Palestinian NGO Master Plan for Sustainable Development of the Lower Part of the Jordan River Basin

Interventions

May 2015

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Agriculture Interventions
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<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
<th>Start Up Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Improvement of Agricultural Water Use Efficiencies</td>
<td>Palestine, Jordan Valley</td>
<td>Agriculture</td>
<td>2015</td>
</tr>
</tbody>
</table>

**Objectives:**
To reduce per dunum agricultural water demands through the shifting of cropping pattern towards less water consumption plantation; and through promotion of the use of drip irrigation.

**Map:**

![Map of the intervention area]

**Intervention:**
Distribution and construction of new plants such as palm farms to replace bananas and vegetables in addition to drip irrigation public awareness campaigns, environmental education, and rehabilitation of the farms to match the new cropping patterns.

**Preparation:**
- Planning & design the farms
- Market study on agricultural needs
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per farm
- Tendering and construction
- Supply contracts with farm owners and farmer organizations
- Training and public awareness campaigns on the importance of shifting to new crop patterns.

**Operations:**
- Distribution of trees
- O&M
- Technical and financial management

**Results / Impacts:**
- Additional 5000 dunums are cultivated with less water consumption plantation.
- Increase income to farmers by 15 Million NIS.
- Increase food production and food security by increasing the income and so the ability to buy products.
- Reduce water consumption by 1 Mcm/year.
- Awareness regarding environmental and water saving practices is improved.

**Sustainability:**
The Project is sustainable and will enhance the sustainability of the aquifer through the reduction of water demands and will increase the economic value of the one cubic meter in agriculture.

**Organization / Responsibilities:**
- Ministry of Agriculture (farmers support)
- Farm owners/ Farmers / Water User Association/ agricultural unions (beneficiary)
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $50,000</td>
<td>• Preparation time: 0.5 year</td>
</tr>
<tr>
<td>• Construction costs: $750,000</td>
<td>• Construction time: 1.5 year</td>
</tr>
<tr>
<td>• Operation costs: $100,000 / yr</td>
<td></td>
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<tr>
<td>• Annual Revenues: $600,000 / yr</td>
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</tr>
</tbody>
</table>

**Other remarks:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
<th>Start Up Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 - Rehabilitation and upgrading of water systems</td>
<td>Palestine, Jordan Valley</td>
<td>Agriculture- Irrigation</td>
<td>2016</td>
</tr>
</tbody>
</table>

**Objectives:**
To increase water resources availability and enhance water efficiency from wells, ponds and wastewater treatment plants in the Jordan Valley in order to increase water supply for different purposes from these sources and minimize losses from network.

**Intervention:**
- Rehabilitation of 10 agricultural ponds in Jericho Governorate
- Rehabilitation of 7 agricultural wells in Al-Jiftlik, Al-Auja, Marj Naja and Al-Zubaidat.
- Construction of 10 km of main agricultural pipelines
- Rehabilitation of wells in Al-Jiftlik, Al-Auja, and Al-Zubaidat.
- Rehabilitation of irrigation networks for 50,000 dunums of irrigated land, including facilities to distribute treated wastewater.
- Rehabilitation of 20 agricultural wells in Al-Jiftlik, Al-Auja, Marj Naja and Al-Zubaidat.
- Construction of 20 km of conveyance agricultural pipelines wells in Al-Jiftlik, Al-Auja, and Al-Zubaidat.
- Environmental education activities to enhance awareness.

**Preparation:**
- Planning & design new equipment
- EIA’s and licenses
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per location
- Tendering and construction
- Supply contracts with well owners and farmer organizations
- Training for operators and farmers

**Operations:**
- Distribution of water
- O&M
- Technical and financial management

**Map:**

- Rehabilitation of 10 agricultural ponds in Jericho Governorate
- Rehabilitation of 7 agricultural wells in Al-Jiftlik, Al-Auja, Marj Naja and Al-Zubaidat.
- Construction of 10 km of main agricultural pipelines
- Rehabilitation of wells in Al-Jiftlik, Al-Auja, and Al-Zubaidat.
- Rehabilitation of irrigation networks for 50,000 dunums of irrigated land, including facilities to distribute treated wastewater.
- Rehabilitation of 20 agricultural wells in Al-Jiftlik, Al-Auja, Marj Naja and Al-Zubaidat.
- Construction of 20 km of conveyance agricultural pipelines wells in Al-Jiftlik, Al-Auja, and Al-Zubaidat.
- Environmental education activities to enhance awareness.

**Preparation:**
- Planning & design new equipment
- EIA’s and licenses
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per location
- Tendering and construction
- Supply contracts with well owners and farmer organizations
- Training for operators and farmers

**Operations:**
- Distribution of water
- O&M
- Technical and financial management
## Results / Impacts:
- Additional quantity of 2.65 Mcm/year, serving approximately 250 dunum of agricultural land against about 2.0 NIS / m³.
- Increase income to source owners by some 5.3 Million NIS/year
- Increase food production by some 6500 ton per year and income to farmers by 13.0 Million NIS/year.
- The economic value of the cubic meter of water is increased and more water is available for irrigation due to the reduction of losses in the irrigation networks.
- The targeted stakeholders are more environmentally educated.

## Sustainability:
The Project is sustainable and will enhance the sustainability of the aquifer through the reduction of water losses.

## Organization / Responsibilities:
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Well owners/ Farmers / Water User Association/farmers associations (beneficiary)

## Costs and Revenues:
- Preparation costs: $ 700,000
- Construction costs: $ 16,300,000
- Operation costs: $ 1,100,000 / yr
- Annual Revenues: $ 3,300,000 / yr

## Implementation Period
- Preparation time: 1.0 year
- Construction time: 2.0 year
<table>
<thead>
<tr>
<th>Name: A3– Water Right Policies and Regulations</th>
<th>Location: Palestine, Jordan Valley</th>
<th>Type of Intervention: Water Resources</th>
<th>Start Up Year: 2019</th>
</tr>
</thead>
</table>

**Objectives:**
To develop an agreed upon policy and regulations to organize water rights from the agricultural water resources in the area to better manage the resources available and consider and allocate water for nature.

**Intervention:**
Develop a unified policy and regulations that will be applied to all agricultural water resources in the area.

**Preparation:**
- Planning & data collection.
- Finance planning

**Construction / realization:**
- Tendering
- Review data, laws and policies
- Develop the policy and regulations
- Conduct awareness campaigns and focus group meetings

**Operations:**
- Apply proposed regulations
- Conduct public awareness campaigns

**Results / Impacts:**
- A unified water rights policy and regulations that is applied for different water resources.
- Fee collection rates improved and user's satisfaction and willingness to pay has been increased.
- Water for nature has been considered in the regulations.

**Sustainability:**
The project will reduce conflict over water and will assure more equitable distribution of available water resources which in return will enhance the sustainability of the project.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Village Council/ Farmers / Water User Association/ owners (beneficiary)

**Costs and Revenues:**
- Preparation costs: $150,000
- Construction costs: $0
- Operation costs: $0 /yr
- Annual Revenues: $0 / yr

**Implementation Period**
- Preparation time: 0.5 year
- Construction time: 1 year

**Other remarks:**
<table>
<thead>
<tr>
<th><strong>Name:</strong></th>
<th>A4 – Operate the Jericho Agro-Industrial Park</th>
<th><strong>Location:</strong></th>
<th>Palestine, Jordan</th>
<th><strong>Type of Intervention:</strong></th>
<th>Agriculture</th>
<th><strong>Start Up Year:</strong></th>
<th>2016</th>
</tr>
</thead>
</table>

**Objectives:**
To optimize the benefits from the agro-industrial park and expand it to consider other agro-industries and to make sure that the resulted wastewater has been treated to the environmentally accepted standards.

