




## UNEP/MAP-METAP SMAP III Project

Promoting awareness and enabling a policy framework for environment and development integration in the Mediterranean with focus on Integrated Coastal Zone Management

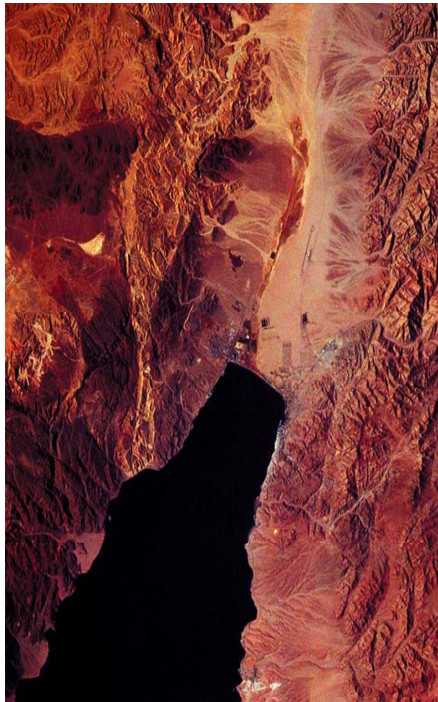
# Policy Brief Reducing Conflicts in the Jordanian Gulf of Aqaba

 <p><i>This project has been financially supported by the European Union</i></p>	<p>Ziyad ALAWNEH, PAP/RAC consultant</p> <p>in collaboration with</p> <p>Charles N. EHLER, PAP/RAC consultant</p>
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## **EXECUTIVE SUMMARY**

The Jordanian Gulf of Aqaba is increasingly overused and under-managed. Human activities continue to grow, often in conflict with one another, e.g., tourism, which depends on a high-quality environment, and port development, while conserving space for nature, e.g., the Aqaba Marine Park and potential new marine protected areas, increasingly conflicts with marine shipping. A proposal is given to develop a marine spatial plan for the Gulf of Aqaba as an element of integrated sea-use management that calls for sustainable development. This approach suits Aqaba since it is a limited area of high use and one that has important political implications. The planning process would be initiated through a Gulf of Aqaba multi-disciplinary and multi-sectoral Advisory and Advocacy Committee that would develop the planning and management framework through a participatory process.

## CONTEXT AND IMPORTANCE OF THE PROBLEM



Satellite images of Gulf of Aqaba Coast and parts of the Red Sea (Source: ASEZA)

Slow economic development, coupled with environmental degradation, impedes the long-term sustainability of the Middle East Region - with Jordan right in its heart. Jordan, in cooperation with its neighbours that share its coastal and marine areas, can promote the development of sustainable tourism, industrial production, and shipping in a manner that preserves the quality of the Gulf of Aqaba.

Jordan is a small country with scarce natural resources. While it has no shores on the Mediterranean, it is still considered one of the Mediterranean countries. It is located within the eastern margins of the Mediterranean climatic zone of the eastern Mediterranean, which is characterised by arid and semi-arid lands.

The Jordanian coasts of the Gulf of Aqaba and the Dead Sea need to be better managed. Both are witnessing increased economic development since they are among the few economic and recreational outlets for Jordan and Jordanians. The coastal GDP share represents 4% of Jordan's GDP in 2006.

