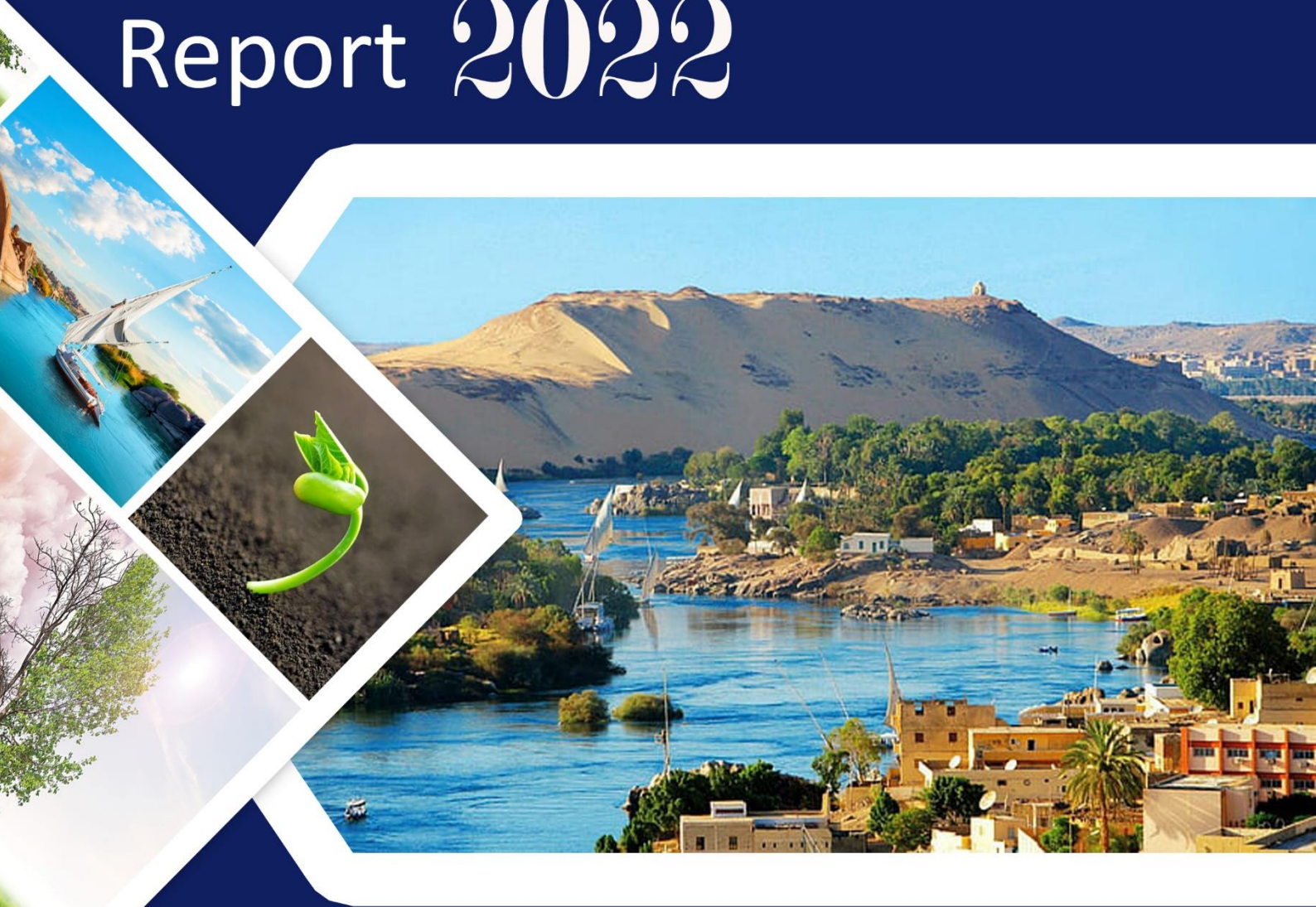




# CB3

## Report 2022



# Environmental Sustainability Guidelines for the Water Sector

Addendums and Environmental Sustainability Safeguards (ESS)

