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ACRONYMS AND ABBREVIATIONS

10YFP	Ten Year Framework of Programmes on Sustainable Consumption and Production	AMU	Arab Maghreb Union
AAAID	Arab Authority for Agricultural Investment and Development	ANME	National Agency for Energy Management
ABSP	Agricultural Biotechnology Support Programme	AoA	Agreement on Agriculture (WTO Uruguay Round)
AC	Air-Conditioning	AOAD	Arab Organization for Agricultural Development
AC	Alternating Current	AP	Advanced Passive reactor
ACG	Arab Coordination Group	AP	Additional Protocol
ACCSAD	Arabic Centre for the Studies of Arid Zones and Drylands	API	Arab Planning Institute
ACU	Arab Custom Union	APR	Advanced Power Reactor
ADA	Arriyadh Development Authority (Riyadh)	APRUE	National Agency for the Promotion and Rationalization of Use of Energy
ADCO	Abu Dhabi Company for Onshore Oil Operations	AREE	Aqaba Residence Energy Efficiency
ADEREE	The National Agency for Energy Efficiency and the Development of Renewable Energy	ARWR	Actual Renewable Water Resources
ADFD	Abu Dhabi Fund for Development	ASABE	American Society of Agricultural and Biological Engineers
ADR	Alternative Disputes Resolution	ASDRR	Arab Strategy for Disaster Risk Reduction
ADSG	Abu Dhabi Sustainability Group	ASFSD	Arab Strategic Framework for Sustainable Development
ADWEA	Abu Dhabi Water & Electricity Authority	ASR	Aquifer Storage and Recovery
AED	United Arab Emirates Dirham	AU	African Union
AEPC	African Environmental Protection Commission	AUB	American University of Beirut
AEPS	Arctic Environmental Protection Strategy	AUM	American University of Madaba (Jordan)
AEWA	African-Eurasian Waterbird Agreement	AVL	Automatic Vehicle Location
AFED	Arab Forum for Environment and Development	AWA	Arab Water Academy
AFESD	Arab Fund for Economic and Social Development	AWC	Arab Water Council
AG	Associated Gas	AWCUA	Arab Water Countries Utilities Association
AGDP	Agricultural Gross Domestic Product	b/d	Barrels per Day
AGERI	Agricultural Genetic Engineering Institute	BADEA	Arab Bank for Economic Development in Africa
AGP	Arab Gas Pipeline	BAU	Business as Usual
AGU	Arabian Gulf University	Bbl	Oil Barrel
AHD	Aswan High Dam	BCH	Biosafety Clearing House
AHDR	Arab Human Development Report	Bcm	Billion cubic meters
AIA	Advance Informed Agreement	BCWUA	Branch Canal Water User Association
AIDS	Acquired Immunodeficiency Syndrome	BDB	Beyond Design Basis
AIECGC	Arab Investment and Export Credit Guarantee Corporation	BDL	Central Bank of Lebanon
AKTC	Aga Khan Trust for Culture	BEPS	Base Erosion And Profit Shifting
Al	Aluminum	BGR	German Geological Survey
ALBA	Aluminium Bahrain	BMP	Best Management Practices
ALECSO	Arab League Educational, Cultural, and Scientific Organization	BMZ	German Federal Ministry of Economic Cooperation and Development
ALMEE	Lebanese Association for Energy Saving & Environment	BNEF	Bloomberg New Energy Finance
ALOA	Association for Lebanese Organic Agriculture	BOD	Biological Oxygen Demand
AMCEN	African Ministerial Conference on the Environment	boe	Barrels of Oil Equivalent
AMF	Arab Monetary Fund	BOO	Build-Own-Operate
		BOOT	Build Own Operate Transfer
		BOT	Build Operate Transfer
		BP	British Petroleum