**Map:**

| **Intervention:** | The intervention includes the promotion of the agro-industrial park in Jericho to include other agro-industrial businesses.
In addition, the intervention will construct the needed wastewater treatment local facility to treat the resulted wastewater to the acceptable standards. |
|---|---|

| **Preparation:** | Planning & design of the expansion
EIA’s and licenses
Setting up utilization plan
Finance planning |
|---|---|

| **Construction / realization:** | Identification of needs
Tendering and construction
Management contracts with companies
Training for operators and public awareness for farmers and potential beneficiaries |
|---|---|

| **Operations:** | Marketing
Fee collection
O&M
Technical and financial management |
|---|---|

| **Results / Impacts:** | The industrial park is fully utilized.
The products are marketed more efficiently.
Increase income to beneficiaries by some 10 Million NIS.
All resulted wastewater has been treated properly |
|---|---|

<table>
<thead>
<tr>
<th><strong>Sustainability:</strong></th>
<th>The project will enhance the sustainability of the agro-businesses and optimize the economic benefits from the agro-industrial park. No harm on the environment from wastewater.</th>
</tr>
</thead>
</table>

| **Organization / Responsibilities:** | Ministry of Agriculture (farmers support)
Ministry of National Economy
Farmers / Farmers Unions/ Industrial sector(beneficiary) |
|---|---|
### Costs and Revenues:
- Preparation costs: $200,000
- Construction costs: $1,800,000
- Operation costs: $300,000 / yr
- Annual Revenues: $250,000/ yr

### Implementation Period
- Preparation time: 1 year
- Construction time: 1 year

### Other remarks:
### Name:
A5– Construction of Agricultural Roads

### Location:
Palestine, Jordan Valley

### Type of Intervention:
Agriculture

### Start Up Year:
2015

### Objectives:
To construct agricultural (dirt) roads to increase the accessibility to the different agricultural areas.

### Map:

![Map showing intervention areas](image)

### Intervention:
Construct 45 km of agricultural (dirt) roads in Al-Jiftlik, Al-auja and Kardala area.

### Preparation:
- Planning & design
- Setting up utilization plan
- Finance planning

### Construction / realization:
- Identification of the roads
- Tendering

### Operations:
- Monitor the constructed roads
- O&M

### Results / Impacts:
- The willingness to utilize available land increases due to increase in accessibility.
- More land is being utilized.
- Transportation cost reduced.

### Sustainability:
The project will encourage farmers to utilize their land and will enhance the access to agricultural land which in turn will increase the willingness to irrigate and utilize the irrigable land in the study area.

### Organization / Responsibilities:
- Ministry of Agriculture (farmers support)
- Village Council/ Farmers / Agricultural unions (beneficiary)

### Costs and Revenues:
- Preparation costs: $ 100,000
- Construction costs: $ 900,000
- Operation costs: $ 10,000 /yr
- Annual Revenues: $ 0 / yr

### Implementation Period:
- Preparation time: 0.5 year
- Construction time: 1.5 year

### Other remarks:
**Name:** A6 Enhancement of Palm Production

**Location:** Palestine, Jordan Valley

**Type of Intervention:** Agriculture

**Start Up Year:** 2017

**Objectives:**
To increase the palm production through the enhancement and reproducing of male palm trees and support the marketing practices since palm production today will not meet the demand for the future for both local use and exportation.

**Intervention:**
Construction of 100 dunums of male palm trees farms and provide of reproduction seeds in addition to the construction of packaging and storage center of 1000 ton capacity. This is less than the projected quantities needed for the future population.

**Preparation:**
- Planning & design the farms and the storage center
- Market study on agricultural needs
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per farm
- Tendering and construction
- Supply contracts with farm owners and farmer organizations
- Training and public awareness campaigns on the importance of male palms and the proper packaging and storage.

**Operations:**
- Distribution of palms
- O&M
- Technical and financial management
- Marketing of dates

**Results / Impacts:**
- Additional 100 dunums of male palm trees are constructed and utilized producing the targeted amount of palm trees.
- The packaging center produces 1000 ton of dates which increases the income by an additional 10 Million NIS for exporting purposes.
- Increase income to farmers
- Increase food production and food security by increasing the income and so the ability to buy products.

**Sustainability:**
The project will contribute to the sustainability and the feasibility of Palm production and will increase the benefits from palm production in the area. In addition, the growing demand will enhance the sustainability.

**Organization / Responsibilities:**
- Ministry of Agriculture (farmers support)
- Ministry of National Economy
- Farm owners/ Farmers / agricultural unions/ (beneficiary)

### Costs and Revenues:
- Preparation costs: $100,000
- Construction costs: $1,500,000
- Operation costs: $100,000/ yr
- Annual Revenues: $400,000 / yr

### Implementation Period
- Preparation time: 0.5 year
- Construction time: 1.5 year

### Other remarks:
### Objectives:
To support and enhance the peas sector in the Jericho area.
To increase the effectiveness of the livestock and poultry agriculture to enhance the economic conditions of the participated beneficiaries and to meet the growing demands on meat.
In addition, the project will support beduin communities and women involvement.

### Intervention:
Support 30 beneficiaries in the Jericho area through providing them with:
- Production needs and equipment
- Import advanced queens
- Enhance marketing processes

Support the livestock sector through:
- Improve farm management through providing buildings, tools, scissors, milking machines to a 100 beneficiaries from Al-Dyouk, Fasayl, Al-auja and Al-Jiftlik for 100 beneficiaries.
- Improve health safety through the introduction of new yoghurt processing units and fight insects for 100 beneficiaries.
- Improve sheep types through artificial breeding for 50 beneficiaries.
- Support the poultry sector through improving the farm conditions by the construction of a thermal resistance roofs and the introduction of new technology in Poultry farming for 20 beneficiaries in Jericho Governorate.
- Support the livestock sector through developing and providing better breeds of sheep and cows.

### Map:

![Map of Jericho area](image)

### Construction / realization:
- Identification of needs
- Tendering and construction
- Supply contracts with beneficiaries

### Operations:
- Distribution and marketing of products
- O&M
- Technical and financial management
<table>
<thead>
<tr>
<th>Preparation:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Planning &amp; design of the intervention</td>
<td></td>
</tr>
<tr>
<td>• Market study</td>
<td></td>
</tr>
<tr>
<td>• Setting up utilization plan</td>
<td></td>
</tr>
<tr>
<td>• Finance planning</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Results / Impacts:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• The production of some 10 tons of honey for the local market.</td>
<td></td>
</tr>
<tr>
<td>• Increase income to the 30 beneficiaries in the Jericho area by some 1.0 Million NIS</td>
<td></td>
</tr>
<tr>
<td>• Increase food production and food security by increasing the income and so the ability to buy products.</td>
<td></td>
</tr>
<tr>
<td>• Increase livestock production in the area including meat and dairy products.</td>
<td></td>
</tr>
<tr>
<td>• Increase income to farmers.</td>
<td></td>
</tr>
<tr>
<td>• Increase Poultry production in the area including meat and eggs products.</td>
<td></td>
</tr>
<tr>
<td>• Support beduin communities and women groups.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainability:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The project will increase the sustainability of livestock agriculture in the area and will increase the net benefits from this agriculture. The project will also be sustainable due to the fact that it will support beduin communities and women groups.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization / Responsibilities:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>• Ministry of Agriculture (farmers support)</td>
<td></td>
</tr>
<tr>
<td>• Farmer unions/ Farmers / agricultural unions/ (beneficiary)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $ 145,000</td>
<td>• Preparation time: 1.0 year</td>
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<tr>
<td>• Construction costs: $ 3,850,000</td>
<td>• Construction time: 2.0 year</td>
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<tr>
<td>• Operation costs: $ 375,000 / yr</td>
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<tr>
<td>• Annual Revenues: $ 1,300,000 / yr</td>
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<table>
<thead>
<tr>
<th>Other remarks:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: A8 Support to Women organizations and Bedouin Communities</td>
<td>Location: Palestine, Jordan Valley</td>
</tr>
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</table>

**Objectives:**
To increase the effectiveness of the women organization programs to enhance the economic conditions of the participated women in the programs and to increase the amount of water available for Bedouin communities to enhance the economic conditions of the participated communities in the programs.

