



Friends of The Earth Middle East



Crossing the Jordan

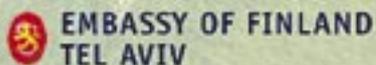
**Concept Document to
Rehabilitate, Promote Prosperity
and Help Bring Peace to the Lower
Jordan River Valley**

CONCEPT DOCUMENT

March 2005

**EcoPeace / Friends of the Earth Middle East
Amman, Bethlehem and Tel Aviv**

Supported by: Government of Finland | European Commission SMAP program | US Government
Wye River Program and UNESCO Amman Office



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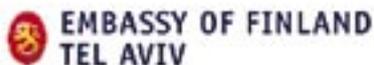
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Wye River
Program



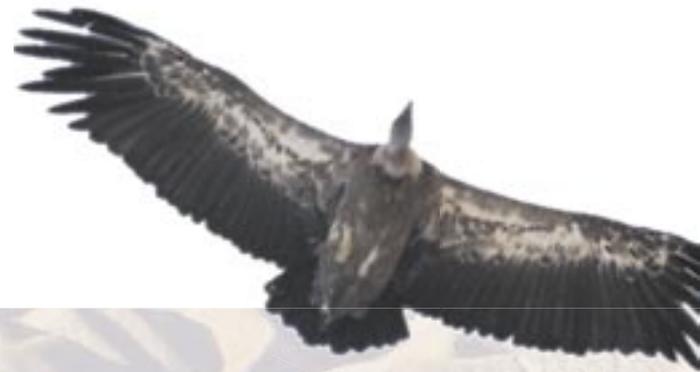


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EXECUTIVE SUMMARY

The Lower Jordan River Valley is part of the Great Rift Valley linking Africa and the Fertile Crescent. The Jordan River flowing from the Sea of Galilee in the north of the valley meanders for some 200 km before entering into the Dead Sea, a terminal lake. On both sides of the valley are natural and cultural sites that are valued the world over and that justify the valley being described as a cultural landscape of universal significance.

The natural and cultural highlights of the Lower Jordan River Valley include:

- Lowest river in the world flowing through some of the narrowest areas of the Great Rift Valley to the lowest point on earth – the Dead Sea.
- Important wetland habitat sustaining diverse vegetation and fauna.
- A flyway for over 500 million birds twice each year.
- The pathway of early human migration out of Africa and the site of early human settlement based on the cultivation of wild wheat first undertaken near Jericho.
- Old and New Testament and Islamic references associating the river to the prophets Moses and Elijah, the baptism of Christ and the companions of the prophet Mohammed. The lush northern area of the river valley is known as the Gates to the Garden of Eden.
- Great Roman cities and crusader castles were built in the valley and momentous battles were fought along the valley floor.

Though still unique in its natural and cultural wealth the river valley is presently threatened by excessive water diversion, pollution and inappropriate development. Of the 1.3 billion cubic meters of water annually that would naturally flow down the River Jordan to the Dead Sea, more than 90% of this water is presently diverted for other purposes. Sewage and other wastes are now discharged into the river. Residents and tourists have little access to the river, due to military restrictions and hence can not experience 'crossing the Jordan'.

The main challenges facing the Lower Jordan River Valley are:

- Excessive water diversion and dam building resulting in sections of the river drying up in summer with the resultant demise of river habitat.
- The capture of the winter flood waters of the Jordan River and its tributaries negatively impacting the habitat of the upper banks of the river.
- The cessation of untreated sewage discharge into the river without the return of considerable quantities of healthy water to the river.
- The lack of cooperative mechanisms in place promoting sustainable development to allow residents of the valley to benefit and prosper from the natural and cultural heritage of the valley.

The integrity of the Lower Jordan River has been heavily compromised and without immediate intervention in river rehabilitation the damage will be irreversible. 'Ecological Rehabilitation' of the river is a commitment agreed to by the governments of Jordan and Israel under Annex IV of their 1994 Peace Treaty. Agreements between Palestinians and Israelis must also consider the right of nature to water. The irony is that despite the valley's potential to attract significant tourism and have its residents benefit from the resulting revenue, the residents of the valley are amongst the poorest in their respective countries.

This concept document makes the link between river rehabilitation, controlled access to limited areas of the riverbank, the development of sustainable management plans through the adoption of appropriate UNESCO mechanisms and the promotion of peace and prosperity in the valley. It proposes that the concerned governments in full cooperation with municipalities, local residents, and civil society groups adopt an Action Plan for the rehabilitation of the river valley and that UNESCO adopt this plan and engage the necessary mechanisms to achieve this aim. Public awareness, media attention, political will and international assistance are all now urgently required so as to allow present and future generations experience 'crossing the Jordan'.

1. INTRODUCTION

This concept document is not the end product but rather the start of a regional effort to raise awareness, educate and influence decision makers, the media and the public at large as to the current demise of the Lower Jordan River. As an advocacy organization EcoPeace / Friends of the Earth Middle East believe that we need to work with the local communities - Jordanian, Palestinian and Israeli - that live in the Valley so that they will lead the call for the river's rehabilitation.

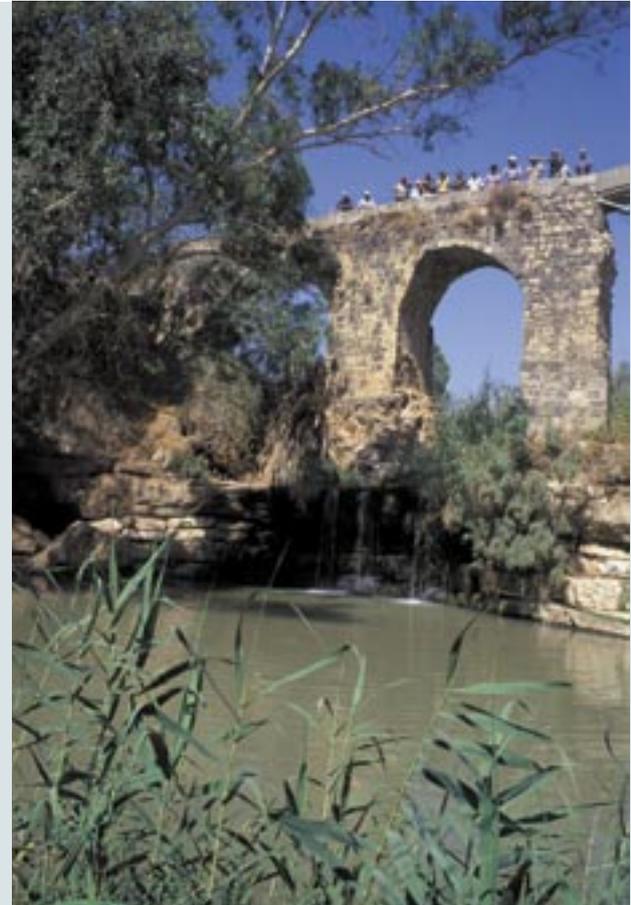
We recognize that if the local communities are to take the lead then they must also participate in and see the benefit of the River's rehabilitation. It is clear that the Jordan River Valley's cultural integrity and the health of its natural environment are linked to the long-term prosperity of the residents of the Valley and peoples of the region as a whole. For the river's rehabilitation to take place effectively, cooperative mechanisms and agreements between the respective governments must be put in place. It is imperative that the governments of Israel and Jordan (later to include Syria) abide by the terms of their 1994 Peace Treaty by agreeing on the release of healthy water to flow down the Jordan River Valley, revitalizing the river and in turn replenishing the Dead Sea.

