, and small hydroelectric generation, designed to power rural areas;

(d) Incentivise the large producers of energy to transition to the renewable sources.

**Recommendation 16.4:**

The Government should:

(a) Implement the construction projects for green power plants and use international auctions to support financing of green power plant projects;

(b) Continue to explore ways to switch TPPs from heavy fuel oil to natural gas;

(c) Undertake a comprehensive study on the development of an appropriate national energy mix that will consider the impact on national grid operation of various power source shares, including consideration of integration of the national electricity grid into a unified regional electricity market.

**Recommendation 16.5:**

The Government should:

(a) Develop and implement restructuring of the state-owned power utilities sector with the establishment of independent generation, transmission and distribution companies and wholesale and retail markets;

(b) Gradually adapt administrative measures towards measures based on economic incentives and energy market mechanisms;

(c) Keep a major role in power generation and transmission.

**Chapter 17: Health and the environment**

**Recommendation 17.1:**

The Government should:

(a) Consolidate the collection of health data in real time, ensure its backup in a database that will integrate health indicators and determinants and ensure that the analysis of health data is regularly carried out;

(b) Implement an operational health surveillance and alert system in real time, integrating all the signals likely to have an impact on the health of the population, in cooperation with the actors responsible for health, food, agriculture and the response to adverse events;

(c) Ensure that the methods of use of these health information systems are standardized via procedures and regulatory texts and the users are trained.

**Recommendation 17.2:**

The Government should:

(a) Develop the analytical capacities of laboratories;

(b) Implement sanitary control of food products;

(c) Ensure that agro-food, industrial or artisanal actors, and other relevant actors, in particular institutional ones, are trained in good practices for the production, transport and preservation of food;

(d) Provide training in food hygiene to all stakeholders;

(e) Develop management measures for non-compliance and response to collective food poisoning by relying on the ministries in charge of health, the environment, agriculture, livestock, trade and fisheries and national laboratories.

**Recommendation 17.3:**

The Government should:

(a) Integrate the “One Health” approach in public policies;

(b) Act to integrate environmental health concerns as early as possible into urban planning processes.
Recommendation 17.4:
The Government should:

(a) Continue vector control actions by insisting that the population adopt the right preventive practices in terms of eradicating larval breeding sites and using protection (clothing, mosquito nets, etc.);
(b) Control and limit chemical control methods by implementing good practices in terms of protecting operators and the population;
(c) Promote preventive actions to combat conditions favourable for the development of harmful insects.