**Intervention:**
Support 6 women organizations in Jericho, Al-Auja, Al-Jiftlik and Al-Zubaidat through the construction of dates processing and freezing units and secure the necessary machinery needed to process the extra quantities of dates produced.
Support the Bedouin communities of Al-Jiftlik and Al-auja with 20 water storage tanks of 50 cubic meter to serve as a storage tank for the community and to distribute water.

**Preparation:**
- Planning & design the processing units.
- Market study on agricultural needs
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs
- Tendering and construction
- Supply contracts with women organizations

**Operations:**
- Distribution and marketing of products
- O&M
- Technical and financial management

**Results / Impacts:**
- 10 dates processing units are functioning and supporting the working women with an additional income of 2.5 Million NIS per year.
- The shifting to dates from other more water consumption plants became more feasible.
- Women in these women groups are more active in their societies.
- The processing and freezing centers produces 1000 ton of dates for exporting to national and international markets.
- Increase income to farmers
- Increase food production and food security by increasing the income and so the ability to buy products.
- Increase water availability to Beduin communities by some 1000 cubic meters for different uses.

**Sustainability:**
The Project will improve the living conditions of the Beduin communities and will enhance the sustainability of the agricultural activities for these communities.

**Organization / Responsibilities:**
- Ministry of Agriculture (farmers support)
- Ministry of National Economy
- Women organizations/ Farmers / agricultural unions/ (beneficiary)

<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation costs: $ 60,000</td>
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<tr>
<td>Construction costs: $ 590,000</td>
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<tr>
<td>Operation costs: $ 45,000 / yr</td>
<td></td>
</tr>
<tr>
<td>Annual Revenues: $ 200,000 / yr</td>
<td></td>
</tr>
<tr>
<td>Preparation time: 0.5 year</td>
<td></td>
</tr>
<tr>
<td>Construction time: 1.5 year</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:**
Name: A9 Land Rehabilitation
Location: Palestine, Jordan Valley
Type of Intervention: Agriculture
Start Up Year: 2018

Objectives:
To increase the irrigable land by 40,000 dunums to enhance the agricultural production and increase the food security in Palestine using the most advanced methods available. This will not affect land for nature reserve since all this area is classified as grade A irrigable land. In addition, this land is classified as irrigable land so it will not affect the land use classification in the area.

Intervention:
Rehabilitation of 40,000 dunums of irrigable land through leveling, terracing, cleaning of the land from any stones and supply the farms with state of the art irrigation systems. These 40,000 dunums are those identified as irrigable land at present and are not irrigated. Most of this newly developed land will use drip irrigation or any future revolved irrigation practices that proves to be more efficient.

The anticipated crops are palms and any other products that show profitable with reasonable water requirements.

Preparation:
- Planning & design the farms and the irrigation systems
- Market study on agricultural needs
- Setting up utilization plan
- Finance planning

Construction / realization:
- Identification of needs per farm
- Tendering and construction
- Supply contracts with farm owners and farmer organizations
- Training and public awareness campaigns on the new irrigation practices.

Operations:
- O&M
- Technical and financial management
- Marketing of dates

Results / Impacts:
- Additional 40,000 dunums of irrigable land is reclaimed and supplied with irrigation networks.
- The new irrigable land is irrigated by available treated wastewater and additional quantities from the Jordan River by some 40 Mcm/year.
- The new irrigated land produces additional 120,000 tons of agricultural products for national markets which increases the income by an additional 120 Million NIS.
- Increase income to farmers
- Increase food production and food security by increasing the income and so the ability to buy products.
**Sustainability:**
The project will increase land availability for irrigation and it will increase the sustainability of the agricultural activities in the area. The project will be sustainable since it will increase the income to farmers, provide means of food security and jobs for people living in the study area in particular and Palestine in general. Additional quantity of 40 Mcm/year from the river is less than the Palestinian water rights in the river and for that it will not affect the river environmental flows.

**Organization / Responsibilities:**
- Ministry of Agriculture (farmers support)
- Ministry of National Economy
- Palestinian Water Authority
- Farm owners/ Farmers / agricultural unions/ (beneficiary)

**Costs and Revenues:**
- Preparation costs: $2,000,000
- Construction costs: $150,000,000
- Operation costs: $15,000,000 / yr
- Annual Revenues: $30,000,000 / yr

**Implementation Period**
- Preparation time: 1 year
- Construction time: 5 years

**Other remarks:**
**Name:** A10 Strengthening of extension Services Public Awareness Program  
**Location:** Palestine, Jordan Valley  
**Type of Intervention:** Agriculture  
**Start Up Year:** 2021

**Objectives:**  
To raise the level of awareness of stakeholders in agricultural and water management practices and strengthening of extension services.

**Map:**

![Map of Jordan Valley](image)

**Intervention:**  
Conduct a long term awareness program through the extension services programs within MoA and NGOs that includes the following main subjects:  
- State of the art irrigation technologies  
- Cropping patterns  
- Building International partnership, marketing and export procedures and conditions

**Preparation:**  
- Identification of needs  
- Setting up utilization plan  
- Finance planning

**Construction / realization:**  
- Preparation of the long term programs and topics identification.

**Operations:**  
- Conduct workshops, public awareness programs and distribution of awareness materials.  
- Develop the institutional capacity of the program  
- Technical and financial management

**Results / Impacts:**  
- Awareness of farmers regarding the targeted subjects has been increased.  
- More export agreements have been signed and more products are being exported  
- Additional dunums are cultivated with less water consumption plantation.  
- Increase income to farmers  
- Increase food production and food security.

**Sustainability:**  
The project will not only be sustainable but will enrich the sustainability of agricultural activities in the study area through raising the capacity of the agricultural community and enhance their knowledge.

**Organization / Responsibilities:**  
- Ministry of Agriculture (farmers support)  
- Palestinian Water Authority  
- Farm owners/ Farmers / Water User Association/ agricultural unions (beneficiary)
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $100,000</td>
<td>• Preparation time: 1 year</td>
</tr>
<tr>
<td>• Construction costs:</td>
<td>• Construction time: 10 year</td>
</tr>
<tr>
<td>• Operation costs: $100,000 / yr</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $ / yr</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:**
**Name:** A11 Promotions of Farmers Cooperatives  
**Location:** West Bank Jordan Valley  
**Type of Intervention:** Irrigation and marketing services  
**Start Up Year:** 2021

### Objectives:
To facilitate groups of family farms to invest jointly in user self-provision of irrigation, processing and/or marketing services for high value export crops, and responsible homestead recreational services.

### Intervention:
Family farms need support to undertake communal initiatives that enable them to develop the economic potentials of resources they control in their communities and to benefit from economics of scale.

### Preparation:
- Dissemination of good experiences with Cooperative Associations for communal self-provision of services.
- Planning of high priority communal service to family farms in rural community to enhance the production potentials of resources controlled.
- Exploring the possibilities to engage farmer groups in partnerships with private agribusiness/industries (production/processing/marketing contracts).
- Exploring the possibilities to engage local farmer groups in responsible homestead recreational services.
- Preparing investment plans using beneficiaries’ contributions, loans from saving and credit institutions and a matching grant from a public sector organization.