# **Environmental Sustainability Guidelines for the Water Sector**

## **Addendums and Environmental Sustainability Safeguards (ESS)**

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For

## **“Enhancing National Capacities for Improved Public Participation for Implementing Rio Conventions (CB3 Project)”**

funded by the Global Environment Facility (GEF) / United Nations Development Program (UNDP) and  
implemented by Ministry of Environment

Citation: Abu-Zeid, K.<sup>1</sup>, Wagdy, A.<sup>2,3</sup>, Saleh, S.<sup>3</sup>, Omar, K.<sup>3</sup>, and Sayed, A.<sup>3</sup> (2022). Environmental Sustainability Guidelines for the Water Sector- “Addendums and Environmental Sustainability Safeguards (ESS)”. Enhancing National Capacities for Improved Public Participation for Implementing Rio Conventions Project (CB3)”. Global Environment Facility (GEF) / United Nations Development Program (UNDP) and Ministry of Environment. Report 202212G, 124 pp.

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## **Executive Summary**

This study aims to compile a set of guidelines for three Ministries in Egypt, namely: Ministry of Water Resources and Irrigation (MWRI), Ministry of Agriculture and Land Reclamation (MALR), and Ministry of Housing, Utilities & Urban Communities (MHUUC). The study passed through five stages; 1) Compile a set of International Regulations and Standards for the guidelines, 2) Compile a set of Local regulations formulated by EEAA, 3) Develop a set that incorporate both and that is customized to the Egyptian sets of Environmental conditions and constraints, 4) Develop Environmental Sustainability Safeguard (ESS) Templates

The main items in the three Rio conventions related to climate change, Biodiversity, and Desertification are briefly presented, especially those linked to Egypt and the three Ministries (MWRI-MALR-MHUUC) with close connection to water. Performance indicators related to sustainable development in Egypt are compiled from several sources including the Compendium on the Role and Obligations of Egypt under RIO conventions (Ministry of Environment), 3<sup>rd</sup> State of the Water Report for the Arab Region (AWC, CEDARE & LAS), Egypt Vision 2030, and EEAA Environmental Impact Assessment (EIA) guidelines.

MWRI projects have been assessed by selecting three different types of projects, applying the legal framework which controls the environmental process, such as: Environmental Law No.4/1994, as amended by Law No.9/2009, and its Executive Regulations, Law 12 for water resources and irrigation. The three main types of projects that were selected to apply Environmental Sustainability Safeguards include Subsurface Drainage Projects, Canals Rehabilitation Projects, and Coastal Protection Projects. Out of different project implemented under the supervision of MALR, three types of projects were selected because of the significance of water influence, namely: Irrigation Modernization Projects, Agriculture Development Projects, and Livestock Development Projects. Three types of projects which have close connection to water and are being implemented under MHUUC were selected including; Domestic Water Supply Projects, Sanitation Projects, and Desalination Projects.

Projects Scoping and classification criteria for water related projects were proposed. Five Environmental Sustainability Safeguards related to water and connected to the activities of the three Ministries (MWRI-MALR-MHUUC) are also proposed under the following titles: 1) Natural Resources which cover water and land as main indicators, 2) Biodiversity, Ecosystems and Natural Habitats which cover indicators such as species, wetlands, green areas, 3) Waste Management covers wastewater and land wastes, 4) Chemical pollutants Management which includes fertilizers and pesticides, and 5) Stakeholders Consideration covering: local communities, gender equality, social heritage, culture, and health. Measurement units have been specified for each of these indicators. Furthermore, a screening template is suggested as a preliminary stage before the Environmental Impact Assessment stage and after Environmental Sustainability Safeguards are applied.