The Peace Treaty signed between Jordan and Israel in 1994 specifically calls on the parties under Environment Annex IV to cooperate as regards the Jordan River for the:

- 'Ecological rehabilitation of the Jordan River.'
- 'Nature reserves and protected areas.'
- 'Tourism and historical heritage.'

Ironically, the sewage and saline water discharged into the river is presently much of what is left of the liquid sustaining the ecology of the River. Plans to treat the sewage for agricultural use and to desalinate the saline water for drinking purposes would, in fact, leave large sections of the River completely dry in summer. New dams currently being built on the Yarmuk River and other tributaries (The Yarmuk River is itself the largest tributary to the Jordan River) would likewise significantly reduce the annual flooding that nourishes the habitat of the upper banks of the Jordan. In the ten years since the Peace Treaty between Israel and Jordan, there has been no rehabilitation strategy launched and there has been no cooperation on protected areas or the cultural heritage of the Jordan River Valley.

If residents of the Valley and the region as a whole are to be supportive of rehabilitation,



The Lower Jordan River and its Tributaries



added benefits will be necessary. Keeping in mind legitimate security concerns, there is a need to review regulations on access to the river and to the Valley as a whole. Presently along the portion of the river which flows through the West Bank, Palestinians are denied any access to the river, with the exception of a limited number of Christian Palestinians on religious occasions to visit the Baptism Site on the western bank of the river. For Palestine it is not only access to land but also water that must be considered. There is no doubt that the water rights of the Palestinians, recognized in the Oslo Accords by Israel, will have to be fully negotiated and agreed to by the parties. Resolution of both access and water issues will help strengthen local Palestinian community interest to the river's rehabilitation.

In the North of Israel, along the border with Jordan a new tourism project educating the public about the history and natural beauty of the River was recently opened at the historic 'Three Bridges' site opposite Kibbutz Gesher. This is an important and welcomed precedent that shows that access to sites along the river can be balanced with security concerns. Similarly, although the River's length in Jordan is also a restricted military area, the recent opening of the Baptism site on the eastern bank of the River is testimony to the recognition from all sides that controlled access to the River is important for the prosperity of the Valley and its people. Crossing the river at official border crossing points – River Jordan Crossing/Sheik Hussein, and King Hussein/Allenby Bridge - is especially difficult, often because of bureaucratic or political grounds. The present situation is unacceptable for local residents and tourists alike. To rehabilitate the Jordan River Valley and to ensure that its cultural heritage is recognized, the Lower Jordan River must stop being the backyard and dumping ground of the region so that 'Crossing the Jordan' will be an experience that local residents and interested tourists from around the world will desire to undertake, in a manner which respects the natural environment in the Valley.





2. THE RIVER AND ITS PEOPLE

The Jordan River Valley as part of the 7,200-kilometre Great Rift Valley (GRV) is geographically unique, situated in the lowest area on Earth as well as in one of the narrowest parts of the GRV. The GRV has been the pathway for the movement of birds and animals, plant life and human migratory routes that carried humanity out of Africa in the hominid period.

Its position at the northernmost part of the GRV is the cross-roads for the development of human activity from Africa to Asia and Europe. Here, the Great Rift Valley merges into the Fertile Crescent – where hunter-gatherers developed into early farmers and the first urban forms of dwelling were built. The evolving cultural activities of the Jordan River Valley over the ages ensure that it is truly a window into the history, both natural and cultural, of the world.

The Lower Jordan River Valley has a rich heritage across a range of successive historical periods:

- the pre-historical sites representing the emerging changes from hunter-gatherers to early farmers with the domestication of wild grains and animals;
- the early urban settlements and the Biblical Period;
- the Greco-roman period with the parallel Nabataean influences;
- the Christian and Byzantine periods;
- the early Arab/Muslim period, including Crusader influences;
- the later Arab/Muslim period including the Ottoman Empire.



The pre-historic sites of 'Ubeidiya and the later settlements of Jericho, Sha'ar Hagolan and Tell al-Far'a represent milestones in dispersion of human communities out of Africa. While the visual remains at these older sites are not spectacular, the valley is nonetheless known for containing remarkable evidence for human origins. Wheat was cultivated for the first time near Jericho, at Gilgal. Jericho, one of the oldest cities in the world, connects the urban farming settlements which follow it historically to the even older primordial cultural landscapes.

The river itself is a life source for the valley, both in terms of the fresh water that it has (at least historically) provided, and in terms of its representation in many cultures as a spiritual element. The sun-drenched area of the valley south of the Sea of Galilee, lush with vegetation, came to be associated with the Gates of the Garden of Eden.

The Old and New Testaments are full of references to the significance of the Jordan River and Valley. Moses, a prophet to three of the world's most prominent religions, was forbidden from entering the valley and instead made to gaze famously down upon it from Mount Nebo. The River Jordan is mentioned in several stories of the Old Testament. Genesis 13:10-11 refers to the beauty of the Jordan Valley: "And Lot lifted up his eyes, and saw that the Jordan Valley was well watered everywhere like the garden of the Lord."

During the Greco-Roman period, writings by Pliny as well as in the New Testament recognize a contiguous territorial authority on both sides of the Jordan River, focused on a disputed number of "Decapolis" cities. The four city-states of Bet Shean/ Scythopolis to the west of the Jordan River and Susseita/Hippos, Gadara and Pella to the east of the River were those that touched the Jordan River Valley.

During the Byzantine period, sites of the baptism and those associated with the revelations of Testament became places of pilgrimage around which churches and monasteries were built.

The Early Moslem period saw the first buildings of the Ommayad dynasty and the identification of sites associated with the prophet Mohammed. The Crusader hiatus during the twelfth and thirteenth centuries generated large-scale building of the Medieval Castles of the Near East. Belvoir and Ajloun are majestic evidence of this period's development.

During the whole period, the geo-climatic conditions were a generator for innovative changes in technologies, including building, with mosaics, pottery and frescos, and farming, including the domestication of new crops and their ancillary installations.



Significance and its universal value

The significance of the Jordan River Valley is the sum total of the natural, cultural and intangible values of the site. It can be summed up as the shared cultural landscape of the Jordan River Valley.