### Construction / realization:
- Piloting of production and marketing contracts between CAs and Private agri-businesses

### Operations:
- Training of CA members in technical and commercial aspects of the production / marketing contract

### Results / Impacts:
- Family farms enabled to engage in a modernization process to increase labour productivity and resilience.
- Dynamic rural economies through cooperation and diversification of family farms.
**Sustainability:**
The project will enhance the sustainability of family farming and will enable rural economies to become more dynamic. For that the project is considered sustainable.

**Organization / Responsibilities:**
- Ministry of Agriculture (enabling policy environment and M&E)
- NGOs working on community development in the Jordan/West Bank (facilitation of communal initiatives)
- Private investors interested in processing/marketing of products of family farms (processing and marketing services)

**Costs and Revenues:**
- Preparation costs: $100,000
- Construction costs: $400,000
- Operation costs:
- Annual Revenues:

**Implementation Period**
- Preparation time: 1yr
- Construction time: 2yr
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
<th>Start Up Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A12 Jordan Valley Credit Program</td>
<td>Jericho Governorate</td>
<td>Credit program for LEISA and IWRM initiatives</td>
<td>2019</td>
</tr>
</tbody>
</table>

**Objectives:**
To create a credit program focusing on semi-subsistence family farms to overcome financial bottlenecks they face in adapting GAP and LEISA agricultural practices and using available water resources most efficiently. In addition the project will aim to enable farmers to invest in drip irrigation and green houses.

**Intervention:** to provide one private and one cooperative financial institution funding for providing affordable loans to family farms that developed technical and commercially viable plans to enhance sustainable crop and livestock production systems and off-farm activities (B&B) on their farms. Also, the intervention will support farmers in the adaptation of drip irrigation and green houses.

**Preparation:**
- Preparation of a credit program for encouraging semi-subsistence families to invest in modernization of the farms and the adaptation to the impacts of climate change
- Call for proposals of financial institutions to manage the credit program in all clusters on the West Bank of the Lower Jordan Valley

**Construction / realization:**

**Operations:**
- Promotion of savings and credit groups in the rural communities farming in the Lower Jordan Valley
- Development of standard credit packages for modernization of family farms (e.g. water harvesting, green house development and precision irrigation)
- Piloting of modernization packages through cooperative and water users associations linked to the savings and credit groups.
- Up-scaling of successful modernization packages
- Technical and financial management

**Results / Impacts:**
- Affordable credit services for developing production and service potentials of family farms through communal security and demand-led extension services
- More farmers are using drip irrigation techniques and green houses.

**Sustainability:**
The project is considered sustainable since it will enables more farmers to have more sustainable income.

**Organization / Responsibilities:**
- Cooperative and private financial institutions that have network of service units or saving and credit groups in the Jericho Governorate
- Ministry of Agriculture and Department of Agriculture in Jericho Governorate
- Private Agricultural Support Services Providers
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $150,000</td>
<td>• Preparation time: one year</td>
</tr>
<tr>
<td>• Construction costs: $950,000</td>
<td>• Piloting time: two years</td>
</tr>
<tr>
<td>• Operation costs: $400,000</td>
<td>• Upscaling time: four years</td>
</tr>
<tr>
<td>• Annual Revenues: $200,000</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:** Family farms have proven to be innovative and resilient when an appropriate enabling policy environment and demand-oriented support service provision are established.
<table>
<thead>
<tr>
<th>Name:</th>
<th>A13 LEISA Research and certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>NAR Stations in Dair Al Alla and Jericho</td>
</tr>
<tr>
<td>Type of Intervention:</td>
<td>Regional cooperation in demand-led research</td>
</tr>
<tr>
<td>Start Up Year:</td>
<td>2019</td>
</tr>
</tbody>
</table>

**Objectives:**

To create research capacities on the development and certification of Low External Inputs Sustainable Agricultural systems (integrated and organic agriculture) in the Lower Jordan Valley.

**Intervention:** to fulfill the environmental quality standards imposed on export markets crucial for agricultural commodities for which the Lower Jordan Valley has comparative advantages. The research program includes a model project with certified Global GAP farms and the farms aiming for certification with the focus on water.

**Preparation:**

- Preparation of a proposal for research program covering on-station and on-farm research and laboratories and includes a model project with certified Global GAP farms and the farms aiming for certification with the focus on water
- Establishment of a governing and management structure for this regional research institution that manages the research programs at the existing agricultural research stations in Dair Al Alla and Jericho
- Financial planning and development of a business plan for the research program

**Construction / realization:**

- Tendering, construction and procurement for on-station research infrastructure and laboratories

**Operations:**

- Perennial and annual planning of research program
- Managing on-station and on-farm research on Good Agricultural Practices for integrated and organic agriculture
- Produce, soil and irrigation water testing for issuing farm and product certificates
- Monitoring and evaluation
- Technical and financial management

**Results / Impacts:**

- Clusters of Global G.A.P and OFOAM certified farms in the Lower Jordan Valley
- Demand-led research activities and knowledge sharing networks between farmers and researchers
- Internationally accredited research and certification institute providing demand-oriented services

**Sustainability:**

The project is not only sustainable but it will enhance the sustainability of agricultural activities and will increase awareness to environmental issues.

**Organization / Responsibilities:**

- Ministries of Agriculture in Jordan and Palestinian Territories
- PPP managed research institute in partnership with Global G.A.P and OFOAM
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $ 150,000</td>
<td>• Preparation time: two years</td>
</tr>
<tr>
<td>• Construction costs: $ 450,000</td>
<td>• Establishment time: two years</td>
</tr>
<tr>
<td>• Operation costs: $ 300,000</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $ 200,000</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:** Basic services must charge cost-covering fees and research funding obtained through competitive research proposals with beneficiaries contributions and public matching grant.
<table>
<thead>
<tr>
<th>Name:</th>
<th>A14 Establish an Agro-Industrial Zone in the Northern JV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Northern JV</td>
</tr>
<tr>
<td>Type of Intervention:</td>
<td>Agriculture</td>
</tr>
<tr>
<td>Start Up Year:</td>
<td>2022</td>
</tr>
</tbody>
</table>

**Objectives:**
To establish an agro-industrial zone in the Northern Jordan Valley in order to meet the needs of agricultural development in the medium to long term.

**Intervention:** Establish an Agro-Industrial zone in the northern JV, which includes a packing and grading center, agro-conversion industries and a logistics center to facilitate the export of goods

**Preparation:**
- Identify land area, prepare plans and start implementation, including identifying donors

**Construction / realization:**
- Prepare plans and implement an agro-industrial zone on up to 200 dunums of land, including infrastructure, such as electricity, water, sewage planning and roads

**Results / Impacts:**
Agro-industrial zone established to meet the needs of agricultural development in the Jordan Valley

**Sustainability:**
The project will enhance the sustainability of the agro-businesses and will increase the income of farmers which will enhance the sustainability of the agricultural sector.

**Organization / Responsibilities:**
- Ministry of Agriculture
- Ministry of National Economy
- Jordan Valley Authority
- Ministry of Public Works
- PIEFZA

**Costs and Revenues:**
**Construction based on needs and area**
- Preparation costs: $500,000
- Construction costs: $11,500,000

**Implementation Period**
- Preparation time: 2 yrs.
- Construction time: 2 yrs.

**Other remarks:**
Name: A15 Hand over Of Settlements
Agricultural Land
Location: Palestine, Jordan Valley
Type of Intervention: Agriculture
Start Up Year: 2020

Objectives:
To handover the irrigable land of some 60,000 dunums currently being irrigated by the Israeli settlers in the study area to enhance the agricultural production and increase the food security in Palestine using the most advanced methods available. This will not affect land for nature reserve since all this area is at present is part of the irrigated area classified as grade A irrigable land.

