Energies Group

ECO Consult

Project: Aqaba-Amman Water Desalination and Conveyance (AAWDC)

2025 AAWDC Project Environmental and Social Impact Assessment

Client: National Carrier Project Company

Report Issue Record

Project: Aqaba-Amman Water Desalination and Conveyance (AAWDC)

Title: 2025 AAWDC Project Environmental and Social Impact Assessment

Client: National Carrier Project Company

Date: December 2025

Version: Final V2

Date	Rev	Author	Checked	Approved
14 November 2025	0	EG	AR	BB
12 December 2025	1	EG	AR	BB
17 December 2025	2	EG	AR	BB

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Abbreviations and Acronyms

AA	Abu Alanda
AAR	Abu Alanda Reservoir
AAWDC	Aqaba-Amman Water Desalination and Conveyance
AAWDCP	Aqaba-Amman Water Desalination and Conveyance Project
AC	Alternating Current
ACES	Arab Centre for Engineering Studies
ACT	Aqaba Container Terminal
AD	Anno Domini
ADC	Aqaba Development Corporation
AFD	French Development Agency
AGI	Above-Ground Installation
AGP	Arab Gas Pipeline
AIS	Automatic Identification System
ALECSO	Arab League Educational, Cultural and Scientific Organisation
AM	Al Muntazah
AMP	Aqaba Marine Park
AMR	Aqaba Marine Reserve
AMR	Al Muntazah Reservoir
AMRMP	Aqaba Marine Reserve Management Plan
ANSI	American National Standards Institute
AOI	Area of Influence
APM	Associated Ports and Marine
AQI	Air Quality Index
ARDD	Arab Renaissance for Democracy and Development

ARGAS	Arabian Geophysical and Surveying Company
ASCE	American Society of Civil Engineering
ASEZ	Aqaba Special Economic Zone
ASEZA	Aqaba Special Economic Zone Authority
asl	Above Sea Level
ATPS	Aqaba Thermal Power Station
AVTR	Amman Vision Treatment & Recycling
AW	Aqaba Water
AZE	Alliance for Zero Extinction
BAP	Biodiversity Action Plan
BAT	Best Available Technologies
BC	Before Christ
BESS	Battery Energy Storage System
BMP	Best Management Practice
BOT	Build-Operate-Transfer
BPS	Booster Pumping Station
BPT	Break Pressure Tank
BRT	Bus Rapid Transit
CAPEX	Capital Expenditure
CBD	Convention on Biodiversity Diversity
CBO	Community-Based Organisation
CC	Control Centre
CCTV	Closed-Circuit Television
CDF	Community Development Framework
CDI	Combined Drought Index

CDM	Clean Development Mechanism
CEGCO	Central Electricity Generating Company
CESMP	Construction Environmental and Social Management Plan
CFP	Chance Finds Procedure
CFR	Code of Federal Regulations
CFU	Colony Forming Unit
CH	Critical Habitat
CHA	Critical Habitat Assessment
CHMP	Cultural Heritage Management Plan
CHSSMP	Community Health, Safety and Security Management Plan
CIA	Cumulative Impact Assessment
CIP	Cleaning-in-Place
CITES	Convention on International Trade in Endangered Species
CLO	Community Liaison Officer
CMS	Convention on Migratory Species
COD	Chemical Oxygen Demand
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea
CR	Critically Endangered
CRC-OP-AC	Optional Protocol on the Involvement of Children in Armed Conflict
CRC-OP-SC	Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography
CRVA	Climate Risk Vulnerability Assessment
CSR	Corporate Social Responsibility
CT	Critically Threatened
CVRA	Climate Vulnerability Risk Assessment
DC	Direct Current