BREEAM	Building Research Establishment Environmental Assessment Method	CLO	Compost-Like-Output
BRO	Brackish Water Reverse Osmosis	CLRTAP	Convention on Long-Range Transboundary Air Pollution
BRS	ARZ Building Rating System		
BSI	Biome Solar Industry	CM	Carbon Management
BU	Boston University	CMI	Community Marketing, Inc.
C&D	Construction and Demolition	CMS	Convention on the Conservation of Migratory Species of Wild Animals
C&I	Commercial and Industrial		
CA	Conservation Agriculture	CNA	Competent National Authority
CAB	Centre for Agriculture and Biosciences	CNCA	Public Agricultural Bank
CAGR	Compound Annual Growth Rate	CNG (CNS)	Compressed Natural Gas
CAIP	Cairo Air Improvement Project	CO	Carbon Monoxide
CAMP	Coastal Area Management Project	CO ₂	Carbon Dioxide
CAMRE	Council of Arab Ministers Responsible for the Environment	CO _{2e/eq}	CO ₂ equivalent
CAN	Competent National Authority	COD	Chemical Oxygen Demand
CAP	Compliance Assistance Programme	COP	Conference of the Parties
CAPEX	Capital Expenditures	CoP	Community of Practice
CBC	Community-Based Conservation	CPB	Cartagena Protocol on Biosafety
CBD	Convention on Biological Diversity	CPC	Calcined Petroleum Coke
CBO	Community-Based Organization	CRS	Center for Remote Sensing
CBSE	Center for the Study of the Built Environment (Jordan)	CSA	City Strategic Agenda
CCA	Climate Change Adaptation	CSD	UN Commission on Sustainable Development
CCAP	Climate Change Action Plan	CSEM	Centre Suisse d'Electronique et de Microtechnique
CCGT	Combined Cycle Gas Turbine	CSO	Civil society organizations
CCS	Carbon Capture and Sequestration	CSP	Concentrated Solar Power
CCS	Carbon Capture and Storage	CSR	Corporate Social Responsibility
CCS CO ₂	Capture and Storage	CTAB	Technical Center of Organic Agriculture
CCUS	Carbon Capture, Usage and Storage	cum	Cubic meters
CD	Compact Disk	CZIMP	Coastal Zone Integrated Management Plan
CDM	Clean Development Mechanism	DAC	Development Assistance Committee
CDRs	Certified Emissions Reductions	DALYs	Disability-Adjusted Life Years
CEDARE	Centre for Environment and Development for the Arab Region and Europe	DBFO	Design Build Finance Operate
CEDRO	Country Energy Efficiency and Renewable Energy Demonstration Project for the Recovery of Lebanon	DBO	Design-Build-Operate
CEIT	Countries with Economies in Transition	DC	Direct current
CEO	Chief Executive Officer	DAC	Development Assistance Committee
CEP	Coefficient of Performance	DED	Dubai Economic Department
CERES	Coalition for Environmentally Responsible Economics	DASI	Deloitte Accelerator for Social Innovation in the Middle East
CERs	Credits	DCFs	Directed Credit Funds
CFA	Cooperative Framework Agreement	DEFRA	Department for Environment, Food and Rural Affairs (UK)
CFC	Chloro-Fluoro-Carbon	DEM	Digital Elevation Model
CFL	Compact Fluorescent Light	DESA	Department of Economic and Social Affairs
CFL	Compact Fluorescent Lamp	DEWA	Dubai Electricity and Water Authority
CG	Coordination Groups	DFID	UK Department for International Development
CGE	Computable General Equilibrium	DHW	Domestic Hot Water
CGIAR	Consultative Group on International Agricultural Research	DII	DESERTEC Industrial Initiative
CH4	Methane	DMN	Moroccan National Meteorological Office
CHN	Centre Hospitalier du Nord -Lebanon	DNE	Daily News Egypt
CHP	Combined Heat and Power	DOE	United States Department of Energy
CILSS	Permanent Interstate Committee for Drought Control in the Sahel	DRM	Disaster Risk Management
CIRAD	Agricultural Research for Development	DRR	Disaster Risk Reduction
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	DSIRE	Database of State Incentives for Renewables & Efficiency
CIWM	Chartered Institution of Wastes Management	DTC	Dubai Transport Corporation
CIHEAM	International Centre for Advanced Mediterranean Agronomic Studies	DTCM	Dubai Department for Tourism and Commerce Marketing
		DTIE	UNEP Division of Technology, Industry, and Economics
		DTO	Dublin Transportation Office

DUBAL	Dubai Aluminum Company Limited	EWRA	Egyptian Water Regulatory Agency
E3G	Third Generation Environmentalism	EWS	Emirates Wildlife Society
EAD	Environment Agency Abu Dhabi	FACE	Free Air Carbon Enrichment
EBRD	European Bank for Reconstruction and Development	FANR	The Federal Authority for Nuclear Regulation (UAE)
ECA	Economic Commission for Africa	FAO	Food and Agriculture Organization of the United Nations
ECAs	Energy Conversion Agreements	FDI	Foreign Direct Investment
ECE	Economic Commission for Europe	FEBEA	European Federation of Ethical and Alternative Banks
ED	Electrodialysis	FEMIP	Facility for Euro-Mediterranean Investment and Partnership
EDCO	Electricity Distribution Company	FFEM	French Fund for Global Environment
EDF	Environmental Defense Fund	FiBL	Research Institute of Organic Agriculture
EDL	Électricité du Liban	FIFA	Fédération Internationale de Football Association
EDM	Al- BiaWal- Tanmia - Environment & Development magazine	FIT	Feed-in-Tariff
EE	Energy Efficiency	FL&W	Food Lost and Wasted
EEAA	Egyptian Environmental Affairs Agency	FOEME	Friends of the Earth Middle East
EEHC	Egyptian Electricity Holding Company	FPEC	Future Pioneers for Empowering Communities
EPPP	Egyptian Environmental Policy Program	FSP	Food Security Program
EF	Ecological Footprint	FSU	Former Soviet Union
EGBC	Egyptian Green Building Council	F-T	Fischer-Tropsch process
EGPC	Egyptian General Petroleum Corporation	FTE	Full Time Equivalent
EGS	Environmental Goods and Services	FTIAB	Packaging and Newspaper Collection Service (Sweden)
EIA	Energy Information Administration	G7	Group of Seven: Canada, France, Germany, Italy, Japan, United Kingdom, United States
EIA	Environmental Impact Assessment	G8	Group of Eight: Canada, France, Germany, Italy, Japan, Russian Federation, United Kingdom, United States
EITI	Extractive Industries Transparency Initiative	GAM	Greater Amman Municipality
EIU	Economist Intelligence Unit	GAP	Good Agricultural Practices
EJ	Electro Joules	GAPs	Good Agricultural Practices
EMA	Europe, the Middle East, and Africa	GAS	Guarani Aquifer System
EMAL	Emirates Aluminium Company Limited	GATT	General Agreement on Tariffs and Trade
EMAS	Eco-Management and Audit Scheme	GAVI	Global Alliance for Vaccine and Immunization
EMR	Eastern Mediterranean Region	GBC	Green Building Council
EMRO	WHO Regional Office for the Eastern Mediterranean	GBIF	Global Biodiversity Information Facility
EMS	Environmental Management System	GCC	Gulf Cooperation Council
ENEC	Emirates Nuclear Energy Corporation	GCF	Green Climate Fund
ENPI	European Neighborhood and Partnership Instrument	GCM	General Circulation Model
ENSO	El Niño-Southern Oscillation	GCOS	Global Climate Observing System
EOR	Enhanced Oil Recovery	GDP	Gross Domestic Product
EPA	US Environmental Protection Agency	GE	General Electric
EPC	Engineering Procurement and Construction	GEFCF	Gas Exporting Countries Forum
EPD	European Patent Office	GEF	Global Environment Facility
EPDRB	Environmental Program for the Danube River Basin	GEMS	Global Environment Monitoring System
EPI	Environment Performance Index	GEO	Global Environment Outlook
EPSA	Exploration and Production Sharing Agreement	GERD	Gross Domestic Expenditure on Research and Development
ESAUN	Department of Economic and Social Affairs	GFEI	Global Fuel Economy Initiative
ESBM	Ecosystem-Based Management	Gfs	Green Funds
ESCO	Energy Service Companies	GFU	Global Facilitation Unit for Underutilized Species
ESCOs	Energy Service Companies	GGGI	Global Green Growth Institute
ESCWA	United Nations Economic and Social Commission for Western Asia	Gha	Global hectare
ESG	Environmental, Social and Governance	GHGs	Greenhouse Gases
ESDU	Environment and Sustainable Development Unit	GIPB	Global Partnership Initiative for Plant Breeding Capacity Building
ESI	Environment Sustainability Index	GIS	Geographical Information Systems
ESMAP	World Bank Energy Sector Management Assistance Program	GIWA	Global International Waters Assessment
ETFs	Earmarked Tax Funds	GJ	GigaJoule
ETM	Enhanced Thematic Mapper	GLASOD	Global Assessment of Soil Degradation
EU	European Union	GLCA	Global Leadership for Climate Action
EU ETS	European Union Emission Trading System		
EVI	Environmental Vulnerability Index		