- natural
 - cultural
 - intangible
- } cultural landscapes

The crossing of rivers has always had special meaning to people. The routes and civilizations that have crossed and walked the valley have termed a phrase to 'Cross the Jordan' predating that of the Rubicon. The intermittent drying of the Jordan River to allow crossings is part of the characteristics of the meandering river. The many khans and customs houses criss-cross the valley as it changes meaning from one period to the next. Water, the life source, is the continuum, the strand that connects people, place and period. The curing of Naaman, the poetry of the Psalms, the baptismal sites and the hot springs at Hamat Gader all point to the role the Jordan Valley plays in the minds of its residents and its admirers the world over.



3. WATER SOURCES AND NATURAL HABITAT

The main source of the waters of the Jordan River is currently the precipitation from Mount Hermon / Jabbel Sheikh. Rain and melting snow from the mountain seeps into the rock and forms huge underground reservoirs that feed the river. The south-western flanks of Mount Hermon / Jabbel Sheikh drain into the Jordan River by direct runoff, but the main water supply to the river originates from large springs. The three main springs are Hasbani in Lebanon, Baniyas in the Golan and Dan in Israel. These three main sources combine near the northern edge of the Hula Valley and from there form the Upper Jordan River which flows south about 14 km and enters the Sea of Galilee. After leaving the Sea of Galilee, the River is known as the Lower Jordan River. About 10 km south of the Sea of Galilee, its main tributary, the Yarmouk River, joins the Jordan River.

The Yarmouk River drains the basaltic plateaus of the Hauran in Syria, an area of fair rainfall and strong runoff, and accordingly with fewer springs. South of the confluence with the Yarmouk, the Jordan River flows to the Dead Sea. From the Yarmouk to the Dead Sea the river receives almost no direct rainfall, but picks up volumes of water from ground water spring flow and intermittent tributaries along its 200 km meander southward along the valley floor to the Dead Sea – the lowest place on earth. Only some fifty years ago an estimated 1.3 billion cubic meters of water flowed annually from the Lower Jordan River into the Dead Sea.



Country	Spring flow and intermittent tributaries
Jordan	Wadi Al-Arab, Sail Ziqlab, Wadi Jurrum, Wadi Al Yabis. Wadi Rajib, Zerqa River, Wadi Shuaib, Wadi Kafranja, Sail Hisban, Wadi Abu Zaid.
Palestine	Wadi El Malih, El Far'a, El Auja and El Quilt
Israel	Nahal Yavne'el, Nahal Tavor, Nahal Yissakhar, Harod River, Amal River, Bezeq Stream

The Jordan River Valley is at the ecological junction of three continents; Asia, Africa and Europe. This geographical location has created a remarkable and unique mixture of diverse habitats that belong in origin to different bio-geographic climates. The Valley has three bio-geographic regions in a relatively small area that maintains flora and fauna species that belong to these three distinctive origins; Mediterranean (European), Irano-turanean (EuroAsian) and Afro-tropical (Ethiopian). The Valley comprises the southern and the northern limits of distribution for a range of species that are threatened even at the global level.

These uniquely diverse zones have allowed for a significant number of vegetation types that are located in a small geographical area. These vegetation types include saline vegetation at the



middle and southern parts of the river banks and their flooding plains, tropical vegetation which occupies the lower parts of the middle and southern Valley, steppe vegetation at the northern parts where the vegetation starts to appear from the river banks until the middle elevation where the Irano-turanian zone exists. Deciduous oak forest vegetation occupies the most northern and high elevations of the River Valley and Mediterranean Non-Forest Vegetation are found at some areas of the higher elevation parts at the northern tip of the Valley. In addition water vegetation is found in the wadi systems which are the natural tributaries that flow west and east toward the River Jordan.

This diverse vegetation cover includes important species which are endemic, rare or endangered.

Endemic Plant Specie	Rare plant Species	Endangered Plant Species
<i>Tamarix jordanis</i>	<i>Acacia albidiae</i>	<i>Acacia albidiae</i>
	<i>Salix alba</i>	<i>Salix alba</i>
	<i>Iris pseudacorus</i>	<i>Iris pseudacorus</i>
		<i>Phoenix dactylifera</i>
		<i>Ziziphus nemmularia</i>
		<i>Quercus aegilops</i>

For fauna as well as flora, the Lower Jordan River Valley is the meeting point for three mammal zoogeographic regions: the Mediterranean Zoogeographic Region in the northern and the higher parts of the Valley, the Sahsro-Sindian Zoogeographic Region in the middle areas of the Valley and the Ethiopian / Afro tropical Zoogeographic Region at the tropical vegetation areas of the Valley.



This diversity of fauna in the Valley is significant for the conservation of important species that are globally or regionally endangered, threatened and rare such as:

Species , Common Name	Conservation Status
<i>Suncus etruscus</i> , Savi's dwarf shrew	Rare in the Valley, unknown status due to insufficient data
<i>Canis lupus pallipes</i> , Indian Wolf	IUCN Mace\ Lande:Vulnerable/Rare
<i>Hyaena hyaena syriaca</i> , Syrian Hyaena	IUCN Mace\Land: Rare
<i>Felis sylvestris tristrami</i> , Wild Cat	IUCN Mace\Land: Endangered
<i>Felis chaus</i> , Jungle cat	IUCN Mace\Land: Critical, Rare
<i>Felis caracal</i> , Caracal	IUCN Mace\Land: Critical, Rare
<i>Felis Pardus</i> , Arabian Leopard	IUCN Mace\Land: Critical, on the verge of extinction from the Valley
<i>Lutra lutra</i> , Common Otter	IUCN Mace\Land: Critical, on the verge of extinction from the Valley
<i>Gazella gazelle gazelle</i> , Palestine Mountain Gazelle	IUCN Mace\Land: Vulnerable



Furthermore due to its location in the Great Rift Valley, the Jordan River Valley is located at the centre of one of the most important bird migration flyways on the globe. This flyway carries more than 500 million birds twice each year as part of their migration from and to the southern and northern hemispheres. The Valley is home to globally and regionally threatened and endangered bird species such as:

Species , Common Name	Conservation Status
<i>Crex crex</i> , Corncrake	Migrant, Globally Threatened
<i>Phalacrocorax pygmeus</i> , Pygmy Cormorant	Resident, Globally Threatened
<i>Marmaronetta angustirostris</i>	Resident, Rare, Globally Threatened
<i>Ciconia ciconia</i> , White Stork	Migrant, Jordan River Valley maintains more than 1% of the world population of this species.
<i>Ciconia nigra</i> , Black Stork	Migrant, Jordan River Valley maintains more than 1% of the world population of this species.
<i>Bubulcus ibis</i> , Cattle Egret	Resident, Migrant, Jordan River Valley maintains more than 1% of the world population of this species.
<i>Nycticorax nycticorax</i> , Night Heron	Resident, Migrant, Jordan River Valley maintains more than 1% of the world population of this species.
<i>Francolinus francolinus</i> , Black Francolin	Resident, Regionally Threatened and declining in numbers
<i>Botaurus stellaris</i> , Bittern	Migrant, Regionally Threatened and declining in numbers
<i>Neophron percnopterus</i> , Egyptian Vulture	Rare Resident, Migrant, Regionally Threatened and declining in numbers
<i>Pernis apivorus</i> , Honey Buzzard	Migrant, Regionally Threatened and declining in numbers
<i>Aquila pomarina</i> , Lesser Spotted Eagle	Migrant, Regionally Threatened and declining in numbers
<i>Accipiter brevipes</i> , Levant Sparrow Hawk	Migrant, Regionally Threatened and declining in numbers
<i>Gallinago media</i> , Great Snipe	Migrant, Regionally Threatened and declining in numbers
<i>Serinus syriacus</i> , Syrian Serin	Rare Migrant, Restricted in its world distribution to Middle East