DFC	Development Finance Corporation
DFI	Development Finance Institution
DI	Ductile Iron
DLS	Department of Lands and Survey
DMPF	Dual Media Pressurised Filter
DoA	Department of Antiquities
DoS	Department of Statistics
DRR	Disaster Reduction Unit
DSE	Display Screen Equipment
DST	Dead Sea Transform
DTS	Distributed Temperature Sensing
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
EDCO	Electricity Distribution Company
EDFI	European Development Finance Institutions
EDNA	Environmental DNA
EEC	European Economic Community
EEZ	Exclusive Economic Zone
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EN	Endangered
Engicon	Engineering Consulting Company
EPA	Environmental Protection Agency
EPC	Engineering, Procurement, and Construction

ERD	Energy Recovery Devices
ESAP	Environmental and Social Action Plan
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESPP	Environmental and Social Policy and Procedures
ESR	Environmental and Social Requirement
EU	European Union
FAO	Food and Agriculture Organisation
FAT	Factory Acceptance Testing
FES	Friedrich-Ebert-Stiftung
FPIC	Free, Prior, and Informed Consent
FSRU	Floating Storage and Regasification Unit
FSU	Floating Storage Unit
GAM	Greater Amman Municipality
GBIF	Global Biodiversity Information Facility
GBV	Gender-based Violence
GBVH	Gender-based Violence and Harassment
GCF	Green Climate Fund
GCR	Ground Coverage Ratio
GDP	Gross Domestic Product
GFCR	Global Fund for Coral Reefs

GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse Gas
GI	Geographical Indication
GIIP	Good International Industry Practice
GIP	Good Industry Practice
GIS	Geographical Information Systems
GIS	Gas Insulated Switchgear
GIZ	Gesellschaft für Internationale Zusammenarbeit
GLTN	Global Land Tool Network
GN	Guidance Note
GoA	Gulf of Aqaba
GoJ	Government of Jordan
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GRM	Grievance Redress Mechanism
GRP	Glass Reinforced Plastic
GWP	Global Warming Potential
HCD	Higher Council for the Rights of Persons with Disabilities
HCS	High Carbon Stock
HCV	High Conservation Value
HDD	Horizontal Directional Drilling
HDPE	High-Density Polyethylene
HF	High-Frequency
HFDB	Hashemite Fund for the Development of the Jordanian Badia
HHV	Higher Heating Value

HIA	Heritage Impact Assessment
HPP	High-Pressure Pump
HPR	High Point Reservoir
HSSE	Health, Safety, Security and Environment
HV	High Voltage
HVAC	Heating, Ventilation and Air Conditioning
IALA	International Organisation for Marine Aids to Navigation
IAQM	Institute of Air Quality Management
IBA	Important Bird and Biodiversity Area
IBAT	Integrated Biodiversity Assessment Tool
ICCP	Impressed Current Cathodic Protection
ICH	Intangible Cultural Heritage
ICHIA	Intangible Cultural Heritage Impact Assessment
ICICH	International Scientific Committee on Intangible Cultural Heritage
ICOMOS	International Council on Monuments and Sites
IEEs	Initial Environmental Examinations
IFC	International Finance Corporation
IFI	International Finance Institution
IGO	Intergovernmental Organisations
ILO	International Labour Organisation
ILUC	Internal Line Up Clamp
IMCA	International Marine Contractors Association
IMMA	Important Marine Mammal Areas
IMO	International Maritime Organisation
IMTA	Important Marine Turtle Area

IPCC	Intergovernmental Panel on Climate Change
IPS	Intake Pumping System
ISEP	Institute of Sustainability and Environmental Professionals
ISO	International Organisation for Standardisation
ISPS	International Ship and Port Facility Security Code
ISRA	Important Shark and Ray Areas
IT	Information Technology
IUCN	International Union for Conservation of Nature
IALA	International Organisation for Marine Aids to Navigation
JBW	Jordan Bird Watch
JCC	Jordan Cooperative Corporation
JD	Jordanian Dinar
JEMV	Jordan Economic Modernisation Vision
JEPCO	Jordanian Electrical Power Company
JI	Joint Implementation
JICA	carried out by Japan International Cooperation Agency
JIPC	Jordan Industrial Ports Company
JMA	Jordan Maritime Authority
JMD	Jordan Metrology Department
JNCC	Joint Nature Conservation Committee
JNCW	Jordanian National Commission for Women
JNPA	Jordan National Protected Areas Network
JOTC	Jordan Oil Terminals Company
JPMC	Jordan Phosphate Mines Company
JRV	Jordan Rift Valley