Intervention:
Handover of some 60,000 dunums of irrigable land to Palestinians and the rehabilitation of this irrigable land through supplying the farms with state of the art irrigation systems.

Preparation:
- Planning & design the farms and the irrigation systems
- Market study on agricultural needs
- Setting up utilization plan
- Finance planning

Construction / realization:
- Identification of needs per farm
- Tendering and construction
- Supply contracts with farm owners and farmer organizations
- Training and public awareness campaigns on the new irrigation practices.

Operations:
- O&M
- Technical and financial management
- Marketing of dates

Results / Impacts:
- Additional 60,000 dunums of irrigable land is handed over and are supplied with irrigation networks.
- The new land is irrigated by available treated wastewater and the present quantities from the Jordan River and the groundwater in the area.
- The new irrigated land produces additional 180,000 tons of agricultural products for national markets and export which increases the income by an additional 180 Million NIS.
- Increase income to farmers
- Increase food production and food security by increasing the income and so the ability to buy products.

Sustainability:
The project will increase land availability and will offer new jobs so it will increase the sustainability of the agricultural activities in the area. The project will be sustainable since it will increase the income to farmers, provide means of food security and jobs for people living in the study area in particular and Palestine in general. No additional quantities from fresh water sources will be needed. On the contrary, savings from the present used fresh water will be replaced by treated wastewater.
### Organization / Responsibilities:
- Ministry of Agriculture (farmers support)
- Ministry of National Economy
- Palestinian Water Authority
- Farm owners/ Farmers / agricultural unions/ (beneficiary)

### Costs and Revenues:
- Preparation costs: $1,000,000
- Construction costs: $15,000,000
- Operation costs: $20,000,000 / yr
- Annual Revenues: $40,000,000 / yr

### Implementation Period
- Preparation time: 1 year
- Construction time: 5 years

### Other remarks:

---

**W Water Management Interventions**
<table>
<thead>
<tr>
<th>Name:</th>
<th>W1 – Wells Rehabilitation and drilling of new well in the Jordan valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Palestine, Jordan Valley</td>
</tr>
<tr>
<td>Type of Intervention:</td>
<td>Water Resources</td>
</tr>
<tr>
<td>Start Up Year:</td>
<td>2015</td>
</tr>
</tbody>
</table>

**Objectives:**
To increase water resources availability and enhance water efficiency from 30 wells in the Jordan Valley and drilling of new well in order to increase water supply for different purposes from these 30 wells.

**Intervention:**
Rehabilitation through deepening and/or change of equipments to 30 wells in the Jordan valley. Drilling of new groundwater well, 700 meter depth in the Eastern Aquifer Basin with a capacity of 1.5 Mcm/year in the Northern part of the study area.

**Preparation:**
- Planning & design new equipment
- Environmental Impact Assessment’s and licenses
- Market study agricultural and domestic use up to 1.5 MCM per year and 1.5 Mcm/year for domestic uses.
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per well and identify well location precisely.
- Tendering and construction
- Supply contracts with well owners and farmer organizations
- Training for operators and farmers

**Operations:**
- Distribution of water
- Fee collection
- O&M
- Technical and financial management

**Results / Impacts:**
- Additional quantity of 1.5 Mcm/year from the 30 wells, serving approximately 1000 dunum of agricultural land against about 2.0 NIS / m³.
- Increase income to well owners by some 3 Million NIS/year
- Increase food production by some 3,000 ton per year and income to farmers by 3 Million NIS/year.
- Additional quantity of 1.5 Mcm/year from the well, serving approximately 30,000 capita with 50 cubic meter of water or supply additional 1500 dunum of agricultural land against about 3.0 NIS / m³.
- Increase income from additional water by some 4.5 Million NIS/year
- Increase food production by some 4,500 ton per year and income to farmers by 4.5 Million NIS/year
- The environmental impact is justified because of the right of water for Palestinian citizens.
### Sustainability:
The rehabilitation of wells will increase the sustainability of these wells and will reduce losses at the well which in turn will enhance the sustainability of the aquifer. Drilling of new well will also be sustainable since the Eastern Aquifer still have some un-utilized quantities by the Palestinians.

### Organization / Responsibilities:
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Well owners/ Farmers / Water User Association (beneficiary)

### Costs and Revenues:
- Preparation costs: $250,000
- Construction costs: $2,200,000
- Operation costs: $860,000 / yr
- Annual Revenues: $1,500,000 / yr

### Implementation Period
- Preparation time: 0.5 year
- Construction time: 2.5 year

### Other remarks:
Name: W2 – Rehabilitation and Protection of Springs

Location: Palestine, Jordan valley

Type of Intervention: Water Resources

Start Up Year: 2016

Objectives:
To increase water resource efficiency and reduce losses through leakage and evaporation from the springs and the main channels. In addition to environmental restoration of the wadi Auja catchment.

Intervention:
Rehabilitation of Al Auja Spring that provides some 6 Mcm/year includes Rehabilitation of the main source of the spring and the rehabilitation of the upper unlined stream 1 km in length from the source in addition to Rehabilitation of the main canal from the spring with a total length of 15 km.

Construction of small pools for water collection in Al Malah area especially Al Farisiya and Al Deir

Rehabilitation of small springs in the area such as Qor’an, Blaybel, Al Shamsiya, Al Malih, Al Himma and Al Hilwah.

Develop protection zones criteria and procedures
Identify and design protection zones
Implement the protection zones on ground.

Rehabilitation of Fasayil Spring includes the creation of a buffer zone and the rehabilitation of the pipeline from the spring.

All the above components include environmental restoration of some 20 square kilometres of the different wadi catchments. Some of this area will be used for public services such as recreational activities, parks and others and will be accessible to public. The other parts will be protected spaces especially around the head of the spring.

Construction / realization:
- Tendering and construction
- Supply contracts with farmer organizations
- Set up operations structure

Operations:
- Distribution of water
- Fee collection
- O&M
- Technical and financial management
### Preparation:
- Planning & design of the source structure and the pipeline.
- Licenses
- Setting up Organizational structure
- Finance planning

### Results / Impacts:
- Additional quantity of 1.5 Mcm/year from the spring, serving approximately 1500 dunum of agricultural land against about 2.0 NIS / m³.
- Increase income from additional water by some 3 Million NIS/year
- Increase food production by some 1,500 ton per year and income to farmers by 3.0 Million NIS/year
- Provide additional quantities of water in the marginalized communities through the enhancement of rainwater harvesting and the rehabilitation of small springs.
- More food production
- Fully protected springs in the area.
- Environmental restoration of 20 square kilometres of wadi catchments.
- Enhance both water quantity and quality from main springs
- Reduce health hazards from using water from springs.

### Sustainability:
This project will increase the quantity utilized from the spring and will enhance water quality from the spring. Both of these factors will enhance the sustainability of the project. The involvement of water users association will increase the feeling of ownership and hence enhance sustainability.

### Organization / Responsibilities:
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Al-Auja Village Council/ Farmers / Water User Association (beneficiary)

### Costs and Revenues:
- Preparation costs: $215,000
- Construction costs: $2,575,000
- Operation costs: $125,000 / yr
- Annual Revenues: $640,000 / yr

### Implementation Period
- Preparation time: 1.0 year
- Construction time: 3 year

### Other remarks:
Name: W3 – Rehabilitation and construction of Domestic water networks
Location: Palestine, Jordan valley
Type of Intervention: Water Supply
Start Up Year: 2015

Objectives:
To improve the water networks to reduce physical losses and improve water quality in the networks.