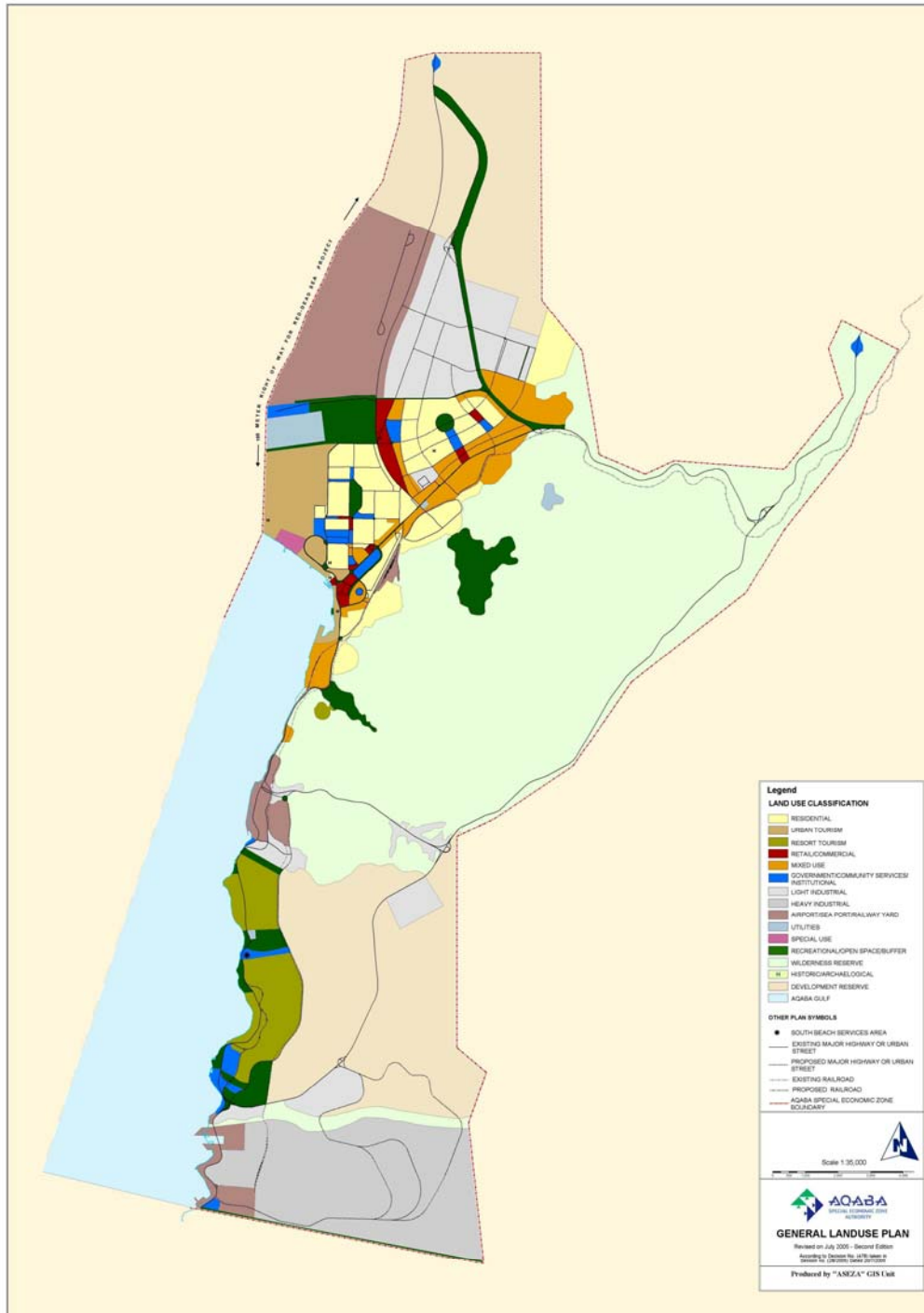
The Jordanian shoreline of the Gulf of Aqaba is only 27 km long. The total area of the Gulf of Aqaba is 375 sq km. Its greatest depth is only 1,852 m with an average depth of 650 m. Since Aqaba is the only seaport of Jordan, many human activities have claimed the short shoreline in the last 50 years. Currently, only seven kilometres of shoreline are still "natural", devoid of ports, hotels, residential constructions and factories. Though a relatively small body of water, the Gulf of Aqaba hosts an extraordinary diversity of corals and related marine life. An estimated 50% of the Gulf's shoreline is fringed with coral reefs.

## *Jordanian Gulf of Aqaba ICZM Policy Brief*

Until 1960s, the Gulf of Aqaba was relatively unaffected by development, with its coastline only sparsely populated by 86,000 Jordanians most of whom come from other parts of Jordan seeking better job opportunities. Since then, the Gulf has become a strategic international asset, with major industrial facilities, shipping activities, and rapidly expanding tourism. The port of Aqaba alone handles 5 million tons of oil each year. These developments have already caused severe disturbance and damage to the Gulf's coastal and marine ecosystems. In addition to the transboundary movement of pollutants, phosphate deposition from ship-loading operations, frequent small to moderate oil spills, and thermal pollution from coastal industries have severely eroded coral life, particularly in the Gulf's intensively developed northern reaches. Moreover, poorly regulated resort development and over-fishing have transformed the ecology in many coastal and marine areas, causing particular devastation to nearshore reefs in a number of popular diving areas.