JS	Jordanian Standard
JSC	Joint Services Council
JSO	Jordan Seismological Observatory
JVF	Jordan Valley Fisheries
KBA	Key Biodiversity Area
KEMAPCO	Kemira Arab Potash Company
KSA	Kingdom of Saudi Arabia
LAC	Local Advisory Committee
LAT	Lowest Astronomical Tide
LC	Least Concern
LESA	Lenders Environmental and Social Advisors
LF	Low-Frequency
LHV	Lower Heating Value
LIDAR	Light Detection and Ranging
LMO	Living Modified Organisms
LNG	Liquefied Natural Gas
LNTP	Limited Notice to Proceed
LOI	Loss on Ignition
LRP	Livelihood Restoration Plan
LSI	Langelier Saturation Index
LVIA	Landscape and Visual Impact Assessment
MARPOL	International Convention for the Prevention of Pollution from Ships
MCM	Million Cubic Metres
MCR	Main Control Room
MDA	Maritime Domain Awareness

MEGA-J	Middle Eastern Geodatabase for Antiquities, Jordan
MEMR	Ministry of Energy and Mineral Resources
MEP	Mediterranean Action Plan
MHWM	Mean High Water Mark
MMA	Marine Mammal Area
MMO	Marine Mammal Observation
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MOEnv	Ministry of Environment
MoEnv	Ministry of Environment
MoI	Ministry of Interior
MoL	Ministry of Labour
MoLA	Ministry of Local Administration
MoSD	Ministry of Social Development
MPA	Marine Protected Area
MPN	Most Probable Number
MPWH	Ministry of Public Works and Housing
MS	Microsoft
MSB	Migratory Soaring Birds
MSL	Mean Sea Level
MSS	Marine Science Station
MSW	Municipal Solid Waste
MVA	Megavolt-Ampere
MWI	Ministry of Water and Irrigation
NAAQS	National Ambient Air Quality Standards

NAF	National Aid Fund
NASA	National Aeronautics and Space Administration
NCHR	National Centre for Human Rights
NCP	National Conveyance Project
NCPC	National Carrier Project Company
NCSCM	National Centre for Security and Crisis Management
NDC	Nationally Determined Contribution
NDT	Non-Disturbed Testing
NE	North East
NEP	National Employment Program
NEPCO	National Electrical Power Company
NG	Net Gain
NGO	Non-Governmental Organisation
NGT	Neutral Grounding Transformers
NMFS	National Marine Fisheries Service
NMP	National Monitoring Program
NNE	North-North-East
NNL	No Net Loss
NNW	North-North-West
NOAA	National Oceanic and Atmospheric Administration
NOEs	Notices of Energisation
NRW	Non-revenue Water
NT	Near Threatened
NTS	Non-Technical Summary
NAAQS	National Ambient Air Quality Standards

O&M	Operation and Maintenance
OECM	Other Effective Area-Based Conservation Measures
OHS	Occupational Health and Safety
OHSAS	Occupational Health and Safety Assessment Series
OHTL	Overhead Transmission Line
OP	Optional Protocol
ORU	Onshore Regasification Unit
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
OUV	Outstanding Universal Value
PA	Protected Area
PAH	Polycyclic Aromatic Hydrocarbons
PAP	Project Affected Persons
PBF	Priority Biodiversity Feature
PCC	Plain Cement Concrete
PCCP	Pre-stressed Concrete Cylinder Pipe
PCFM	Project Construction and Facilities Management
PCFM	Post Fatality Monitoring
PCOD	Project Commercial Operation Date
PDTRA	Petra Development and Tourism Region Authority
PERSGA	Regional Organisation for the Conservation of the Environment of the Red Sea and Gulf of Aden
PFM	Pipe Facing Machine
PIC	Prior Informed Consent
PLC	Programmable Logic Controller
PM	Particulate Matter