Map:

Intervention:
Rehabilitation and extension of 30 km of water networks of different diameters.
Installation of filling points.
Distribution of 1.5 m³ plastic tanks and mobile water tankers with a variety of capacities
Rehabilitation of rainwater harvesting cisterns in marginalized communities.

Preparation:
- Planning & design of the pipelines to be replaced and upgraded.
- Setting up Organizational structure
- Finance planning

Construction / realization:
- Tendering and construction

Operations:
- Distribution of water
- O&M
- Technical and financial management

Results / Impacts:
- Provide better access to water in the marginalized communities.
- Reduce the water bill for the citizens in these communities.
- Additional quantity of water through the rehabilitation and construction of rainwater harvesting cisterns.
- A reduction of UFW by 10% which will provide an additional quantity of 0.5 Mcm/year from the rehabilitation, serving approximately 10,000 capita with 50 cubic meter per year against about 2.0 NIS / m³.
- Improve health conditions and reduce risk from water born diseases.

Sustainability:
The project will reduce physical losses from the existing water networks and will provide access to safe drinking water to the new population which will increase the sustainability of the project due to the importance of water supply projects to the communities in the study area.
**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Municipalities and Village Council/ Water User Association (beneficiary)

**Costs and Revenues:**
- Preparation costs: $320,000
- Construction costs: $3,380,000
- Operation costs: $120,000 / yr
- Annual Revenues: $400,000 / yr

**Implementation Period**
- Preparation time: 0.5 year
- Construction time: 1.5 year

**Other remarks:**
**Name:** W4 Desalination of Brackish wells  
**Location:** Palestine, Jordan Valley- Jiftlik  
**Type of Intervention:** Water Supply  
**Start Up Year:** 2017  

<table>
<thead>
<tr>
<th>Objectives:</th>
<th>Map:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase water resource efficiency and enhance water quality from brackish water wells located in the Jiftlik area. The brine will be dumped in evaporation pond and later will be dried up.</td>
<td><img src="image" alt="Map" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention:</th>
<th>Construction / realization:</th>
</tr>
</thead>
</table>
| Installation of desalination units in 10 brackish water wells in the area. Rehabilitate the water network from these wells | - Tendering and construction  
- Supply brackish water units  
- Set up operations structure |

<table>
<thead>
<tr>
<th>Preparation:</th>
<th>Operations:</th>
</tr>
</thead>
</table>
| - Planning & design of the units specifications.  
- licenses  
- Setting up Organizational structure  
- Finance planning | - O&M  
- Technical and financial management |

<table>
<thead>
<tr>
<th>Results / Impacts:</th>
<th></th>
</tr>
</thead>
</table>
| - Better quality of water from these wells.  
- Reduce physical losses of 0.5 Mcm/year from wells main supply pipe.  
- Increase agricultural production per dunum due to increase water quality  
- Provide safe access to good quality water for additional domestic uses  
- Enhance the hygiene conditions of the citizens.  
- Protect the groundwater aquifer and the soil in the area. | |

<table>
<thead>
<tr>
<th>Sustainability:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The project will increase the sustainability of utilizing these wells since the project will improve water quality from these wells and allow better utilization of these resources.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization / Responsibilities:</th>
<th></th>
</tr>
</thead>
</table>
| - Palestinian Water Authority (regulation)  
- Ministry of Agriculture (farmers support)  
- Village Councils/well owners/ Farmers / Water User Association (beneficiary)  
- Middle East Water Desalination Research Center | |
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $ 50,000</td>
<td>• Preparation time: 0.5 year</td>
</tr>
<tr>
<td>• Construction costs: $ 700,000</td>
<td>• Construction time: 1 year</td>
</tr>
<tr>
<td>• Operation costs: $ 40,000 / yr</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $ 150,000 / yr</td>
<td></td>
</tr>
</tbody>
</table>

Other remarks:
**Name:**
W5 – Rehabilitation of Al-Qilt Spring group and the construction of a dam

**Location:**
Palestine, Wadi Al-Qilt

**Type of Intervention:**
Water Resources

**Start Up Year:**
2018

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**Objectives:**
To increase water resource efficiency and reduce losses through leakage and evaporation from the main channel and the construction of small dam on the wadi. The project will increase the recharge rates from the Wadi.

---

**Intervention:**
Rehabilitation of Al Qilt Spring includes rehabilitation of the main source of the spring and the rehabilitation of the upper unlined stream 1 km in length from the source. Also, the intervention includes the construction of small dam on the wadi with a capacity of 0.5 Mcm/year.

**Preparation:**
- Planning & design of the source structure and the pipeline.
- Licenses
- Setting up Organizational structure
- Finance planning

---

**Construction / realization:**
- Tendering and construction
- Supply contracts with farmer organizations
- Set up operations structure

**Operations:**
- Distribution of water
- Fee collection
- O&M
- Technical and financial management

---

**Results / Impacts:**
- Additional quantity of 0.5 Mcm/year from the spring, serving approximately 500 dunum of agricultural land against about 2.0 NIS / m³.
- Increase income from additional water by some 1 Million NIS/year
- Increase food production by some 1,500 ton per year and income to farmers by 1.5 Million NIS/year.
  - The environmental impact is justified because of the right of water for Palestinian citizens.

**Sustainability:**
The project will enhance the sustainability of the aquifer through the recharge and will increase the quantities of water available. The involvement of the village council will enhance the project sustainability through the increased feeling of ownership of the stakeholders.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Al-Auja Village Council/ Farmers / Water User Association (beneficiary)
### Costs and Revenues:
- Preparation costs: $150,000
- Construction costs: $1,700,000
- Operation costs: $50,000 / yr
- Annual Revenues: $300,000 / yr

### Implementation Period
- Preparation time: 0.5 year
- Construction time: 1 year

### Other remarks:
**Name:** W6 – Development of Water and wastewater Tariff structures  
**Location:** Palestine, Jordan Valley  
**Type of Intervention:** Water Resources  
**Start Up Year:** 2017

<table>
<thead>
<tr>
<th>Objectives:</th>
<th>Map:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To unify water tariff for both domestic and agricultural water uses to achieve social equity.</td>
<td><img src="image" alt="Map" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention:</th>
<th>Construction / realization:</th>
</tr>
</thead>
</table>
| Develop a unified tariff structure for both domestic and agricultural water uses that will be used for water tariff for the different water supply facilities. | • Tendering  
• Review data, laws and policies  
• Develop tariff structures |

<table>
<thead>
<tr>
<th>Preparation:</th>
<th>Operations:</th>
</tr>
</thead>
</table>
| • Planning & data collection.  
• Finance planning | • Apply proposed tariff structure  
• Conduct public awareness campaigns |

<table>
<thead>
<tr>
<th>Results / Impacts:</th>
<th>Sustainability:</th>
</tr>
</thead>
</table>
| • A unified tariff structure has been applied for different water uses.  
• Fee collection rates improved and users satisfaction and willingness to pay has been increased.  
• The motivation to reduce water consumption. For that, the project will aim for a tariff structure benefitting the water users and apply water saving measures. | The project is sustainable and will enhance the sustainability of other interventions. The implementation of proper tariff will increase people willingness to pay, secure better services and afford a mean for water demand management. |

<table>
<thead>
<tr>
<th>Organization / Responsibilities:</th>
<th></th>
</tr>
</thead>
</table>
| • Palestinian Water Authority (regulation)  
• Ministry of Agriculture (farmers support)  
• Village Council/ Farmers / Water User Association (beneficiary) |  |
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation costs: $100,000</td>
<td>Preparation time: 0.5 year</td>
</tr>
<tr>
<td>Construction costs: $0</td>
<td>Construction time: 0.5 year</td>
</tr>
<tr>
<td>Operation costs: $0 /yr</td>
<td></td>
</tr>
<tr>
<td>Annual Revenues: $0 / yr</td>
<td></td>
</tr>
</tbody>
</table>

Other remarks:
**Name:**
W7 – Development of a water conveyance system

**Location:**
Palestine, Jordan Valley

**Type of Intervention:**
Water Supply

**Start Up Year:**
2026

**Objectives:**
To enhance water management and assure equitable distribution among users and geographical locations in addition to allow the reallocation of water resources in an optimal manner.