ASEZA, the Special Economic Zone Authority, was established in 2001 to attract and facilitate investment in Aqaba in the areas of industry, port development, tourism, infrastructure, utilities and services. The ASEZA Master Plan was developed at the time to guide the development process. The Port Component of the Master Plan included proposals for expanding the economic potential of the ASEZA by enlarging the capacity of the South Port, extending the Southern Industrial Zone, removing port services from the Main Port, and expanding the tourism potential of the area by converting the Main Port area to tourism and business uses related to the Aqaba Town waterfront. ASEZA has developed a master plan comprised of a General Land-use Plan, Sea-use Plan, Environmental Sensitivity Plan, and a General Transportation Plan. According to the ASEZA environmental commissioner, the plans focus on zoning and clustering of human activities in the area. Moreover, a Port Relocation and Redevelopment Programme for Aqaba are being developed, in which the Main Port will be shut down, the South Port will be developed, and relocation of all Main Port Services to the South Port would be carried out. Services to be developed at the South Port will include: general cargo, grain, bulk liquids including ammonia, vegetable oil, LPG, and bulk salts including phosphate. An oil terminal with land-side storage is also part of the programme. The existing ferry terminal will also be relocated to one of three specific locations. The community feels that land available for the public use is diminishing in view of the fact that port relocation is in the process. ASEZA is giving priority for investment with minimal consultation with people in the area.

One marine protected area, the Aqaba Marine Park (along 7 km of shoreline on the eastern side of the Gulf of Aqaba), has been established to promote the conservation of marine areas. In the future, this protected area may face the danger of being also used for development. Therefore, any plans to establish more marine protected areas in the future will be challenging.



General Landuse of Aqaba Town- Landuse Classification (Source: ASEZA)

This Policy Brief focuses only on the potential environmental challenges facing the Gulf of Aqaba and proposes an approach - marine spatial planning, that can reduce conflicts among uses, reduce conflicts between uses and nature conservation, promote compatible uses where appropriate, and encourage sustainable development in and around the Gulf of Aqaba.

## **A REVIEW OF POLICY OPTIONS**

The Jordanian part of the Gulf of Aqaba is managed by ASEZA, a statutory institution empowered with regulatory, administrative, fiscal and economic responsibilities to:

- improve the quality of life for all community members;
- create, regulate and sustain a globally competitive investor-friendly environment;
- optimise the efficient use of entrusted marine natural resources in harmony with the Master Plan to internationally recognised practices; and
- synergise the activities of the ASEZA.

ASEZA is in charge of development, and, at the same time, is responsible for protecting the quality of all marine natural resources. The Aqaba Development Corporation (ADC) is handling development and investment, while the Jordan Maritime Authority (JMA) is in charge of protecting and preserving the quality of marine natural resources in Aqaba.

A number of other organisations are involved in environmental activities in the Aquaba region through advocacy and raising community awareness of the value of the coast. The Jordan Sustainable Development Society has a bird watching tower and the Royal Marine Conservation Society of Jordan (JREDS) has a permanent office to examine marine issues, lobby and identify problems. Land and Human to Advocate Progress (LHAP) is a non-governmental organisation, active in the region in organising a number of clean up campaigns and Coast Day events, as well as conducting an assessment survey to measure the value of both, the Gulf of Aqaba and the Dead Sea in the eyes of Jordanians. The Environmental Non-governmental Organisations (ENGOS) have a “soft” relationship with ASEZA and, therefore, their influence is minimal. In addition, the Marine Science Station is a research station established in 1980 as a co-operative facility between the Jordan University and Yarmouk University to monitor coral reef ecological trends, and conduct research to measure development impacts on the marine life. It works closely with ASEZA as an advisory body on a contractual basis to provide consultancy services and facilities for training.

ENGOS are not influential enough in environmental and marine resources matter. In particular, they are not powerful to advocate what they want when it comes to certain plans. For instance, in the relocation of the port scoping session, ENGOS were heard, some of their remarks were considered, but no process was in place to ensure that what they wanted were considered in implementing the actual work.