PMR	Partnership for Market Readiness
POWO	Plants of the World Online
PPC	Power Plant Controller
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PR	Performance Requirement
PROPARCO	Promotion et Participation pour la Coopération Économique
PRS	Pressure Relief System
PS	Performance Standard
PS ADC	Pumping Station Amman Dev Corridor
PSD	Public Security Directorate
PTS	Permanent Threshold Shift
PV	Photovoltaic
QAIA	Queen Alia International Airport
RAP	Resettlement Action Plan
RCIA	Rapid Cumulative Impact Assessment
RDB	Red Data Book
RE	Renewable Energy
REMPEC	Regional Marine Pollution Emergency Response Centre
RFC	Royal Filming Commission
RFP	Resettlement Policy Framework
RGT	Regulating Tank
RICCAR	Regional Initiative for the Assessment of Climate Change
RJNF	Royal Jordanian Naval Force
RMS	Royal Medical Services

RO	Reverse Osmosis
Ro-Ro	Roll-on, Roll-off
ROV	Remotely Operated Vehicle
RoW	Right of Way
RPF	Resettlement Policy Framework
RSCN	Royal Society for the Conservation of Nature
RSDS	Red Sea-Dead Sea
RSDSC	Red Sea-Dead Sea Conveyance
RSMPP	Red Sea Marine Peace Park
RSS	Royal Scientific Society
RUSLE	Revised Universal Soil Loss Equation
SAC	Special Areas of Conservation
SAR	Search and Rescue
SAT	Site Acceptance Testing
SBS	Sodium Bisulphate
SCADA	Supervisory Control and Data Acquisition
SDGs	Sustainable Development Goals
SDI	Silt Density Index
SDII	Simple Precipitation Intensity Index
SEAH	Sexual Exploitation and Abuse and Harassment
SEL	Sound Exposure Levels
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
SLR	Sea Level Rise
SNG	Subnational Government

SOLAS	Safety of Life at Sea
SPL	Sound Pressure Levels
SPV	Special Purpose Vehicle
SSC	Social Security Corporation
SSC	Species Survival Commission
SSC	Social Security Coverage
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
SWRO	Seawater Reverse Osmosis
SWT	Seawater Temperature
SAC	Special Areas of Conservation
TBC	The Biodiversity Consultancy
TCFD	Taskforce on Climate-related Financial Disclosures
TDS	Total Dissolved Solids
TK	Traditional Knowledge
TOR	Terms of Reference
TTS	Temporary Threshold Shift
TWL	Total Water Level
UAE	United Arab Emirates
UHI	Urban Heat Island
UJ	University of Jordan
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme

UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations Refugee Agency
US	United States
US NMFS	United States National Marine Fisheries Service
USAID	United States Agency for International Development
UV	Ultraviolet
VECs	Valued Environmental and Social Components
VHF	Very High Frequency
VP	Vantage points
VSD	Variable Speed Driven
VTS	Vessel Traffic Service
VU	Vulnerable
WAJ	Water Authority Jordan
WBGT	Wet Bulb Globe Temperature
WFO	World Flora Online
WHO	World Health Organisation
WHS	World Heritage Site
WRPA	Wadi Rum Protected Area
WWF	World Wide Fund for Nature
WWTP	Wastewater Treatment Plant
YU	Yarmouk University
YWC	Yarmouk Water Company

Aqaba-Amman Water Desalination and Conveyance (AAWDC)

Chapter 1: Introduction

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1 Introduction

1.1 Project Overview

Jordan has one of the lowest levels of water availability per capita in the world with climate change impacts and population increase predicted to cause further decline in water availability. The Ministry of Water and Irrigation (MWI) launched the Aqaba-Amman Water Desalination and Conveyance (AAWDC) Project (the Project) as a major initiative to contribute to bridging the growing water-demand supply gap. The Project aligns with the objectives and targets of the Jordanian National Water Strategy 2016-2025 (MWI, 2016) and National Water Strategy 2023-2040 (MWI, 2023).