GM	Genetically Modified	ICT	Information and Communication Technology
GME	Gazoduc Maghreb Europe	ICZM	Integrated Coastal Zone Management
GMEF	Global Ministerial Environment Forum	IDA	International Desalination Association
GMO	Genetically Modified Organism	IDB	Islamic Development Bank
GMP	Green Moroccan Plan	IDECO	Irbid District Electricity Company
GNI	Gross National Income	IDP	Internally Displaced Persons
GNP	Gross National Product	IDRC	International Development Research Center
GPC	Green petroleum Coke	IDSC	Information and Decision Support Center
GPEDC	Global Partnership for Effective Development Cooperation	IEA	International Energy Agency
GPS	Global Positioning System	IEADSM	International Energy Agency Demand-side Management
GPRS	Green Pyramid Rating System	IEEE	Institute of Electrical and Electronic Engineers
GRI	Global Reporting Initiative	IEEF	Inclusive Economic Empowerment Finance Facility
GRID	Global Resource Information Database	IFA	International Fertilizer Industry Association
GSDP	General Secretariat for Development planning-Qatar	IFAD	International Fund for Agricultural Development
GSI IISD	Global Subsidies Initiative	IFC	International Finance Corporation
GSLAS	General Secretariat of League of Arab States	IFOAM	International Federation of Organic Agriculture Movements
GSR	Global Status Report		
Gt	Gigaton	IFPRI	International Food Policy Research Institute
GTZ	German Technical Cooperation (Gesellschaft für Technische Zusamm)	IGCC	Integrated Gasifier Combined Cycle
GVC	Civil Volunteers' Group (Italy)	IHP	International Hydrology Program
GW	Gigawatt	IIED	International Institute for Environment and Development
GW	Greywater	IIIEE	Lund University International Institute for Industrial Environmental Economics
GW _e	Gigawatt electrical	IIIP	Integrated Irrigation Improvement Project
GW _i	Global Water Intelligence	IIP	Irrigation Improvement Project
GWP	Global Warming Potential	IISD	International Institute for Sustainable Development
GWP	Global Water Partnership	ILO	International Labour Organization
GW _{th}	Gigawatt-thermal	ILW	Intermediate Level waste
ha	Hectares	IMC	Istituto Mediterraneo Di Certificazione
HACCP	Hazardous Analysis and Critical Control Points	IMF	International Monetary Fund
HCFC	hydrochlorofluorocarbons	IMO	International Maritime Organization
HDI	Human Development Index	INDC	Intended Nationally Determined Contributions
HFA	Hyogo Framework for Action	InWEnt	Capacity Building International-Germany
HFCs	Hydrofluorocarbons	IO	Input-Output
HFO	Heavy Fuel Oil	IOC	International Oil Companies
HICs	High-Income Countries	IPCC	Intergovernmental Panel on Climate Change
HIV	Human Immunodeficiency Virus	IPF	Intergovernmental Panel on Forests
HLW	High Level Waste	IPM	Integrated Pest Management
HNWI	High Net Worth Individuals	IPNS	Integrated Plant Nutrient System
HPMPs	HCFC phase-out management plans	IPP	Independent Power Producer
HVAC	Heating, Ventilation, and Air-Conditioning	IPR	Intellectual Property Rights
I/M	Inspection and Maintenance	IPTRID	International Program for Technology and Research in Irrigation and Drainage
IAASTD	International Assessment of Agricultural Knowledge Science and Technology for Development	IRENA	International Renewable Energy Agency
IAEA	International Atomic Energy Agency	IRESEN	Institut de Recherche en Energie Solaire et en Energies Nouvelles
IAS	Irrigation Advisory Service		
IC	Irrigation Council	IRR	Internal Rate Of Return
ICAM	Integrated Coastal Area Management	ISCC	Integrated Solar Combined Cycle
ICARDA	International Center for Agricultural Research in Dry Areas	IsDB	Islamic Development Bank
ICBA	International Center for Biosaline Agriculture	ISESCO	Islamic Educational, Scientific, and Cultural Organization
ICC	International Chamber of Commerce		
ICGEB	International Center for Genetic Engineering and Biotechnology	ISIC	UN International Standard Industrial Classification
ICLDC	Imperial College London Diabetes Centre	ISO	International Organization for Standardization
ICM	Integrated Coastal Management	ISWM	Integrated Solid Waste Management
ICPDR	International Commission for the Protection of the Danube River	ITC	Integrated Tourism Centers
		ITC	International Trade Center
		ITSAM	Integrated Transport System in the Arab Mashreq