## **The guidelines covers the following topics:**

### SECTION 1: Introduction

### SECTION 2: Rio Conventions

#### 2.1 United Nations Framework Convention on Climate Change (UNFCCC)

##### 2.1.1 Climate Change in Egypt

#### 2.2 United Nations Convention on Biological Diversity (UNCBD)

##### 2.2.1 Biodiversity in Egypt

#### 2.3 United Nations Convention to Combat Desertification (UNCCD)

##### 2.3.1 Desertification in Egypt

#### 2.4 Egypt's Efforts under the Rio Conventions

### SECTION 3: EEAA Regulations for Environmental Impact Assessment (EIA)

#### 3.1 Legal and Administrative Framework for Environmental Issues

#### 3.2 Principles and EIA Guidelines

##### 3.2.1 Categorization of Projects

##### Highest Level

##### Medium Level

##### Lowest Level

#### 3.3 Project Screening

### SECTION 4: Performance Indicators for Environmental Sustainability

#### 4.1 Egypt Sustainable Development Strategy (SDS):

#### 4.2 State of the Water Report for the Arab Region

#### 4.3 Performance Indicators for Green Recovery

#### 4.4 Environmental Impact Assessment Decision Support System (EIADSS)

### SECTION 5: Water Related Ministries and Rio Conventions

#### 5.1 Ministry of Water Resources and Irrigation (MWRI)

##### 5.1.1 MWRI Roles and Responsibilities Towards Rio Conventions:

#### 5.2 Ministry of Agriculture and Land Reclamation

##### 5.2.1 MALR Roles and Responsibilities Towards Rio Conventions:

#### 5.3 Ministry of Housing, Utilities & Urban Communities (MHUUC)

##### 5.3.1 MHUUC Roles and Responsibilities Towards Rio Conventions:

### SECTION 6: Environmental Sustainability

#### 6.1 Scoping and Classification of Projects

#### 6.2 Environmental Sustainability Safeguards (ESS)

##### 6.2.1 ESS 1: Natural Resources Conservation

##### 6.2.2 ESS 2: Biodiversity, Ecosystems and Natural Habitats Protection

##### 6.2.3 ESS 3: Waste Management

##### 6.2.4 ESS 4: Chemical Pollutants Management

##### 6.2.5 ESS 5: Stakeholders Consideration

#### 6.3 ESS Screening Template

### SECTION 7: MWRI Environmental Sustainability

#### 7.1 MWRI Type of Projects

##### 7.1.1 Subsurface Drainage Projects

##### 7.1.2 Canals Rehabilitation Projects

##### 7.1.3 Coastal Protection Projects

#### 7.2 MWRI