The AAWDC Project is designed to generate 300 million cubic meters (MCM) of desalinated water per year, supplying Amman (250MCM per year) and Aqaba (50MCM per year) from a new desalination plant located near Aqaba. An overview of the Project scope is shown in Figure 1-1.

The Project comprises the following main components:

1. **Desalination Plant and Intake/Outfall Facilities:** new desalination facilities located within the Aqaba Special Economic Zone including:
    - Marine intake infrastructure, onshore pumping and transfer facilities to extract seawater from the Gulf of Aqaba and deliver the extracted seawater to a new desalination plant
    - New seawater reverse osmosis (SWRO) desalination plant located within the Aqaba Industrial Zone, designed to produce desalinated water that meets applicable national drinking water quality standards
    - Marine outfall infrastructure to discharge aqueous desalination process by-products (e.g. brine), that will be pre-treated to comply with applicable environmental standards prior to discharge to the Gulf of Aqaba

The intake and outfall facilities design comprises a new intake channel structure, an outfall pipeline, an Intake Pumping Station (IPS) located on the coastline with intake and outfall transfer pipelines between the IPS and SWRO site.

2. **Conveyance System:** a buried pipeline approximately 438km long to convey desalinated water from the desalination plant to the existing reservoirs of Abu Alanda and Al Muntazah near Amman. To support pumping of water and control the pressure within the pipeline, the conveyance system design includes:
    - Four pumping stations (booster stations BPS1, BPS2 and BPS3 and pumping station PS ADC)
    - Two regulating tank facilities (RGT1 and RGT3) and one break pressure tank (BPT)

The first three pumping stations are designed to lift the water from the desalination plant to regulating tank 3 (RGT3). The water then flows down a gravity section for approximately 250km until the fourth pumping station (PS ADC) near Amman, from where it is sent to two existing reservoirs (see Figure 1-2). The pipeline is designed to run parallel to the existing Disi Conveyor[1] and the Desert Highway for most of its route.

3. **Renewable Energy Facility:** a new solar photovoltaic (PV) power plant and supporting electrical substation located approximately 5km to the east of Al-Quwayrah (shown as “RE2” within Figure 1-1).

[1] Also known as South-North Water Conveyor. Designed to supply water from the Disi aquifer to Amman.

The AAWDC Project will use electricity from this solar power plant, as well as from the national electricity transmission and generation companies (National Electrical Power Company (NEPCO), Jordanian Electrical Power Company (JEPCO) and Electricity Distribution Company (EDCO)) through long-term power purchase agreements.

Associated Facilities include:

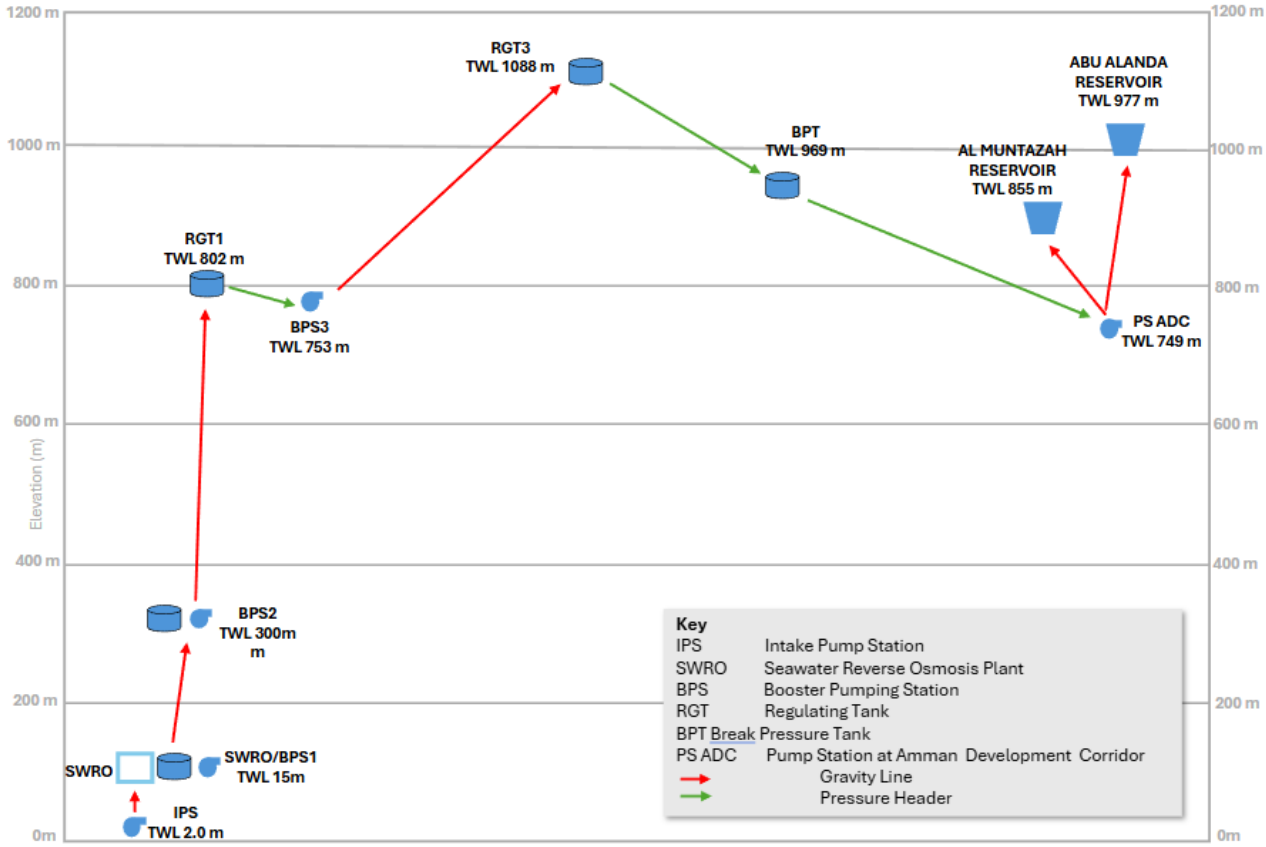
- **New Electrical Transmission Lines and Substation:** To be built and operated by NEPCO and EDCO. New electrical transmission lines will include new overhead transmission lines (OHTL) to connect the Renewable Energy Facility to the SWRO desalination plant and install grid connections including connections to a new substation to be located at Aqaba. New substations will also be constructed at the IPS and BPS2, BPS3 and PS ADC
- **Existing Abu Alanda and Al Muntazah Storage Reservoir Upgrades:** At the time of writing the design of required upgrades to the existing water storage reservoirs, if any, is not finalised. However, it is most probable that, at least, the Al Muntazah storage reservoir will require expansion

At the time of writing, works associated with the Project are progressing under a Limited Notice to Proceed (LNTP) instruction. The scope of this instruction includes surveys and site investigations, design and engineering, and procurement and sourcing activities.

Based on the current schedule, it is anticipated that the Project construction activities will commence in 2Q 2026 with the commissioning of the completed system. Commencement of operations is planned for 2030.

Figure 1-1 Location of the AAWDC Project Facilities

Figure 1-2 AAWDC Project Schematic Showing Key Conveyance Facilities and Elevations



1.2 Project Developer and Lenders

The Project will be implemented as a Public Private Partnership (PPP) with a Build Own Operate Transfer (BOT) Contractor responsible for the financing, construction and operation of the Project.