4. CHALLENGES AND OPPORTUNITIES

Diversion of the River's Water

Fresh water sources have been diverted from the Lower River Jordan in significant quantities. Under British Mandate authority a dam was built at the southern exit of the Sea of Galilee at Degania. Subsequently in the 1960s Israel diverted waters of the Sea of Galilee out of the basin through the National Water Carrier, after which Jordan built the King Abdullah Canal capturing waters of the Yarmuk River. Israel, Syria and Jordan have built significant side dams on the Wadis capturing the water that flowed either into the Lower Jordan River directly or to the Yarmuk and its sources.

The result of all the water diversion is that the flow of the Lower Jordan River has dropped by over 90% from 1.3 billion cubic meters per annum to an estimated 50 to 100 million cubic meters per annum presently. A significant percentage of what now flows in to the river is sewage from Israeli, Jordanian and Palestinian communities, agricultural return flows, ground water seepage, and brackish water flow discharged from salty springs around the Sea of Galilee and diverted by Israel to the Lower Jordan River by means of the Salt Carrier Canal (SCC). Plans by Israel and Jordan to treat the sewage effluent and utilize it for agriculture and plans to desalinate the brackish water and make it available for urban consumption will reduce the base flow of the river even further.



Ironically, a recent study concluded that without the sewage and brackish water dumping into the river, parts of the river would be completely dry in summer. A new dam is also being built by Syria and Jordan on the Yarmouk that will stop the winter floodwaters of the Yarmuk from enriching the riverbanks. These annual floods play an important role in maintaining the plant life of the river bank habitat, the river channel structure, flush sediments and signal mating times for wildlife and now this too is threatened to be lost. The impact on the Dead Sea of the diversion of over 90% of Jordan River waters has also been destructive, and has been a large factor in the dramatic drop in Dead Sea water levels resulting in the formation of sinkholes along the length of its shores. For more information on this issue see, "Let the Dead Sea Live. A Concept Document towards the Dead Sea Basin Biosphere Reserve and World Heritage Listings," FoEME, 2000.

Existing Nature Reserves, Protected Areas and Parks

Despite the uniqueness of the Jordan River Valley in both cultural and natural heritage there is no integrated management plan for the area, no strategy in place to protect and sustainably manage the area as a whole and no mechanism in place for cooperation between the responsible

authorities, Israeli, Palestinian and Jordanian, as regards protection of the cultural and heritage values of the Valley.

What does exist is a patchwork of Nature Reserves and National Parks on the western side of the Valley on the Israeli and Palestinian side and only one as a proposed nature reserve on the Jordanian side. National parks exist to manage the many cultural sites but there is no network in place to emphasize the unified natural heritage of the region or to connect cultural sites, which could capitalize on the story of "Crossing of the Jordan" as the common theme that unites them. The current demise of the river, as it has been turned into little more than an open sewage channel is contrary to natural and cultural heritage values subscribed to by the countries under international convention.

Ironically it is the declared military zone and fencing along the western side of the River that has protected the natural habitats and their species - especially at the floor of the Valley close to River Jordan. But while the lack of access to the River has prevented most development along its banks, it has also allowed government authorities to divert the waters of the Jordan River and replace them with sewage with little public outcry to date. With the River expected to run dry soon and the natural habitat of the Valley facing possible devastation, controlled access to the River is crucial to raise public awareness and gather public support for the revitalization of the River Valley.

There is an urgent need to assess in an integrated fashion the adequacy of existing reserves and parks as core areas of cultural and natural heritage sites. There is a great need to identify and declare additional areas for protection - including the Jordan River itself - while recognizing the needs of other sectors social and economic through the implementation of zoning. A good example of appropriate zoning exists under the UNESCO Man and Biosphere program where core, buffer and transition areas are demarcated as part of an overall management plan. Development of eco-tourism in the Jordan River Valley is an example of an economic activity that can, if properly planned and implemented, balance the competing economic and conservation interests at stake.





5. STRATEGIES AND MECHANISMS FOR CHANGE

Conventions and Networks

The use of existing and accepted mechanisms for the conservation of cultural and natural heritage is an effective manner to influence decision making. While the sites along the Jordan River Valley might not all be of outstanding universal value, the categories that have developed over the past decades can be used not only in the universal context but also in regional and district contexts. It is with this in mind that we relate these conventions and programmes to develop an overall strategy integrating not only the tangible and intangible but also the cultural and natural into a comprehensive approach to the Lower Jordan River Valley.

We have identified the following frameworks for consideration:

- World Heritage
- Man and Biosphere
- Intangible Heritage
- Cultural Diversity
- Peace Parks
- Ramsar
- Important Bird Areas

World Heritage

The Convention Concerning the Protection of World Cultural and Natural Heritage, 1972, known commonly as the World Heritage Convention, identifies *monuments, groups of buildings and sites*. The sites of the Jordan Valley can be seen as defined in Article 1 of the Convention as

'the works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view.'

Paragraph 36 of the Operational Guidelines to the Convention that were amended in 1992 defines the Cultural Landscapes as the *'combined works of nature and of man'*

They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal. They should be selected on the basis both of their outstanding universal value and of their representativity in terms of a clearly defined geo-cultural region and also for their capacity to illustrate the essential and distinct cultural elements of such regions.



There are six criteria for the inscription of cultural sites:

- i. represent a masterpiece of human creative genius; or*
- ii. exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design; or*
- iii. bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared; or*
- iv. be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history; or*
- v. be an outstanding example of a traditional human settlement or land-use which is representative of a culture (or cultures), especially when it has become vulnerable under the impact of irreversible change; or*
- vi. be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance (the Committee considers that this criterion should justify inclusion in the List only in exceptional circumstances and in conjunction with other criteria cultural or natural);*

The Jordan River Valley might relate to criteria (iii), (iv),(v) and (vi) not only through individual sites but through the cultural landscapes of the valley.