Jordan is a signatory to the following international treaties and conventions that are relevant to the protection of the marine environment:

- The International Convention for the Prevention of Pollution from Ships (MARPOL 1973, 1978), Annexes I, II, III, IV and V;
- The Regional Convention for the Conservation of the Red Sea and the Gulf of Aden Environment (Jeddah Convention, 1982) covering the prevention of marine pollution discharges from ships, including oil, waste and other materials, land-based sources, including from outfalls and pipelines, land reclamation, including dredging;
- The International Convention for the Prevention of Pollution of the Sea by Oil, 1954;

## *Jordanian Gulf of Aqaba ICZM Policy Brief*

- The Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention, 1972) that prohibits dumping of certain materials from ships;
- The International Convention for Safety of Life at Sea (SOLAS), 1974;
- The International Convention on Civil Liability for Oil Pollution Damage, 1969;
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1979;
- The Convention for the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (Basel Convention, 1992);
- UN Convention on Biological Diversity (CBD), 1994; and
- The Arrangement between the Government of Jordan and the Government of Israel on Co-operation in Environmental Protection and Nature Conservation, 1995.

ASEZA has a newly established authority, the Jordan Maritime Authority (JMA), which monitors the implementation of the conventions. Another institution responsible for implementation is the Hamze Centre for Combating Marine Pollution. This Centre belongs to the JMA. Jordan has also recently established an Environmental Police Department that has a branch in Aqaba. Its main objective is to act as enforcement arm of the various ministries regarding decisions targeting environment protection and conservation. JMA is the delegated authority for enforcing conventions relating to marine resources in Jordan. Moreover, the Aqaba Development Corporation (ADC) is the technical arm of ASEZA that operates on a purely commercial basis and works to secure funds to support ASEZA activities. This means that ADC and JMA are two different institutions of ASEZA, one responsible for development and the other for environmental implementation and monitoring.

The Peace Treaty between Israel and Jordan, signed on 24 October 1994, establishes a strong basis for environmental consultation and co-operation between these two states bordering the Gulf of Aqaba. Under Annex IV of the Treaty, Jordan and Israel agreed to co-operate in several key areas including: environmental planning; the conduct of environmental impact assessment; the exchange of data on proposed development projects; environmental legislation, regulations, standards, and enforcement; and in emergency response, monitoring, related notification procedures, and control of damage. The two states have co-operated on several occasions. Some research has been carried out in collaboration with the Marine Science Station. In addition, an oil spill incident in the Jordanian side received the full support from the Israeli side and was followed by training to the Jordanian side.

Jordanian concerns about a fish farm on the Israeli side resulted in negotiations of a signed agreement to reduce pollution and impacts of the fish industry. Several regional clean up campaigns for the two coasts have been carried out jointly.

Several domestic laws, standards and guidelines are also used by ASEZA for protecting and maintaining the marine environment, including:

## *Jordanian Gulf of Aqaba ICZM Policy Brief*

- ASEZA Law No. 32 for the year 2000 where Article 52 states that the ASEZA is in charge for protecting and mainstreaming marine environment and promoting development in the area;
- Environmental Protection Regulation No. 21 (2001);
- The Aqaba Marine Park Regulation No. 22 (2001);
- The Development, and the Improvement of the Investment Climate Regulation No. 11 (2001) that stipulates that the initiation of any economic activity in the ASEZA Zone requires an operational permit from ASEZA related to the requirements for public health, public safety and the environment;
- The regulation and licensing of Enterprises No. 13 (2001), which deals with the procedures and conditions for the registration and licensing of enterprises wishing to operate in the ASEZA Zone;
- The Environmental Protection Law No. 1 (2003), which brought into existence the Ministry of Environment in its articles 8, 9A and 10;
- Jordan Standard Specifications No. 202 (1982), updated in 1991, establishes maximum allowable limits for some 37 pollutants discharged into streams, wadis, or the sea, or used for natural recharge or irrigation;
- Jordan Standard Specifications No. 893 (1994);
- Shipping Law No. 51 (1961);
- Quarantine Aqaba Port Law No. 32 (1972);
- Port Services Fees Law No. 49 (1976) and Circular No. 31; and
- Agriculture Law No. 20 (1973).

However, while laws in Jordan are in place, they are not effectively enforced. Actions are mobilised when there is a crisis, but no stringent implementation of these laws is taking place in a consistent manner over time.

Moreover, ASEZA has adopted a number of policies associated with the regulation, management, and protection of the natural environment among which are the Environmental Policy, the Marine Protection Policy, the Groundwater Management Policy, the Wastewater Management Policy, the Water Conservation Policy, and the Energy Conservation Policy. The formulation of these policies is important for ASEZA to show that they care and use them when they have emergency situations.