IUCN	International Union for Conservation of Nature	LRA	Litani River Authority
IUCN	World Conservation Union (International Union for the Conservation of Nature and Natural Resources)	LV	Low Voltage
IWMI	International Water Management Institute	MAAR	Syrian Ministry of Agriculture and Agrarian Reform
IWPP	Independent Water And Power Producer	MAD	Moroccan Dirham
IWRB	International Waterfowl and Wetlands Research Bureau	MALR	Ministry of Agriculture and Land Reclamation
IWRM	Integrated Water Resources Management	MAP	UNEP Mediterranean Action Plan
JAEC	Jordan Atomic Energy Commission	MARPOL	International Convention for the Prevention of Pollution from Ships
JBAW	Jordan Business Alliance on Water	MASEN	Moroccan Agency for Solar Electricity
JCEDARE	Joint Committee on Environment and Development in the Arab Region	mb/d	million barrels per day
JD	Jordanian Dinar	MBT	Mechanical-biological treatment
JEPCO	Jordan Electric Power Company	MCM	Million Cubic Meters
JI	Joint Implementation	MD	Membrane Distillation
JMWI	Jordan Ministry for Water and Irrigation	MDGs	Millennium Development Goals
JNRC	Jordan Nuclear Regulatory Commission	MEA	Multilateral Environmental Agreement
JREEEF	Jordan Renewable Energy and Energy Efficiency Fund	MECTAT	Middle East Centre for the Transfer of Appropriate Technology
JVA	Jordan Valley Authority	MED	Multiple-Effect Distillation
KA-CARE	King Abdullah City for Atomic and Renewable Energy	MED WWR WG	Mediterranean Wastewater Reuse Working Group
KACST	King Abdulaziz City for Science and Technology	MED-ENEC	Energy Efficiency in the Construction Sector in the Mediterranean
KAHRAMAA	Qatar General Electricity and Water Corporation	MEEES	Middle East Economic Survey
KAUST	King Abdullah University of Science and Technology	MEMAC	Marine Emergency Mutual Aid Centre
KEPCO	Korea Electric Power Corporation	MENA	Middle East and North Africa
KFAED	Kuwait Fund for Arab Economic Development	MEPS	Minimum Energy Performance Standards
KFUPM	King Fahd University of Petroleum and Minerals	METAP	UNEP Mediterranean Environmental Technical Assistance Program
KfW	German Development Bank	MEW	Lebanese Ministry of Energy and Water
KISR	Kuwait Institute for Scientific Research	MGD	Million Gallon per Day
KSA	Kingdom of Saudi Arabia	MHT	Mechanical Heat Treatment
KW	Kilowatt	MICE	Meetings, Incentives, Conferences, And Events
kWh	Kilowatt-hour	MICs	Middle-Income Countries
LADA	Land Degradation Assessment of Drylands	MIGA	Multilateral Investment Guarantee Agency
LAS	League of Arab States	MJ	Mega Joule
LATA	Lebanese Appropriate Technology Association	MIST	Masdar Institute of Science and Technology
LAU	Lebanese American University	MMBTU	One Million British Thermal Units
LBNL	Lawrence Berkeley National Laboratory	MMCP	Making the Most of Commodities Programme
LCC	Life Cycle Costing	MNA	Multinational Approaches
LCEC	Lebanese Center for Energy Conservation	MoCCE	Ministry of Climate Change and Environment
LCOE	Levelized Costs of Electricity	MOQ	Maersk Oil Qatar
LDCs	Least Developed Countries	MOU	Memorandum of Understanding
LDN	Land degradation neutrality	MOX	Mixed-Oxide
LED	Light-Emitted Diode	MPA	Marine Protected Area
LEED	Leadership in Environmental Design	MPAP	Multi-Stakeholder Policy Formulation and Action Planning
LEMA	Suez Lyonnaise des Eaux, Montgomery Watson and Arabtech Jardaneh	MPAR	Ministry of Planning and Administrative Reform
LEU	Low-enriched Uranium	MSF	Multi-Stage Flash
LGBC	Lebanon Green Building Council	MSF	Multi-Stakeholder Forum
LLF	Lives & Livelihoods Fund	MSP	Mediterranean Solar Plan
LICs	Low-Income Countries	MSW	Municipal Solid Waste
LLW	Low Level Waste	Mt	Metric tons
LMBAs	Land and Marine Based Activities	MT	Million ton
LMEs	Large Marine Ecosystems	Mt	Megatons
LMG	Like Minded Group	MtCO ₂	Million tons of CO ₂
LMICs	Low Middle-Income Countries	Mtoe	Million tons of oil equivalent
LMO	Living Modified Organism	MTPY	Metric Tons Per Year
LNG	Liquefied Natural Gas	MV	Medium Voltage
LowCVP	Low Carbon Vehicle Partnership	MW	Megawatt
LPG	Liquefied Petroleum Gas	MW _n	Megawatt-hour