Man and Biosphere

The Biosphere Reserves are an elective mechanism forming a world network. They are defined as

areas of terrestrial and coastal ecosystems promoting solutions to reconcile the conservation of biodiversity with its sustainable use... Biosphere reserves serve in some ways as 'living laboratories' for testing out and demonstrating integrated management of land, water and biodiversity. Each biosphere reserve is intended to fulfil three basic functions, which are complementary and mutually reinforcing:

- **conservation** ... - to contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **development** ... - to foster economic and human development which is socio-culturally and ecologically sustainable;
- **logistic** ... - to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

Once again the format of providing an integrative approach involving the local communities is high on the agenda. The MAB format identifies core areas, buffer and transition zones, which could form the basis for the comprehensive proposal for the Jordan River Valley. These zones are defined as:

The core area needs to be legally established and give long-term protection to the landscapes, ecosystems and species it contains. It should be sufficiently large to meet these conservation objectives. As nature is rarely uniform and as historical land-use constraints exist in many parts of the world, there may be several core areas in a single biosphere reserve to ensure a representative coverage of the mosaic of ecological systems. Normally, the core area is not subject to human activity, except research and monitoring and, as the case may be, to traditional extractive uses by local communities.

A buffer zone (or zones) which is clearly delineated and which surrounds or is contiguous to the core area. Activities are organized here so that they do not hinder the conservation objectives of the core area but rather help to protect it, hence the idea of "buffering". It can be an area for experimental research, for example to discover ways to manage natural vegetation, croplands, forests, fisheries, to enhance high quality production while conserving natural processes and biodiversity, including soil resources, to the maximum extent possible. In a similar manner, experiments can be carried out in the buffer zone to explore how to rehabilitate degraded areas. It may accommodate education, training, tourism and recreation facilities. In buffer zones, emphasis is on sustainable use of the natural resources for the benefit of local communities.

An outer transition area, or area of co-operation extending outwards, which may contain a variety of agricultural activities, human settlements and other uses. It is here that the local communities, conservation agencies, scientists, civil associations, cultural groups, private enterprises and other stakeholders must agree to work together to manage and



sustainably develop the area's resources for the benefit of the people who live there. Given the role that biosphere reserves should play in promoting the sustainable management of the natural resources of the region in which they lie, the transition area is of great economic and social significance for regional development.

The core areas might be the cultural nodes and natural forms of the Jordan River the Ghore and Zohre together with the tributaries, while the landscape will provide the backcloth and buffer zone.

Intangible Heritage

This new Convention approved in November 2003 brings together many aspects of the intangible as defined in Article 1.

The "intangible cultural heritage" means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their



environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. For the purposes of this Convention, consideration will be given solely to such intangible cultural heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development.

The Jordan River Valley presents the Cultural Spaces recognizable by communities and groups as their cultural heritage. The challenge that this Convention offers is to deal with its constant recreation whether through tradition of baptism or pilgrimages to the Holy Sites and shrines.

Cultural Diversity

The UNESCO Declaration on cultural diversity is another layer of attitudes reflecting the importance of shared cultural values

Culture takes diverse forms across time and space. This diversity is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind. As a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature. In this sense, it is the common heritage of humanity and should be recognized and affirmed for the benefit of present and future generations.

Peace Parks

Peace Parks have developed over the years and are becoming an important tool in the visual comprehension of peace in troubled areas. The process has been developed by IUCN - The World Conservation Union and WCPA- World Commission on Protected Areas. The first evaluation and guidelines were formulated at an International Symposium on Parks for Peace at Bormio, Stelvio National Park, Italy - in May 1998. The vision was defined at differing levels as parallel top-down and bottom-up process:

Someone at some level must have a vision that transboundary cooperation between protected areas is needed or very desirable because of the benefits which more than compensate for the problems encountered in trying to have collaboration across a border. It behoves WCPA in any "Parks for Peace"

1 The term protected area (PA) is used both in the sense of the IUCN definition and its categories (I - VI), but also to include Dedicated Conservation Areas where biodiversity conservation and sustainable use objectives prevail, but the area may not be legally established. initiative to

make these benefits very visible, so that individual protected area field staff, managers and directors, agency heads, ministers, politicians, NGOs and the general public may become enthused, and work to achieve transboundary cooperation. Benefits may be in such areas as:

- *Promoting international friendly working relations which may extend eventually to other areas including enhancing regional cooperation;*
- *Better safeguarding and maintenance of biodiversity since ecosystem boundaries do not stop at borders, either on land or sea, or rivers;*
- *Better research;*
- *Better control of cross-border problems such as fire, pests, poaching, marine pollution;*

In addition to the accepted definitions of biodiversity and sustainability, yet again the involvement of the local communities is paramount. The guidelines are specific in this activity:

1. *Know and understand how the existing socio-economic dynamic can affect or support the development of a transboundary protected area initiative.*
2. *Involve local communities living in the border area in educational and environmental awareness activities promoted by protected areas.*
3. *Facilitate and promote actions that contribute to transboundary management such as cultural activities, joint festivals across the borders, common open markets, etc.*
4. *Promote the participation of local communities in planning and management of TBPA's.*
5. *Involve local communities living in border areas in economic activities such as tourism, local industries, transport, infrastructure development, and the like.*

Ramsar

The Convention's mission is "the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world". A broad definition of the types of wetlands is covered in its mission, including swamps and marshes, lakes and rivers, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans.

- *Wetlands provide fundamental ecological services and are regulators of water regimes and sources of biodiversity at all levels - species, genetic and ecosystem.*
- *Wetlands are windows on interactions between cultural and biological diversity.*
- *Wetlands constitute a resource of great economic, scientific and recreational value for the global community. Progressive encroachment on, and loss of, wetlands cause serious and sometimes irreparable damage to provision of ecosystem services.*
- *Wetlands should be restored and rehabilitated, whenever possible.*
- *Wetlands should be conserved by ensuring their wise use.*

The River Jordan and Rhore area could be classified as an Inland Wetland (M) Permanent rivers/ streams/creeks; includes waterfalls.

In the New Guidelines for management planning for Ramsar sites and other wetlands there are general guidelines dealing with the dialogue with stakeholders and the dynamics of an evolving process.