**Intervention:**
Develop a regional water pipeline (20 inch diameter) about 60 km pipeline that goes from North to south in the study area and integrates with the proposed West Ghor Canal

**Preparation:**
- Planning & design of the route
- EIA’s and licenses
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs per well
- Tendering and construction
- Supply contracts with well owners and farmer organizations
- Training for operators

**Operations:**
- Distribution of water and management of available resources
- Fee collection
- O&M
- Technical and financial management

**Results / Impacts:**
- Equitable distribution of water resources all over the study area.
- Minimize supply cost through the utilization of additional quantities from the Jordan River.
- Increase income and food production

**Sustainability:**
The project will provide access to safe drinking water to the new population which will increase the sustainability of the project due to the importance of water supply projects to the communities in the study area.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Well owners/ Farmers / Water User Association (beneficiary)
### Costs and Revenues:
- Preparation costs: $500,000
- Construction costs: $12,000,000
- Operation costs: $600,000 / yr
- Annual Revenues: $1,200,000 / yr

### Implementation Period
- Preparation time: 1 year
- Construction time: 2 years

### Other remarks:
**Name:** W8 – Water Quality Monitoring Program  
**Location:** Palestine, Dead Sea Area  
**Type of Intervention:** Water Resources  
**Start Up Year:** 2021

**Objectives:**
To enhance water management and assure equitable distribution among users and geographical locations in addition to allow the reallocation of water resources in an optimal manner. The program includes surface water, groundwater, springs and wells and is related to intervention P05 land and water quality protection.

**Intervention:**
The intervention involves the conducting of a water quality monitoring program for the different surface and groundwater sources within the area.

**Preparation:**
- Planning & design of the program
- Identification of needs in terms of equipment and know-how
- Setting up implementation plan
- Finance planning

**Construction / realization:**
- Construct and procure all equipments
- Tendering and construction
- Setting up institutional framework
- Training for operators

**Operations:**
- Conduct the monitoring program.
- Analysis of results and findings
- Development of an emergency plan
- Development of a warning system.
- O&M
- Technical and financial management

**Results / Impacts:**
- Enhance the river water quality supplied to users.
- Mitigate any pollution risk through early warning to users.
- Reduce hazard from any waterborne diseases or environmental threats.
- Develop a good data base of the River.

**Sustainability:**
This project will not only be sustainable but will also enhance water quality which in turn will lead to a more sustainable resources in the area.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture and Ministry of Health
- Environmental Quality authority
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $ 200,000</td>
<td>• Preparation time: 1 year</td>
</tr>
<tr>
<td>• Construction costs: $ 1,000,000</td>
<td>• Construction time: 1 year</td>
</tr>
<tr>
<td>• Operation costs: $ 200,000 / yr</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $ / yr</td>
<td></td>
</tr>
</tbody>
</table>

Other remarks:
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
<th>Start Up Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>W9– Utilization of Jordan River</td>
<td>Palestine, Jordan valley</td>
<td>Water Resources</td>
<td>2026</td>
</tr>
</tbody>
</table>

**Objectives:**
To increase water resources availability to cover the growing water gap between available supply and increasing demand.

**Map:**

**Intervention:**
Construction of pumping stations along the lower part of the River and the development of the necessary conveyance system to link to the main pipeline.

**Preparation:**
- Panning & design new equipment
- EIA's and licenses
- Market study agricultural and domestic use up to 50 MCM per year
- Setting up utilization plan
- Finance planning

**Construction / realization:**
- Identification of needs
- Tendering and construction
- Supply contracts with Municipalities and farmer organizations
- Training for operators and farmers

**Operations:**
- Distribution of water and management of pumping stations
- Fee collection
- O&M
- Technical and financial management

**Results / Impacts:**
- Additional quantity of 40 Mcm/year from the River, serving approximately 40,000 dunum of agricultural land against about 2.0 NIS / m³.
- Increase food production by some 120,000 ton per year and income to farmers by 120 Million NIS/year.
  The environmental impact is justified because of the right of water for Palestinian citizens.

**Sustainability:**
Water quantities proposed in this intervention is less that Palestinian water rights in the Jordan River Basin which indicates the sustainability of the project since the proposed quantities in this intervention can be pumped or diverted from the river without harming the environmental flows in the river basin.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Municipalities and Village councils/ Farmers / Water User Association (beneficiary)
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $1,000,000</td>
<td>• Preparation time: 1 year</td>
</tr>
<tr>
<td>• Construction costs: $25,000,000</td>
<td>• Construction time: 5 years</td>
</tr>
<tr>
<td>• Operation costs: $3,500,000 / yr</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $12,500,000/ yr</td>
<td></td>
</tr>
</tbody>
</table>

Other remarks:
**Name:** W10 – Artificial Recharge Scheme  
**Location:** Palestine, Jordan valley  
**Type of Intervention:** Water Resources  
**Start Up Year:** 2025

**Objectives:**
To increase amount of water recharge to the groundwater aquifers using treated wastewater which will enhance and increase the safe yield of the aquifer in addition to improving water quality and reduce desalinization rates and finally to mitigate any future impact from climate change.

**Intervention:**
Construction of recharge areas and injection wells in the study area by using treated wastewater.

**Preparation:**
- Planning & design new equipment
- Groundwater modeling to optimize the recharge impact
- Finance planning

**Construction / realization:**
- Identification of potential recharge areas
- Tendering and construction
- Groundwater modelling of the aquifers in the Basin.

**Operations:**
- Conveying of TWW to recharge areas.
- Monitoring of water quality
- O&M
- Technical and financial management

**Results / Impacts:**
- Additional quantity of 10 Mcm/year from the groundwater resources due to the rising of the water table and the additional recharge quantities serving approximately 100,000 capita and 5000 dunums of agricultural land against about 2.0 NIS / m$^3$.
- Increase food production by some 15,000 ton per year and income to farmers by 15 Million NIS/year.
- The environmental impact is justified because of the right of water for Palestinian citizens.

**Sustainability:**
The project will enhance the sustainability of the aquifer and will allow for better utilization of the groundwater resources in the area.

**Organization / Responsibilities:**
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Municipalities and Village councils / Farmers / Water User Association (beneficiary)
<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $1,000,000</td>
<td>• Preparation time: 1 year</td>
</tr>
<tr>
<td>• Construction costs: $10,000,000</td>
<td>• Construction time: 5 years</td>
</tr>
<tr>
<td>• Operation costs: $1,500,000 / yr</td>
<td></td>
</tr>
<tr>
<td>• Annual Revenues: $5,000,000/ yr</td>
<td></td>
</tr>
</tbody>
</table>

Other remarks:
**Name:** W11 – Construction of water networks  
**Location:** Palestine, Jordan valley  
**Type of Intervention:** Water Supply  
**Start Up Year:** 2025

**Objectives:**  
To expand and construct new water networks for the new population namely in the two newly constructed cities, one in the north and one in the central part of the study area.