MW _p	Megawatt-peak	OA	Organic Agriculture
MWRI	Ministry of Water Resources and Irrigation	O&M	Operation and Maintenance
MW _{th}	Megawatt-thermal	OAPC	Organization of Arab Petroleum Exporting Countries
MVR	Measurement, Reporting and Verification	OAU	Organization for African Unity
N ₂ O	Nitrous Oxide	ODA	Official Development Assistance
NAMA	Nationally Appropriate Mitigation Actions	ODP	Ozone Depletion Potential
NARI	National Agricultural Research Institutes	ODS	Ozone-Depleting Substance
NARES	National Agricultural Research and Extension Systems	OECD	Organization for Economic Co-operation and Development
NASA	National Aeronautics and Space Administration	OFID	OPEC Fund for International Development
NBC	National Biosafety Committee	OIC MCs	Organization of Islamic Conference Member Countries
NBDF	Nile Basin Discourse Forum	OIES	Oxford Institute for Energy Studies
NBF	National Biosafety Framework	OME	Observatoire Méditerranéen de l'Energie
NBI	Nile Basin Initiative	OMW	Olive Mills Wastewater
NBM	Nile Basin Management	ONA	Omnium Nord-Africain
NC	National Communication	ONE	National Electricity Office
NDC	Nationally Determined Contributions	ONEP	National Office of Potable Water
NEPCO	National Electric Power Company	OPEC	Organization of Petroleum Exporting Countries
NCSR	Lebanese National Council of Scientific Research	OPEX	Operational Expenditures
ND	Neighborhood Development	OSS	Sahara and Sahel Observatory (Observatoire du Sahara et du Sahel)
NDW	Moroccan National Drought Watch	OWG	Open Working Group
NEA	Nuclear Energy Agency	PACD	Plan of Action to Combat Desertification
NEAP	National Environmental Action Plan	PARC	Pan Arab Research Centre
NEEAP	National Energy Efficiency Action Plan	PBCs	Performance-Based Contracts
NEEP	National Energy Efficiency Program	PC	Personal Computer
NEEREA	National Energy Efficiency and Renewable Energy Action (Lebanon)	PCB	Polychlorinated Biphenyls
NERC	National Energy Research Centre	PCFPI	Per Capita Food Production Index
NF	Nano-Filtration	PCFV	Partnership for Clean Fuels and Vehicles
NFC	Nile Forecast Center	PEA	Palestinian Energy and Natural Resources Authority
NFP	National Focal Point	PERG	Global Rural Electrification Program
NGCCs	Natural-Gas-Fired Combined Cycles	PERSGA	Protection of the Environment of the Red Sea and Gulf of Aden
NGGP	National Green Growth Plan	PFCs	Perfluorocarbons
NGO	Non-Governmental Organization	PICs	Pacific Island Countries
NGV	Natural Gas Vehicles	PIM	Participatory Irrigation Management
NGWA	Northern Governorates Water Authority (Jordan)	PJ	Peta Joule
NIF	Neighborhood Investment Facility	PM	Particulate Matter
NMC	Northern Mediterranean countries	PMU	Program Management Unit
NMVC	Non-Methane Volatile Compounds	PNA	Palestinian National Authority
NOAA	National Oceanic and Atmospheric Administration	PNEEI	Tunisian National Program of Irrigation Water Conservation
NOAC	National Oil Company	POPs	Persistent Organic Pollutants
NOEC	Net Oil Exporting Countries	PPA	Power Purchase Agreement
NOGA	National Oil and Gas Authority (Bahrain)	PPIAF	Public-Private Infrastructure Advisory Facility
NOIC	Net Oil Importing Countries	PPM	Parts Per Million
NORDEN	Nordic Council of Ministers	PPM	Process and Production Methods
NOx	Nitrogen Oxides	PPP	Public-Private Partnership
NPK	Nitrogen, Phosphates and Potash	PPP	Purchasing Power Parity
NPP	Nuclear Power Plant	PPP	Public-Private Partnership
NPP	Net Primary Productivity	PRM	Persons with Reduced Mobility
NPPA	Nuclear Power Plant Authority	PRY	Potential Researcher Year
NPT	Non-Proliferation treaty of nuclear weapons	PTs	Persistent Toxic Substances
NRC	National Research Council	PV	Photovoltaic
NREL	National Renewable Energy Laboratory	PWA	Palestinian Water Authority
NREAP	National Renewable Energy Action Plans	QNFSP	Qatar National Food Security Programme
NRW	Non-Revenue Water	QP	Qatar Petroleum
NSAS	Nubian Sandstone Aquifer System	QSAS	Qatar Sustainable Assessment System
NSR	North-South Railway project	R&D	Research and Development
NUS	Neglected and underutilized species	RA	Risk Assessment
NWRC	National Water Research Center (Egypt)		
NWSAS	North Western Sahara Aquifer System		