7. *Wetlands are dynamic areas, open to influence from natural and human factors. In order to maintain their biological diversity and productivity (i.e., their 'ecological character' as defined by the Convention and to permit the wise use of their resources by people, an overall agreement is essential between the various managers, owners, occupiers and other stakeholders. The management planning process provides the mechanism to achieve this agreement.*

9. *The management plan is part of a dynamic and continuing management planning process. The plan should be kept under review and adjusted to take into account the monitoring process, changing priorities, and emerging issues.*

But the most critical part of the Ramsar Convention deals with the attitudes towards the cultural values of the sites. Their recommendations are outlined below:

106. *Landscape and wilderness qualities are often overlooked in management plans when they apply to protected areas. For sites where habitat management and maintenance is important, and there are few human-made structures, the management of the habitat will usually also cover most landscape issues. For most natural protected areas, landscape management will be concerned with minimising, or removing, the influence of people where this is regarded as visually damaging.*

107. *In the case of sites where there are significant anthropogenic artefacts with historical, cultural or religious values, these should also be safeguarded through the management planning process. Such features could be included in a plan's section on landscape, but their protection and maintenance is probably best achieved by regarding them as features of interest, and dealing with them as any other feature.*

108. *An indicative list of cultural features of wetlands is provided in box 2.*

BOX 2. Indicative list of cultural features of wetlands for evaluation for wetland management planning

(derived from the Cultural aspects of wetlands (Ramsar COP8 DOC.15))

Palaeontological and archaeological records

Historic buildings and artefacts

Cultural landscapes

Traditional production and agro-ecosystems e.g. ricefields, salinas, exploited estuaries

Collective water and land management practices

Self-management practices, including customary rights and tenure

Traditional techniques for exploiting wetland resources

Oral traditions

Traditional knowledge

Religious aspects, beliefs and mythology

The arts" - music, song, dance, painting, literature and cinema

Important Bird Areas

The Ramsar Convention gives first priority to the wetlands as a home for waterfowl, thus coordinating with identified Important Bird Areas. These areas are selected in several categories and include:

- 1: *Sites regularly holding significant numbers of an endangered, threatened, or vulnerable species. (US Endangered Species Act, or BirdLife International list).*
- 2: *Sites regularly holding endemic species, or species with restricted ranges. (species with range <50,000 sq km)*
- 3: *Sites regularly holding an assemblage of species restricted to a biome or a unique/ threatened natural community type.*
- 4: *Sites where birds concentrate in significant numbers when breeding, in winter, or during migration.*
 - a) *The site regularly holds greater than 1% of the population of a congregatory species (global, continental, national).*



6. RESPONSIBLE AUTHORITIES AND STAKEHOLDERS

The first note of Article 5 of the World Heritage Convention elaborates on the importance of participation:

To ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party to this Convention shall endeavour, in so far as possible, and as appropriate for each country:

a. to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes;

The mechanisms proposed have to be developed using the varied conventions and networks available under the UNESCO umbrella. In many instances there is no need to formally approve a convention to start the processes needed for the management of the site. At the local level the experiences of the existing Jordan Valley Authority on the Jordanian side, River Basin Authorities on the Israeli side and the operations of the Palestinian Water Authority can be the basis for expanding management. The local experiences of the Joint Water Committees, Israeli – Palestinian and Israeli – Jordanian as well as the Israeli – Jordanian Border Commission are important to learn from though none of these bodies have promotion of sustainable development as their mandate. International experience is important to learn from and in this regard for instance the International Joint Commission, which has for nearly a century managed waters along the United States-Canadian border, seems to offer a model with some promise for application to both the Jordan River and Dead Sea Basin. We have shown that by using the accepted terms and formats of professional guidelines, an enriched structure can be prepared. It can also be seen, and should be emphasized, that the involvement of the local community and the other stakeholders can be the guarantee for success.



7. OUR PROPOSAL AND NEXT STEPS

Cultural Heritage

Our proposal for emphasizing the cultural richness of the Lower Jordan River Valley emphasizes the concept of “crossing” in terms of physical, natural and historical bridges and links between the two banks of the river and between the Valley and the world at large. We begin by identifying sites of significance by historical periods and by their grouping in the Jordan River Valley.

The periods represented:

1. Pre-historic
2. Biblical
3. Greco-Roman
4. Early Christian and Byzantine
5. Early Arab/Muslim
6. Crusader
7. Later Arab/Muslim and Ottoman

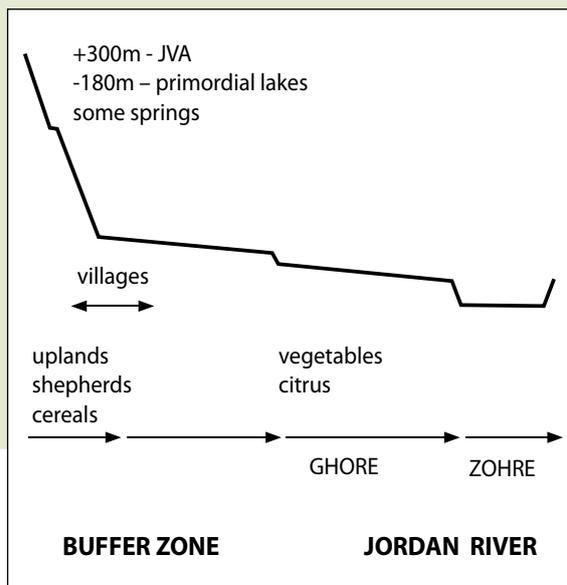
Each of the following sites is to be identified as a core zone or site for possible recommended inscription through one of the UNESCO mechanisms, with the opportunity that they might be connected to the many natural sites through the cultural landscapes and buffer zone concepts. The main foci are identified below.

	Israel	Jordan	Palestine
Pre-historic	'Ubeidiya – Shaar Hagolan	Teleilat al Ghassul	Tel-el-Sultan
Biblical	Bet Shean, Gilboa	Tel Deir Alla, Mount Nebo	Gilgal, Sartaba, Jericho
Greco-Roman	Scythopolis	Pella, Gadara	
Early Christian & Byzantine	Bet Alpha	Baptism Site	Deir Hijle Deir Qarantal Hisham Palace Baptism Site
Early Arab/Muslim		Tel al Mazar, Abu-Ubaida	
Crusader	Belvoir	Ajloun	
Later Arab/Muslim and Ottoman		Umm Qais	

Crossing the Cultural Heritage in the Lower Jordan River Valley

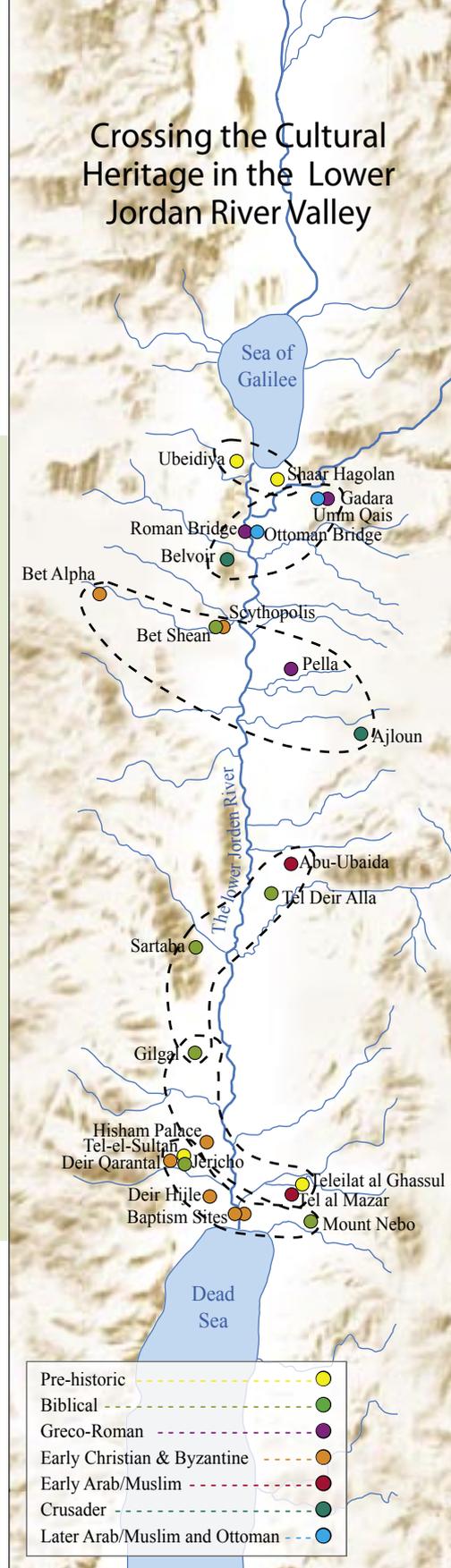
At each side of the rift extend cultural sites – the Jezreel Valley and the historic sites and battles at Megiddo, Wadi Qelt and the desert monasteries of Byzantium and the sites of Madaba and Philadelphia by Wadi Kafrein to the east. The peaks of the Gilboa, Sartaba, Umm Qais and Mount Nebo provide the sense of place overlooking the valley.