Projects Scoping

#### 7.4 MWRI Environmental Sustainability Safeguards Indicators

#### 7.5 Environmental Sustainability Safeguards (ESS) Screening for MWRI Projects

### SECTION 8: MALR Environmental Sustainability

#### 8.1 MALR Type of Projects

##### 8.1.1 Modern Irrigation Systems

##### 8.1.2 Agriculture Development Projects

##### 8.1.3 Livestock Production Projects

#### 8.2 MALR Projects Scoping

#### 8.4 MALR Environmental Sustainability Safeguards Indicators

#### 8.5 Environmental Sustainability Safeguards (ESS) Screening for MALR Projects

## SECTION 9: MHUUC Environmental Sustainability Safeguards

### 9.1 MHUUC Type of Projects

#### 9.1.1 Drinking Water Projects

#### 9.1.2 Sanitation Projects

#### 9.1.3 Water Desalination Projects

### 9.2 MHUUC Projects Scoping

### 9.4 MHUUC Environmental Sustainability Safeguards Indicators

## REFERENCES:

### Annexes:

Annex 1: Environmental Impact Assessment - Form A

Annex 2: Environmental Impact Assessment - Form B

Annex 3: Environmental Impact Assessment - Form C

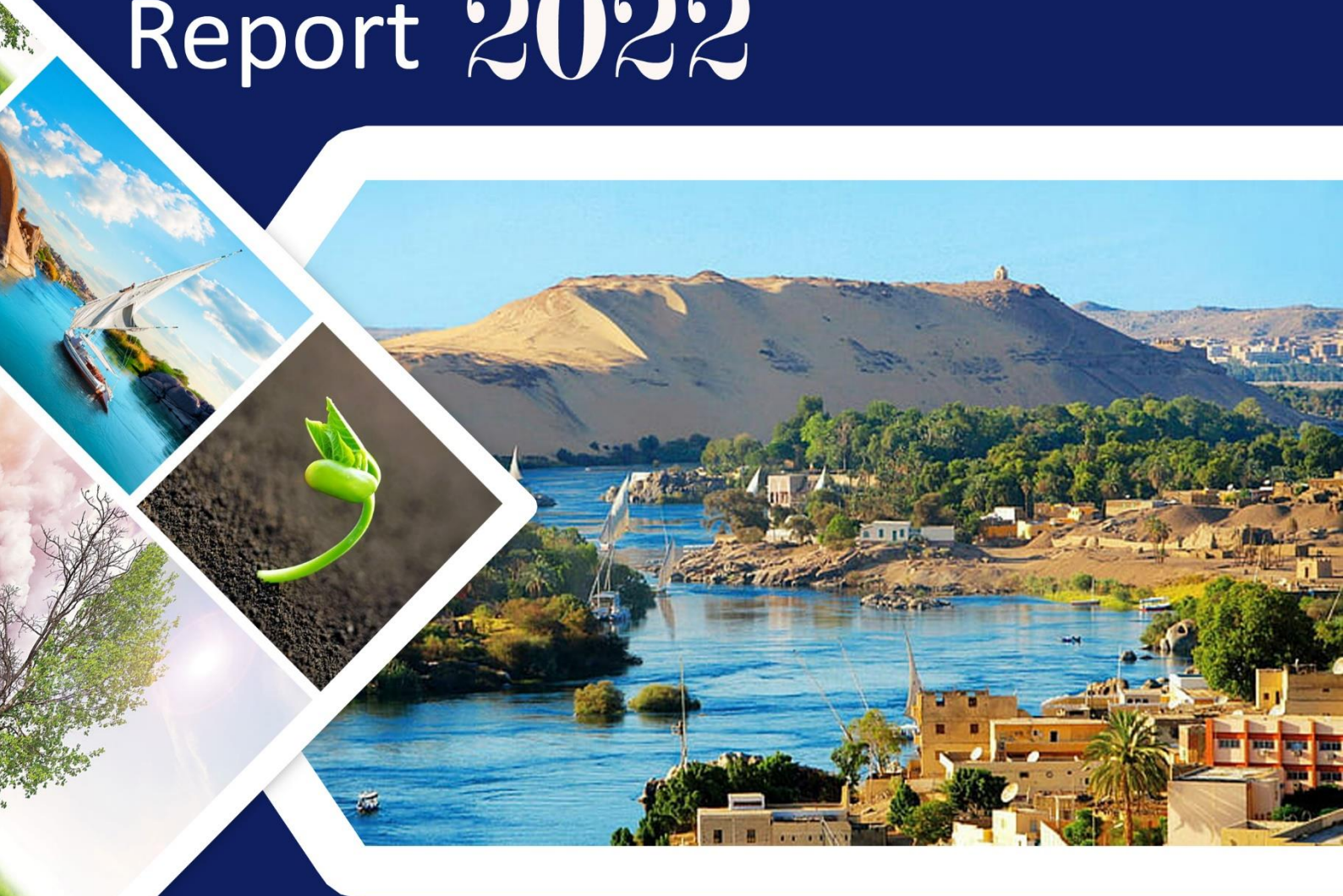
Annex 4: MWRI Law 48





# CB3

## Report 2022



# Environmental Sustainability Guidelines for the Energy Sector

Addendums and Environmental Sustainability Safeguards (ESS)

# **Environmental Sustainability Guidelines for the Energy Sector**

## **Addendums and Environmental Sustainability Safeguards (ESS)**

This guidelines is developed by Dr. Ibrahim Abdelgalil as part of the outputs of the project: “Enhancing National Capacities for Improved Public Participation for Implementing Rio Conventions (CB3)” funded by the Global Environment Facility (GEF) / United Nations Development Program (UNDP) and implemented by Ministry of Environment

Citation: Abd Elgalil. I.<sup>1</sup>, Wagdy, A.<sup>1,2</sup>, Saleh, S.<sup>1</sup>, Omar, K.<sup>2</sup>, and Sayed, A.<sup>2</sup> (2022). Environmental Sustainability Guidelines for the Energy Sector- “Addendums and Environmental Sustainability Safeguards (ESS)”. Enhancing National Capacities for Improved Public Participation for Implementing Rio Conventions Project (CB3)”. Global Environment Facility (GEF) / United Nations Development Program (UNDP) and Ministry of Environment. Report 202211G, 76 pp.