RADEEMA	Régie autonome de distribution de l'eau et de l'électricité de Marrakech	SoE	State of the Environment
RB	Raised Bed	SONEDE	Société Nationale d'Exploitation et de Distribution des Eaux
RBA	Results-Based Approach	SOx	Sulfur Oxides
RBf	Results-based financing	SPD	Sozialdemokratische Partei Deutschlands
RBO	River Basin Organization	SPM	Suspended Particulate Matter
RBP	Restrictive Business Practices	SRES	Special Report on Emission Scenarios
RCM	Regional Circulation Model	SRTM	Shuttle Radar Topography Mission
RCREEE	Regional Center for Renewable Energy and Energy Efficiency	SSA	Sub-Saharan Africa
RDF	Refuse Derived Fuel	SSR	Self-Sufficiency Ratio
RE	Renewable Energy	SRIs	Socially Responsible Investments
REC	Renewable Energy Credits	STI	Science, Technology and Innovation
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea	SWCC	Saline Water Conversion Corporation
REN21	Renewable Energy Policy Network for the 21st Century	SWH	Solar Water Heating
Rep	Republic	SWRO	Seawater Reverse Osmosis
RET	Renewable Energy Technologies	T&D	Transmission and Distribution
RISE	Regulatory Indicators for Sustainable Energy	TAC	Technical Advisory Committee
RM	Risk Management	TAR	Third Assessment Report
RO	Reverse Osmosis	Tcm	Trillion cubic meters
ROPME	Regional Organization for the Protection of the Marine Environment of the sea area surrounded by Bahrain, I.R. Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	TDM	Transportation Demand Management
RPS	Renewable Portfolio Standard	TDS	Total Dissolved Solids
RSA	ROPME Sea Area	TES	Thermal Energy Storage
RSC	Royal Society of Chemistry (UK)	TFP	Total Factor Productivity
RSCN	Royal Society for the Conservation of Nature	TFEC	Total Final Energy Consumption
RSGA	Red Sea and Gulf of Aden	TIES	The International Ecotourism Society
RUAF	Resource Centers Network on Urban Agriculture and Food Security	TII	Thermal Insulation Implementation
S&T	Science and Technology	Toe	Tons of Oil Equivalent
SAIC	Science Applications International Corporation	TOSSD	Total official support for sustainable development
SAP	Strategic Action Program	TPES	Total Primary Energy Supply
SASO	Saudi Standards, Quality and Metrology Organization	TRAFFIC	Trade Records Analysis for Flora and Fauna in International Commerce
SCP	Sustainable Consumption and Production	TRI	Toxics Release Inventory
SCPI	Sustainable Crop Production Intensification	TRIPs	Trade-Related Aspects of International Property Rights
SCP/RAC	Regional Activity Centre for Sustainable Consumption and Production	TRMM	Tropical Rainfall Measuring Mission
SD	Sustainable Development	tU	tones of Uranium
SDGs	Sustainable Development Goals	TWh	Terawatt-hour
SDIAR	Sustainable Development Initiative in the Arab region	UA	Urban Agriculture
SEA	Strategic Environmental Assessment	UAB	Union of Arab Banks
SEEA	System of Environmental and Economic Accounting	UAE	United Arab Emirates
SEEC	Saudi Energy Efficiency Cen	UCLA	University of California at Los Angeles
SEGC	Chinese Shanghai Electric Generation Group	UCS	Union of Concerned Scientists
SEMC	Southern and Eastern Mediterranean Countries	UF	Ultrafiltration
SFD	Saudi Fund for Development	UfM	Union for the Mediterranean
SHS	Solar Home System	UHCPV	Ultra-High Concentration Photovoltaic
SIR	Shuttle Imaging Radar	UHI	Urban Heat Island
SIWI	Stockholm International Water Institute	UIS	UNESCO Institute for Statistics
SL	Syrian Pound	UK	United Kingdom
SLM	Sustainable Land Management	UMA	Union du Maghreb Arabe (Arab Maghreb Union)
SLR	Sea Level Rise	UMICs	Upper Middle-Income Countries
SME	Small and Medium-Size Enterprises	UN	United Nations
SMS	Short Messaging Service	UNCBD	United Nations Convention on Biological Diversity
SNA	System Of National Accounts	UNCCD	United Nations Convention to Combat Desertification
		UNCED	United Nations Conference on Environment and Development
		UNCHS	United Nations Centre for Human Settlements (now UN-Habitat)
		UNCLOS	United Nations Convention on the Law of the Sea
		UNCOD	United Nations Conference on Desertification

UNCTAD	United Nations Conference on Trade and Development	WGEO	World Green Economy Organization
UNDAF	United Nations Development Assistance Framework	WHC	World Heritage Convention
UNDP	United Nations Development Programme	WHO	World Health Organization
UNEP	United Nations Environment Programme	WIPP	Waste Isolation Pilot Plant
UNESCO	United Nations Educational, Scientific and Cultural Organization	WMO	World Meteorological Organization
UNESCO-ROSTAS	UNESCO Regional Office for Science and Technology for the Arab States	WNA	World Nuclear Association
UNFCCC	United Nations Framework Convention on Climate Change	Wp	Watt-peak
UNFPA	United Nations Population Fund	WRI	World Resources Institute
UNHCR	United Nations High Commission for Refugees	WSSCC	Water Supply and Sanitation Collaborative Council
UNICE	United Nations Children's Fund	WSSD	World Summit on Sustainable Development
UNIDO	United Nations Industrial Development Organization	WTO	World Trade Organization
UNISDR	United Nations International Strategy for Disaster Reduction	WTTC	World Travel and Tourism Council
UNWTO	United Nations World Tourism Organization	WUA	Water User Association
UPC	Abu Dhabi Urban Planning Council	WUE	WUE Water Use Efficiency
UPI	United Press International	WWAP	World Water Assessment Program
USA	United States of America	WWC	World Water Council
USAID	United States Agency for International Development	WWF	World Wide Fund for Nature
USCCSP	United States Climate Change Science Program	WWF	World Water Forum
USEK	Université Saint-Esprit De Kaslik	WWI	First World War
USEPA	United States Environmental Protection Agency	WWII	Second World War
USJ	Saint Joseph University	YASAD	Yemenite Association for Sustainable Agriculture and Development
USPTO	United States Patent and Trademark Office	YR	Year
UV	Ultraviolet (A and B)	ZT/CA	Conservation Agriculture/Zero Tillage
VAT	Value-Added Tax		
VC	Vapor Compression		
VCM	Volatile Combustible Matter		
VMT	Vehicle Miles Traveled		
VOC	Volatile Organic Compound		
VRS	Vapor Recovery System		
WACC	Weighted Average Cost of Capital		
WaDImena	Water Demand Initiative for the Middle East and North Africa		
WAJ	Water Authority of Jordan		
WALIR	Water Law and Indigenous Rights		
WANA	West Asia and North Africa Region		
WB	West Bank		
WBCSD	World Business Council for Sustainable Development		
WBG	World Bank Group		
WBGU	German Advisory Council on Global Change		
WCD	World Commission on Dams		
WCED	World Commission on Environment and Development		
WCMC	UNEP World Conservation Monitoring Center		
WCP	World Climate Programme		
WCS	World Conservation Strategy		
WDM	Water Demand Management		
WDPA	World Database on Protected Areas		
WEEE	Waste of Electronic and Electrical Equipment		
WEF	World Economic Forum		
WEF	Water-Energy-Food		
WEI	Water Exploitation Index		
WETC	Wind Energy Technology Centre		
WF	Water Footprint		
WFN	Water Footprint Network		
WFP	World Food Programme		
WGP-AS	Water Governance Program in the Arab States		