The sites are grouped according to geography and history. The regional grouping is important



for the local management and economic base, while the themes provided by history allow the *living together in the valley*. But the cross section of the valley is the key to its narrative. It provides the essence of the cultural landscape.

The Jordanian Jordan Valley Authority (JVA) defines the upper limits of their aegis at 300 metres above sea level, and in some places this is the visual and geological outer boundary of the valley as well. As this diagram shows, the shape of the valley is influenced by the primordial lakes of Lissan and 'Ubeidiya at 180 metres below sea level. Springs in the upper reaches of the rift support the growth of villages at the end of the plain. The uplands above the villages inside the valley (which lie just above the ghore) are prime areas for grazing and cereal cultivation, while the vegetables and citrus trees are planted in the upper



reaches of the plain. The Ghore and Zohre, distinguished by the amount of flooding they encounter, overlap at the Jordan River depression. This geography changes somewhat along the course of the river, but these basic demarcations are critical to its cultural landscape.

The cultural itineraries can be the structure whereby the sites can be linked. This might include the prehistoric routes from the Great Rift Valley to the Fertile Crescent, the Biblical Routes, the Roman frontiers, the journeys of Jesus and the Apostles and the pilgrims' route of the 'friends of Mohammed'. The battles of this region include the early conquests of the Persians and the Assyrians and the later treks of Salah-a-din.

Natural Heritage

The natural component of our proposal must build on the current recognized and proposed natural areas along the lower Jordan River Valley. These areas are classified as follows:

Classification	Jordan	Palestine	Israel
Nature Reserve		Agmot Umm Zukha Tamun Kabir Kharuba Sartaba Adam Bridge Fara Wadi El Akhmar Wadi Malha Pazel Aravot Jericho Wadi Ouja Wadi Kelt Jordan	Motzei Yarden Yarmuch Nahal Tavor Naveh Yissakhar Gilboa Gaon Ha Yarden Hamadia Maoz Hayim Horushat Maoz Hayim Kfar Rupin Shmurat Abuka Tel Saharon Bezek Ein Jinda
National Park		Hisham Palace	Kohav Hayarden Beit Shean Harod Spring Gan Hashlosha Beit Alpha
Proposed Protected Area	Al Maghtas (Baptism Site)		
Important Wetland	Jordan River Valley Wadi El Arab Wadi Ziglab Zarqa River Wadi Damia, Kibed Pool, Kafrein Dam an Swaimeh Pool	Jordan River Valley	Jordan River Valley
Important Birds Area	North Shouneh, Al Maghtas (Baptism Site) and Swaimeh	Al-Oja Jericho Wadi Al-Qelt	Harod and Beit She'an Valleys Northern lower Jordan valley Kfar Rupin

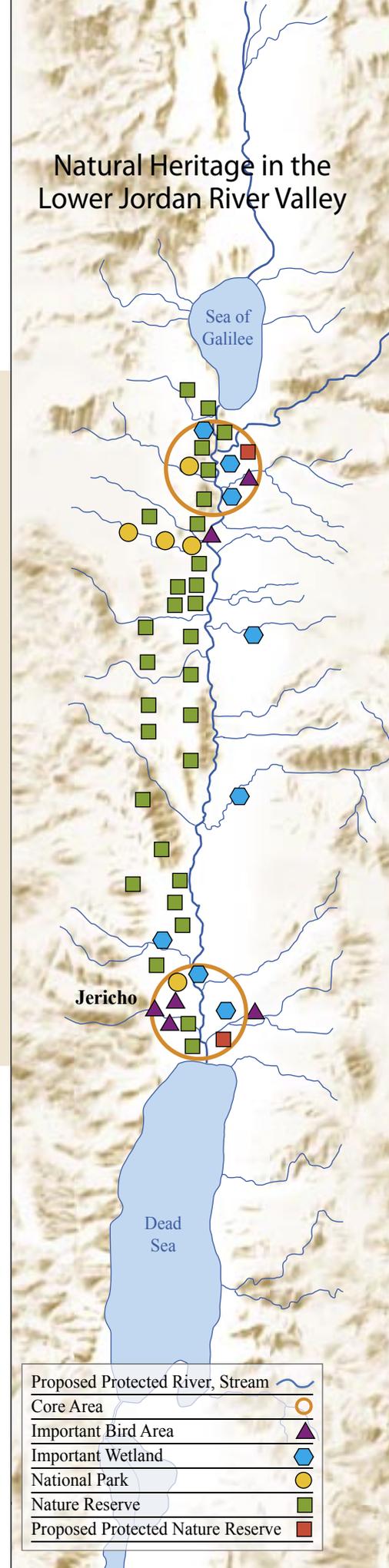
Natural Heritage in the Lower Jordan River Valley

According to the above mentioned classification there are two major clusters or core areas in the north and the south of the Valley that have a diameter not less than 5 km. These core areas are trans-boundary, where the River Jordan itself is at the centre of these trans-boundary core areas. Around these two cores a buffer zone should be created where socio-economic activities should only be allowed that enriches the natural biodiversity, which the cores hold. Transitional zones should be created around the buffer zones where more intensive human activities can occur. At the same time all naturally important areas that are located out of these two core areas are still to be protected and considered core areas where national and international protection laws and regulations should be implemented on these sites in accordance with their classification and recognition.

There are four main sections of the River Valley reflected in the east and west tributaries of the Jordan. All these rivers and streams must be identified for different levels of protection and ecological restoration.