The Consortium of Meridiam and Suez with their Contractors (Engineering, Procurement, and Construction (EPC) Contractors and Operation and Maintenance (O&M) Contractors) (the "BOT Contractor" or the "Developer") were appointed Preferred Bidder by the MWI of the Government of Jordan in relation to the Project in September 2024. The BOT Contractor established the Special Purpose Vehicle (SPV) for the local Project Company under the name the "National Carrier Project Company" (NCPC). The Commercial agreement was signed between the Government of Jordan (GoJ) represented by the MWI and the "National Carrier Project Company" in January 2025, covering execution of the BOT scope over a period of 30 years.

The Project will be financed through a mix of debt, equity, and GoJ subsidies. Equity financing will be provided by Meridiam (90%) and Suez (10%). Debt financing will be provided by a large pool of lenders led by a number of development finance institutions (DFIs) and joined by local, regional and international commercial lenders and export credit agencies. The Key Prospective DFIs (the "Lenders") comprise the International Finance Corporation (IFC, part of World Bank group), the European Bank for Reconstruction and Development (EBRD), the US Development Finance Corporation (DFC), the European Investment Bank (EIB), the Green Climate Fund (GCF) and PROPARCO (a subsidiary of the French Development Agency (AFD)).

1.3 Objectives of the Environmental and Social Impact Assessment

This document is the 2025 Environmental and Social Impact Assessment (ESIA) report for the Project. The objectives of the ESIA are to:

- Ensure that environmental and social considerations are integrated into the project design, construction and operation
- Enable environmental and social impacts to be identified, quantified and assessed and appropriate avoidance and mitigation measures proposed
- Ensure that applicable national and international legal requirements, national and lender standards and expectations are addressed and embedded in the project design and execution
- Ensure relevant stakeholders are consulted throughout the project and their concerns are addressed

An initial ESIA (Tetra Tech, 2022) was prepared in 2022 to assess the environmental and social impacts of the original concept design with funding and advisory support provided by the European Investment Bank (EIB). The 2022 ESIA report was prepared by Tetra Tech International Development and Engicon in accordance with national legislation and EIB requirements and subsequently approved by the Jordanian Ministry of Environment (MOEnv), and the Aqaba Special Economic Zone Authority (ASEZA). Updates were subsequently made to the document in 2025 to reflect the change in location of the PS ADC facility. The updated 2022 ESIA report and its Annexes[2] were disclosed on EIB website (https://www.eib.org/en/Projects/pipelines/all/20190712).

In 2025 NCPC appointed environmental contractors (Energies Group and ECO Consult) to revise the 2022 ESIA to assess the updated Project design resulting from the changes and refinements since 2022 (including those under the LNTP programme) and to address and embed the environmental, social and governance requirements of the Lenders (refer to Section 1.2 above). Applicable lender standards and policies include the World Bank, IFC, US DFC, EIB and EBRD policies, standards and guidance, AFD Exclusion List and GCF Environmental and Social policies.

The full 2025 AAWDC Project ESIA disclosure package, developed to meet lender requirements and standards, comprises the following:

- 2025 AAWDC Project ESIA Non-Technical Summary (NTS)
- 2025 AAWDC Project ESIA Report
- Project Stakeholder Engagement Plan (SEP)
- Resettlement Policy Framework (RFP)
- Environmental and Social Mitigation and Monitoring Plan (ESMMP) and supporting Frameworks

In addition to the 2022 ESIA, separate interim updates have been prepared covering the change of SWRO desalination plant location and assessment of the Project Renewable Energy Facilities and associated overhead transmission line impacts. This 2025 AAWDC Project ESIA report consolidates these E&S impact studies and incorporates the findings of the Project SEP and RFP.

[2] Note: The 2022 ESIA Annexes include AAWDC Project Stakeholder Engagement Plan (SEP) (2022), AAWDC Project Land Acquisition and Resettlement Policy Framework (2022) and AAWDC Project Environmental and Social Management Plan (2022)

1.4 ESIA Report Structure

Table 1-1 provides a summary of the 2025 AAWDC Project ESIA report structure and content.