State of Arab Environment Series

AFED Annual Reports

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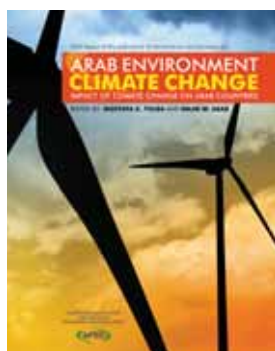
Arab Environment: Future Challenges

2008 Report of the Arab Forum for Environment and Development

For the first time, a comprehensive independent expert report on Arab environment is released for public debate.

Entitled *Arab Environment: Future Challenges*, this ground-breaking report has been commissioned by Arab Forum for Environment and Development (AFED), and written by some of the most prominent Arab experts, including authors, researchers and

reviewers. Beyond appraising the state of the environment, based on the most recent data, the policy-oriented report also evaluates the progress towards the realization of sustainable development targets, assesses current policies and examines Arab contribution to global environmental endeavors. Ultimately, the report proposes alternative policies and remedial action.

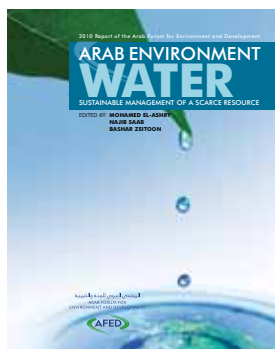


Arab Environment: Climate Change

2009 Report of the Arab Forum for Environment and Development

Impact of Climate Change on the Arab Countries is the second of a series of annual reports produced by the Arab Forum for Environment and Development (AFED). The report has been designed to provide information to governments, business, academia and the public about the impact of climate change on the Arab countries, and encourage concrete action to face the challenge. The report analyzes the Arab

response to the urgent need for adaptation measures, and uses the latest research findings to describe the vulnerabilities of natural and human systems in the Arab world to climate change and the impacts on different sectors. In an attempt to help shape adequate policies, the report discusses options for a post-Kyoto regime and outlines the state of international negotiations in this regard.



Arab Environment: Water

2010 Report of the Arab Forum for Environment and Development

Water: Sustainable Management of a Scarce Resource is the third of a series of annual reports produced by the Arab Forum for Environment and Development (AFED). It follows the publication of two reports, Arab Environment: Future Challenges in 2008 and Impact of Climate Change on Arab countries in 2009. The 2010 report is designed to contribute to the discourse on the sustainable management of water resources in the Arab world and provides critical understanding of

water in the region without being overly technical or academic in nature. The unifying theme is presenting reforms in policies and management to develop a sustainable water sector in Arab countries. Case studies, with stories of successes and failures, are highlighted to disseminate learning. This report contributes to the ongoing dialogue on the future of water and catalyzes institutional reforms, leading to determined action for sustainable water policies in Arab countries.



Arab Environment: Green Economy

2011 Report of the Arab Forum for Environment and Development

Green Economy: Sustainable Transition in a Changing Arab World is the fourth of a series of annual reports on the state of Arab environment, produced by the Arab Forum for Environment and Development (AFED). This report on options of green economy in Arab countries represents the first phase of the AFED green economy initiative. Over one hundred experts have contributed to the report, and discussed its drafts in a

series of consultation meetings. The report is intended to motivate and assist governments and businesses in making a transition to the green economy. It articulates enabling public policies, business models, green investment opportunities, innovative approaches, and case studies, and addresses eight sectors: agriculture, water, energy, industry, cities and buildings, transportation, tourism, and waste management.

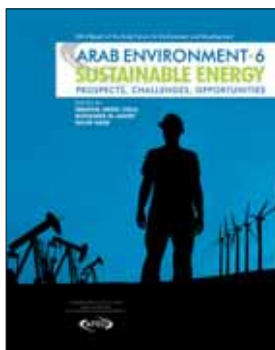


Arab Environment: Survival Options

2012 Report of the Arab Forum for Environment and Development

Survival Options - Ecological Footprint of Arab Countries is the fifth in the series of annual reports produced by the Arab Forum for Environment and Development (AFED) on the state of the Arab environment. It examines sustainability choices in Arab countries, based on a survey of people's demand of natural capital and available supply. The report discusses potential paths to sustainability based on ecological constraints. As a basis for the analysis, AFED has commissioned the Global Footprint Network, the world leader in this field, to produce an Arab Ecological Footprint and Biocapacity

Atlas using the most recent data available. The Atlas covers the 22 members of the League of Arab States, as region, sub-regions and individual countries. The analysis focuses on the challenges posed by the state of food security, water and energy, while considering main drivers such as population and patterns of production and consumption. Ultimately, it prescribes regional cooperation and sound management of resources as the main options for survival in a region characterized by stark variations in ecological footprint, natural resources and income.