Yavniel, Tavor, Yissachar	Yarmuch, Arab
Harod, Bezek, Malich	Zeghlab
Fara, Achmar	Zarka
Ouja, Qelt	Damya, Kafrein

The exact location of the core and buffer zones cannot presently be defined due to the need for further information and research. Nevertheless it seems that the southern transboundary core and buffer could be from Wadi Numrin down to the Dead Sea on both sides of the River Jordan, and the northern core and buffer could lie between the southern tip of the Sea of Galilee and Wadi Zeghlab and down to Kfar Rupin.





Ecological River Restoration

The ecological component of the proposal is based on facilitating plans for the restoration of instream flows to the river itself. Protection of instream flows follows accepted academic and policy recommendations, including those of the European Commission's Water Directive, the World Commission on Dams, and the World Conservation Union (IUCN). The practice is now gaining currency within the region as well. For instance, the Israeli national water law was recently amended in order to recognize nature as a legitimate consumer of water.

To do so the following steps are anticipated:

- Collection of current research on flows within the region
- Comparison of local options with international experience in restoration flows
- Adaptation of international models to local circumstances
- Agreement on level of desired and feasible restoration through participatory process
- Evaluation of the social and economic impacts of restoration and possible compensation for those who may be adversely affected
- Development of restoration plan
- Promoting political and social support for plan



The steps are not necessarily sequential. For instance, promotion of political and social support for restoration is intended to be an ongoing process from the initiation of the project. It is fully expected that a restoration plan could be integrated within any of the international conventions and networks mentioned above, should they be adopted.

Several studies have demonstrated the public's interest in seeing restored water bodies and natural areas. In fact, one recent study undertaken by EcoPeace/Friends of the Earth Middle East for The Dead Sea Basin, has shown that all three local populations, Israeli, Jordanian, and Palestinian, are even willing to pay significant sums of money for such restoration. Unfortunately, at the moment the public does not have much awareness of the issue, nor is it one that it feels it has a role to play in promoting. At the political level, restoration remains at the level of broad planning, if at all. The little protection of minimum flows has been taken up by local environmental agencies or organizations on an ad hoc level and has been only of limited success. For instance, local bodies succeeded in moving a diversion of water from Wadi Mujib, in Jordan, downstream of a nature reserve, but did not succeed in preventing the diversion.

Currently, the Israeli Nature Reserve and Parks Authority and the Ministry of Environment have initiated a program for the restoration of minimum flows to rivers. Their assessment of the waters necessary to restore the lower Jordan and surrounding area range from 141-192 million cubic meters (mcm) per year. The figures were based on the Tennent Method for estimating instream flow needs. This method is one of the most popular in the world, because it was one of the first such methods to be applied, it is extremely easy to use, and involves almost no research costs. It is a very general method, however, and based on data from rivers in the United States. A logical next step is to convene experts throughout the region to compare the findings of this method with those of other accepted methods such as the Wetted Perimeter Method, the Instream Flow Incremental Method (IFIM), the Range of Variability Approach, the DRIFT Method, etc. In addition to examining minimum flows, several of these other methods take into consideration the timing, duration, and quality of such flows, as well as biological and geo-morphological factors.

Public forums with a wide variety of stakeholders will be convened to discuss feasible desired levels of restoration. Impacts further down the Jordan Valley and on the Dead Sea must also be considered. This will allow scientists, economists and policy-makers to then examine the trade-offs necessary for achieving the various possible restoration goals. Once such estimates have been made, an actual restoration plan can be made, including designation of implementing agencies and partners. It is very likely that any restoration plan will impose costs on some sectors. Therefore, it is crucial that, in addition to the restoration of ecological and cultural features, part and parcel of the plan will be a process for gaining the approval and support of potentially negatively affected stakeholders, either through development of alternative options, benefit sharing, or compensation.

Finally, in order to get the necessary political and financial support for implementation, the project envisions a broad informational campaign targeting both the public at large, and policy-makers in particular. The basics are in place, there is now the need for the will of all the parties to bring back to life the Lower Jordan Valley.

8. FURTHER RECOMMENDATIONS

Harness the UNESCO mechanisms of World Heritage, Man and Biosphere, Intangible Heritage and Cultural Diversity as well as Peace Parks, Ramsar Wetlands, and Important Bird Areas (IBA) to promote sustainable development in the Lower Jordan River Valley. Based on UNESCO mechanisms, we recommend that our governments develop in a participatory fashion with municipalities, local residents, civil society groups, the private sector and in particular small business, a detailed Action Plan for the benefit of the valley. UNESCO and potential donor states are asked to adopt this Action Plan and where possible support its implementation. The Lower Jordan River Valley Action Plan (JRV-AP) would have the following objectives:

Ecological Rehabilitation

- Launch and implement a program to rehabilitate the Lower Jordan River and its tributaries, including the prohibition of wastewater discharge in the rivers and eradication of other types of pollution.
- Prepare a Protected Areas Master Plan for the valley, which includes the rehabilitation and sustainable management of its ecological systems both aquatic and open spaces, in accordance with one or more of the UNESCO mechanisms mentioned above.
- Link the many declared nature reserves on the western side of the valley creating ecological corridors and researching potential areas to create new nature reserves especially on the eastern side of the valley, followed by cooperation on nature reserve management across the river valley.

Eco-Tourism

- Prepare tourism trails from where to view the natural beauty and unique heritage of the valley, including developing cross-valley hiking paths, bicycle trails and bird watching areas.
- Develop rural tourism by identifying opportunities to assist and train local residents including farming communities to improve existing or establish new local guesthouses in the valley.
- Identify opportunities in places like Hamat Gader, Himma, Beit Shean, Pella and Jericho to prepare a small business plan for the development of health and spa tourism facilities across the river valley.

Culture

- Prepare a business plan for cross border museums with exhibitions on the water resources, culture, history, habitat and agriculture of the Valley, with educational activities for children and adults.
- Promote cultural events such as festivals and concerts in the old Roman amphitheaters and other sites in Bet She'an, Umm Qais, Jericho, and Pella.
- Restore and promote the archeological, religious and cultural sites that cross the valley in a manner that encourages tourists to visit and compare sites across the valley. (Yardenit in Israel attracted over 500,000 visitors in the year 2000 alone).

Sustainable Agriculture

- Prepare and implement a training program to promote organic, local variety, and sustainable agriculture.
- Prepare a business plan on the theme of a Jordan River Valley organic produce logo and the organization of "organic fairs" in the main cities of the region.
- Provide financial incentives to farmers that maintain and protect cultural landscapes.

The Lower Jordan River Valley Action Plan should utilize and benefit from the existing data researched and developed by government agencies, research institutes, universities and NGOs from across the region.





EcoPeace / Friends of the Earth Middle East (FoEME)

Friends of the Earth Middle East (FoEME) was established in 1994 under the name of EcoPeace. It is a non-governmental, non-profit environmental organisation with the primary objective of promoting co-operative efforts to protect the shared environmental heritage of the Middle East. In so doing, it seeks to advance sustainable development and sustainable peace. FoEME has offices in Amman, Bethlehem and Tel-Aviv.

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