In addition, ASEZA adopted in the year 2001 the Master Plan and Land-use Plan. They were designed to guide the development in the area until the year 2020. The Plans are comprised of development of a protected area for corals, a reduction of phosphate dust emissions, reduction of ship discharges, and measures on drainage, sedimentation and fishing.

## **POLICY RECOMMENDATION**

In view of the current situation in the Jordanian Gulf of Aqaba, Marine Spatial Planning (MSP) should be considered as a strategic approach to protect and conserve the marine environment of the Gulf of Aqaba. This approach has been used in other high-conflict

areas (e.g., Belgium and The Netherlands in the North Sea) to ensure sustainable use of resources, to make explicit trade-offs among multiple objectives and uses of the marine environment, and to balance benefits in an equitable manner. The result is a "Marine Spatial Plan".

Marine Spatial Planning (MSP) is a process of analysing and allocating parts of three-dimensional *marine spaces* to specific uses, to achieve ecological, economic, and social objectives; the MSP process usually results in a comprehensive plan or vision for a marine region (Ehler and Douvère, 2007).

MSP is recommended because it allows the early identification of potential conflicts: (1) among economic sectors (user-user conflicts); and (2) between economic sectors and nature (user-nature conflicts). Developers should be able to predict where their proposals will be likely to gain permits with much greater certainty and efficiency, thus reducing work and costs that currently arise when conflicts are identified in later stages of the planning process.

Moreover, MSP can ensure participation of all stakeholders (government, industry and NGOs) and gain their support. It is, therefore, proposed to form a national advisory and advocacy group comprised of all affected and interested stakeholders, including: ASEZA; the Jordan Valley Authority Ministry of Environment; the Jordan Royal Society for Environmental Diving; Land and Human to Advocate Progress; and the Marine Science Station. They could jointly develop a framework for a marine spatial plan with the following proposed objectives:

- conserving and enhancing the overall quality of Aqaba coast, its natural processes and its biodiversity;
- reducing conflicts among human uses of the marine environment, as well as conflicts between human uses and the marine environment;
- using marine resources in a sustainable and ecologically sensitive manner to conserve ecosystems and achieve increased environmental, social and economic benefits from the marine environment;
- promoting and encouraging environmentally sustainable use of natural resources to ensure long-term economic benefits and sustainable employment;
- increasing people's understanding of the marine environment, its natural processes and Jordanian cultural marine heritage and the impact that human activities have upon them; and
- promoting public awareness, understanding and appreciation of the value of the marine environment and seeking active public participation in the development of new policies.

The objectives of a marine spatial planning process will be translated in the following actions:

- Formation of a National Advisory and Advocacy Group to promote a Gulf of Aqaba marine spatial plan;
- Establishment of a marine spatial management process that includes setting objectives, assessments, implementation, monitoring, audit and review;
- Organisation of a national consultation process to develop a plan during which all stakeholders could set priority areas and where a target for protected areas is

## *Jordanian Gulf of Aqaba ICZM Policy Brief*

identified, followed by the determination of zones where certain objectives (e.g., strict protection, multiple-use, etc.) would be identified;

- Work at the national level to make the plan and the resources allocated by the authorities meet international commitments;
- Set out the Government's objectives for the marine environment and for managing activities and developments;
- Organise a national campaign to raise community awareness on the value of marine areas through organising workshops, public hearings, consultations, seminars, on-line discussions, and production of publications and celebrate national and international Coast Day events; and
- Organise appropriate national plan adoption actions to ensure implementation of the plan.

## **References**

1. Environmental Jordanian Legislation Encyclopaedia, by Sharary and Tell within KHEMPT project, 1999.
2. International Guidelines for Ecosystem-based, Marine Spatial Planning, by Charles Ehler and Fanny Douvère, 2007 (in preparation).
3. Jordan National Agenda 21, General Corporation for Environmental Protection of Jordan, 1999.
4. Marine Protected Areas and Zoning in Marine Spatial Planning, a discussion paper by WWF-UK, by S. Gubbay in June 2005.
5. National Jordanian Agenda, by a Royal Committee, Amman, 2005.
6. Protecting the Gulf of Aqaba, A Regional Environmental Challenge, by Environmental Law Institute, Washington, 1993.
7. Vision for a Sea Change, report for the first international workshop on Marine Spatial Planning by UNESCO , 2006.
8. <http://www.aseza.gov.jo>
9. [www.Lhap.net](http://www.Lhap.net) / [smap.ew.eea.europa.eu/az](http://smap.ew.eea.europa.eu/az)