Arab Environment: Sustainable Energy

2013 Report of the Arab Forum for Environment and Development

Sustainable Energy is the sixth in the series of annual reports produced by the Arab Forum for Environment and Development (AFED) on the state of Arab environment. The report highlights the need for more efficient management of the energy sector, in view of enhancing its contribution to sustainable development in the Arab region. The AFED 2013 report aims at: presenting a situational analysis of the current state of energy in the Arab region, shedding light on major challenges, discussing different

policy options and, ultimately, recommending alternative courses of action to help facilitate the transition to a sustainable energy future. To achieve its goals, the AFED 2013 report addresses the following issues: oil and beyond, natural gas as a transition fuel to cleaner energy, renewable energy prospects, the nuclear option, energy efficiency, the energy-water-food nexus, mitigation options of climate change, resilience of the energy sector to climate risk, and the role of the private sector in financing sustainable energy.



Arab Environment: Food Security

2014 Report of the Arab Forum for Environment and Development

Food Security is the seventh in the series of annual reports on the state of Arab environment, produced by the Arab Forum for Environment and Development (AFED). The report highlights the need for more efficient management of the agriculture and water sectors, in view of enhancing the prospects of food security. *Food security* is of great concern to Arab countries. They have been pursuing a target of higher food self-sufficiency rate, but achieving this goal remained beyond reach. While they have limited cultivable land and

scarce water resources, they did not use their agricultural endowments in an effective and efficient manner. Lack of appropriate agricultural policies and practices led to diminishing the bio-capacity of the resources to regenerate their services and threatened agricultural sustainability. AFED hopes that its report on Food Security will help Arab countries adopt the right policies and commit to long-term investments, allowing them to secure a sustainable supply of food to meet ever-growing needs.



Arab Environment: Sustainable Consumption

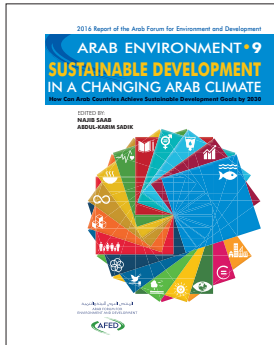
2015 Report of the Arab Forum for Environment and Development

Increasing production alone cannot solve the need of food for hungry people and water for thirsty people, nor will it provide power to dark villages. Equally, solely building more waste dumps and incinerators cannot solve the trash crisis. Inadequate consumption patterns are at the core of the problem, and any feasible solution requires a fundamental change in the way we consume resources and produce waste. Thus, the 2015 AFED Annual Report, *Sustainable Consumption for Better Resource Management*, discusses how changing consumption patterns can help preserve resources and protect the environment, ultimately leading

to sustainable development. While it is true that changing consumption patterns requires adequate policies based on expert studies, the support of consumers is a prerequisite for successful implementation. In view of tracking how people perceive consumption and to what extent they are ready for positive change, AFED carried out a wide-ranging public opinion survey, which drew over 31,000 participants from 22 countries. The survey, which has been incorporated in the report, found that the Arab public is ready to pay more for energy and water and to change their consumption patterns if this will help preserve resources and protect the environment.

Arab Environment: Sustainable Development in a Changing Arab Climate

2016 Report of the Arab Forum for Environment and Development



This AFED report on “*Sustainable Development in a Changing Arab Climate*” highlights the policy options available for the Arab countries to realize the Sustainable Development Goals by the 2030 target set by the United Nations, in light of the new political, economic, and social developments.

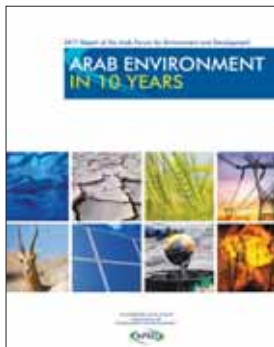
The report recommends an alternative approach, based on integrating sustainable development principles within the anticipated rebuilding efforts. It calls upon local, regional, and international aid organizations not to limit their efforts to providing safety and basic necessities to those affected, but rather

to use the relief plans as a launch pad for promoting new approaches to development, rooted in a transition to green economy.

This report, on prospects and challenges along the path towards achieving the SDGs, builds on the previous eight reports on the state of Arab environment, produced by the Arab Forum for Environment and Development (AFED) since 2008. AFED annual reports have so far addressed major development issues in the Arab region, including Water, Food Security, Energy, Green Economy, Ecological Footprint, Sustainable Consumption, and Climate Change.

Arab Environment In 10 Years

2017 Report of the Arab Forum for Environment and Development



Arab Environment In 10 Years crowns a decade of the series of annual reports produced by the Arab Forum for Environment and Development (AFED) on the state of Arab environment. It tracks and analyzes changes focusing on policies and governance, including level of response and engagement in international environmental treaties. It also highlights developments in six selected priority areas, namely water, energy, air, food, green economy and environmental scientific research.

This report found that the state of environment in the Arab countries over the past ten years has been characterized by disparities. While progress was slow and the situation deteriorated in many aspects, there were advances in others, especially regarding matters related to governance and commitment to international treaties, particularly regarding climate change. Despite the lack of real progress in several countries, mainly those which are

facing political unrest and instability, others have made strides towards shifting to a more sustainable path, with more financial resources directed towards investments in environmental infrastructure.

Despite slow progress, we noted with satisfaction that what AFED called for in its reports has become prime driver for policy reforms in many Arab countries. AFED continues to engage many regional players, including public policy officials, corporations, academia, NGOs, and the media, in a meaningful debate.

As part of the 2017 report, AFED carried out a public opinion survey cross the Arab countries to track environmental perceptions and attitudes. Results showed that a majority of 80 percent thought that the environmental situation deteriorated or did not improve, while 95 percent found that their country is not doing enough to tackle environmental challenges.