Table 1-1: Structure and Content of the 2025 AAWDC Project ESIA Report

Section/Chapter	Content
Non-Technical Summary	A summary of the ESIA written in a way that can be understood by most stakeholders
Abbreviations and Acronyms	A list of the abbreviations and acronyms used in the ESIA
Glossary	A glossary of terms
1. Introduction	An overview of AAWDC Project, ESIA objectives, ESIA team and ESIA Report structure
2. Policy, Legislation, Regulation and Standards	A summary of applicable national legislation and guidance, ratified international convention requirements that Jordan is party to, lender requirements and expectations and how these are addressed within the ESIA.
3. Impact Identification and Assessment Methodology	A description of the methodology used for the impact assessment including definition of the study area and assessment approach.
4. Project Alternatives	A description and comparative review of the alternative locations/routing, technology options and concept design refinements considered for the AAWDC Project
5. Project Description	A detailed description of the AAWDC Project, focused on the current design basis
6. Environmental Description	A description of environmental conditions in the areas potentially affected by the Project.
7. Social Description	A description of social conditions in the area potentially affected by the Project
8. Stakeholder Engagement	An overview of stakeholder engagement activities undertaken for the AAWDC Project and the issues and concerns raised.
9. Environmental and Social Impact Assessment, Mitigation and Monitoring	An assessment of potential environmental and social impacts associated with the construction and operation of the AAWDC Project facilities
10. Cumulative Impact Assessment, Mitigation and Monitoring	An assessment of potential cumulative impacts associated with the construction and operation of the AAWDC Project facilities
11. Transboundary Impact Assessment, Mitigation and Monitoring	An assessment of potential transboundary impacts associated with the AAWDC Project activities

Section/Chapter	Content
12. Climate Resilience and Adaptation and GHG Emissions Assessment	An assessment of existing climate risks and vulnerabilities and the identification of additional adaptation measures to be incorporated into the AAWDC Project
Appendices: Supporting studies and documents including field survey reports, modelling studies and Critical Habitat Assessments (marine and terrestrial)	

1.5 ESIA Team

The details of the 2025 AAWDC Project ESIA Team are provided in Table 1-2.

Table 1-2: 2025 AAWDC Project ESIA Team

Team member	Role
Energies Group	ESIA Project Manager and Lead Authors Terrestrial ecology, marine ecology, GIS, contaminated land, hydrology and flood risk, climate risk and greenhouse gas, air quality, noise and light specialists
ECO Consult	Local ESIA Manager Local terrestrial ecology, marine ecology, GIS, contaminated land, hydrology and flood risk, climate risk and greenhouse gas, air quality, noise and light, social, stakeholder, resettlement and cultural heritage specialists Local Social, Stakeholder Consultation and Resettlement Specialists Local Cultural Heritage, Bedouin and Resettlement Specialists
Katal Consulting	Social and Stakeholder Consultation Specialist
Frederic Giovannetti	Resettlement Specialist
Chronicle Heritage	Cultural Heritage Specialist
The Biodiversity Consultancy	Bird Specialist
Envision	Marine Survey Specialist
Marine Science Station (MSS)	Local Marine Survey Specialist
Xodus	Marine Environmental Risk Specialist
Deltares	Marine Modelling Specialist
Metrica	Air Quality, Dust, Noise, Vibration, Glint and Glare Specialist
Vinci Construction Grands Projets (leader), Orascom Construction, Archirodon, Suez International, The Arab Contractors	Project Engineering, Procurement and Construction (EPC) Contractors
Artelia and Sajdi	Owners Engineer
National Carrier Project Company (NCPC)	BOT Contractor (comprises 90% Meridiam and 10% Suez).

Team member	Role
Ministry of Water and Irrigation (MWI)	Client and owner

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