1 Consultant: Energy & Environment

2 CB3 Project, Ministry of Environment

3 Cairo University, Faculty of Engineering

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## **The content covers the following topics:**

### **Part I: Energy and Environmental Sustainability**

- 1.1. The Rio Conventions
  - 1.1.1. United Nations Framework Convention on Climate Change (UNFCCC)
  - 1.1.2. Convention on Biodiversity (CBD)
  - 1.1.3. United Nations Convention to Combat Desertification (UNCCD)
- 1.2. Egypt's obligations under the Rio Conventions
- 1.3. Climate change in Egypt
  - 1.3.1. Egypt's GHG emissions
  - 1.3.2. Mitigation measures
  - 1.3.3. Vulnerability assessments
- 3.4. Adaptation measures
  - 1.3.4. climate adaptation:
- 1.4. CBD-related issues
  - 1.4.1. Biodiversity conservation measures
  - 1.4.2. Managing protected areas
- 1.5. UNCCD-related issues
  - 1.5.1. Drivers for desertification
  - 1.5.2. Urban encroachment
    - 1.5.2.1. Soil deterioration

### **Part II: Environmental Sustainability Safeguards Policies**

- 2.1. Aims
- 2.2. Legal and Regulatory Framework
  - 2.2.1. Law of Environmental Protection
  - 2.2.2. Environmental Impact Assessment
    - 2.2.2.1. Project Categorization
    - 2.2.2.2. EIA Review and Approval Procedures
- 2.3. Mainstreaming Environmental sustainability in publicly funded projects (Safeguard Policy)
- 2.4. Environmental Sustainability Requirements
- 2.5. Exclusion List

### **Part III: Environmental Sustainability Safeguards (ESS) Procedures**

### **Part IV: Oil and Gas Sector: Ministry of Petroleum and Mineral resources**

- 4.1. Overview of the Oil and gas sector
- 4.2. Environmental Impacts of the oil and gas sector
- 4.3. Mitigation measures
- 4.4. Estimation of GHG emissions
- 4.5. Environmental sustainability safeguard procedure for public funding

### **Part V: Electricity Sector: Ministry of Electricity and Renewable Energy**

- 5.1. Overview of the electricity sector
- 5.2. Environmental Impacts of the electricity sector
  - a. Hydroelectric facilities
  - b. Thermal power plant
  - c. Onshore wind energy
  - d. Solar Energy
  - e. Biomass Energy
  - f. Transmission Infrastructure
- 5.3. Mitigation measures
- 5.4. Estimation of GHG emissions
- 5.5. Environmental sustainability safeguard procedure for public funding

### **Part VI: Transport Sector: Ministry of Transportation**

- 6.1. Overview of the Transportation Sector
- 6.2. Energy used in transportation
- 6.3. Environmental Impacts of the Transport Sector
  - a. Air pollution
  - b. Noise



- c. Quality of Water and Marine environment
- d. Biodiversity
- e. Climate change
- 6.4. Mitigation measures
  - a. Road Transport
  - b. Railways
  - c. Cairo Underground Metro
  - d. Incentives
- 6.5. Estimation of GHG emissions
- 6.6. Environmental sustainability safeguard procedure for public funding

Part VII: Industrial Sector: Ministry of Industry and Trade

- 7.1. Overview of the Industrial Sector
- 7.2. Energy used in Industry
- 7.3. Environmental Impacts of the Industrial Sector
- 7.4. Mitigation measures
  - a. Decoupling resource consumption from production
  - b. Reducing industry's impacts on the local environment
  - c. Environmentally related standards in the global market
  - d. GHG mitigations
  - I. Sector-wide options
  - II. Process-specific technologies and measures
- 7.5. Estimation of GHG emissions
- 7.6. Environmental sustainability safeguard procedure for public funding

Acronyms

Glossary

References

Appendix 1

(Environmental Sustainability Safeguard Form A)

Appendix 2

(Environmental Sustainability Safeguard Form B)

For more information, please contact CB3 Project at:

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