**Intervention:**  
Construction Rehabilitation and extension of water networks of different diameters for some 250,000 capita.

**Preparation:**  
- Planning & design of the pipelines to be replaced and upgraded.  
- Setting up Organizational structure  
- Finance planning

**Results / Impacts:**  
- An additional of 250,000 capita have access to safe drinking water and the network will provide an additional quantity of 12.5 Mcm/year.  
- Improve health conditions and reduce risk from water born diseases.

**Sustainability:**  
The project trigger basic needs for the people in the study area which is water supply. For that, the communities in the area will ensure the good management of these networks and will do their utmost efforts to sustain these networks.

**Organization / Responsibilities:**  
- Palestinian Water Authority (regulation)  
- Municipalities and Village Council/ Water User Association (beneficiary)

**Costs and Revenues:**  
- Preparation costs: $1,250,000  
- Construction costs: $30,000,000  
- Operation costs: $1,000,000 / yr  
- Annual Revenues: $3,000,000 / yr

**Construction / realization:**  
- Tendering and construction

**Operations:**  
- Distribution of water  
- O&M  
- Technical and financial management

**Implementation Period**  
- Preparation time: 2 year  
- Construction time: 8 year

**Other remarks:**
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
<th>Start Up Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>W12 – Hydro-geological Assessment of the Study Areas</td>
<td>Palestine, Jordan Valley</td>
<td>Water Resources</td>
<td>2021</td>
</tr>
</tbody>
</table>

### Objectives:
To enable water managers and decision makers to better understand the hydro-geological conditions of the area.

### Intervention:
Develop hydro geological study for groundwater and surface water units in the study area.

### Preparation:
- Identify the study components
- Finance planning

### Construction / realization:
- Development of criteria and procedures
- Tendering

### Operations:

### Results / Impacts:
- Fully understand the hydro-geological conditions of the area.
- Enhance water management of springs and wells in the area.
- Reduce health hazards from using water from springs and wadis.

### Sustainability:
The project is highly sustainable and will also enhance the sustainability and the optimal utilization of water resources in the area.

### Organization / Responsibilities:
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)

### Costs and Revenues:
- Preparation costs: $1,000,000

### Implementation Period
- Preparation time: 0.5 year
- Construction time: 1.5 year

### Other remarks:
Pollution Control and Environmental Management
### Name:
P1 – Solid and Hazardous Waste Management Plan and Construction Activities for the Jordan Valley

### Location:
Jordan Valley, Palestine

### Type of Intervention:
Planning and Construction

### Objectives:

1. To lay down a solid basis for a new waste management system in the Palestinian part of the Jordan Valley. On the long term this should lead to the full collection and sanitary treatment of all solid waste streams and maximized reuse and recycling of waste streams, including waste to energy.
2. To enable an adequate and safe collection of solid waste.
3. To stimulate the reuse of resources/waste streams and limit the amount of waste to be landfilled.
4. To prevent/limit environmental pollution and risks to drinking water (mainly shallow springs and shallow aquifers).
5. To limit the amount of organic material that will be turned into waste (considering the waste to energy option) and limit the amount of food to be bought for animals.
6. To prevent environmental pollution and health risks.
7. To address all the possible solid waste that might be generated due to the Israeli withdrawal from settlements.
8. To construct a central landfill

### Map:

![Map of Jordan Valley showing locations like Tuba, Nablus, Al-Nassariya, Al-Jiftlik, Fasavi, Al'Auia, Jericho, and Jerusalem.]

### Intervention:
- Carry out an integrated comprehensive management plan for the entire area for the solid waste
- Improve and develop existing solid waste collection methods. In addition, development of new methods and plans will take care wherever needed. Integrate these plans for the entire area.
- New landfills will be constructed

### Construction / realization:
- Setting up Regional criteria for Solid Waste Management (of all waste streams, including domestic, agricultural, industrial, medical and hazardous waste)
- Setting up of the Solid Waste Management Plan
- Setup waste collection organization and make arrangements with municipalities and local councils to prevent littering as much as possible
- Tendering for more waste containers and more frequent collection
Dealing with agricultural waste typically associated with animals includes but is not limited to manure, wasted feed, runoff from feedlots, wastewater from farm buildings, waste from forage, and dead animals in addition to plastics, chemicals, empty containers, building materials, old machinery, and animal health care products. Also all the solid waste that would be generated from the Israeli withdrawal from settlements.

**Preparation:**
- Analysis of the current state of solid waste management (collection, transfer, transport and disposal, and recycling)
- Exchange of experiences
- Discussion with Ministries, etc. to determine the basis for future Solid Waste Management
- Investigate the number of waste containers required and the collection frequency
- Information campaigns for inhabitants and industries
- Information campaign for farmers stimulating the reuse of compost
- Inventory of markets for reusables
- Analysis of the current situation:
  - Inventory of the locations off and amounts of waste in all existing uncontrolled dumpsites
  - Analysis of the situation in the controlled landfill in Jericho
- Closure/Rehabilitation plan
- Post closure plan
- Search for temporary landfilling options for the waste from the area
- Determination of required landfilling capacity
- Site selection for a sanitary landfill in the Jordan Valley
- Planning & design for the sanitary landfill (based on national criteria described in the Solid Waste Management plan)
- EIA's and licenses
- Analysis of the possibilities of turning certain agricultural plan tissue remains into animal food
- Inventory of the market
- Information campaign for farmers

**Operations:**
- Setup organization for the separate collection
- Tendering for more waste containers and separate collection
- Start up pilots
- Tendering for the closure and rehabilitation of the landfills and construction of the final cover and other rehabilitation measures
- Tendering for the post closure activities
- Tendering and construction of the landfills
- Training for operators
- Set up operations structure
- Start a stimulation program for this application/recycling
- Awareness among farmers

**Results / Impacts:**
- Regional criteria for solid waste management (including collection, reuse, recycling, composting, anaerobic digestion and other reuse options)
- Standards for the rehabilitation of old non sanitary landfills and of uncontrolled landfills (illegal dumpsites) and for the realization of sanitary landfills

Setup organization for the separate collection
• Tendering for more waste containers and separate collection
• Start up pilots
• Tendering for the closure and rehabilitation of the landfills and construction of the final cover and other rehabilitation measures
• Tendering for the post closure activities
• Tendering and construction of the landfills
• Training for operators
• Set up operations structure
• Start a stimulation program for this application/recycling
• Awareness among farmers

**Operations:**
- Study of current conditions
- Analysis
- Forecasts
- Management plans
- Conclusions
- Decisions to be recommended
- Waste collection
- Fee collection
- Technical and financial management
- Start post closure program
- New tariff system
- Implementation of the land rehabilitation plans
- Public awareness campaigns on sorting and recycling along with the need of having new landfills and the closure of the unsupervised dumpsites
- Closure of selected random dumpsites
- Cost sharing
- Post closure actions
- Limit manure application to plant requirements
- Supervise manure use in areas of high runoff potentials
- Do not apply manure when there are high chances of rainfall
- Avoid using manure (or having livestock grazing) in unmanaged way in areas of high vulnerability to contamination (or sensitive areas)
- Manure storage
- Odour and fly control

**Results / Impacts:**
- Regional criteria for solid waste management (including collection, reuse, recycling, composting, anaerobic digestion and other reuse options)
- Standards for the rehabilitation of old non sanitary landfills and of uncontrolled landfills (illegal dumpsites) and for the realization of sanitary landfills

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- Increased capacity for and frequency of waste collection
- Less littering
- Improvement of environmental situation
- Improvement of public health situation
- Potential financial benefits
- Introduction of separate collection of specific organic waste streams (market waste, plant tissue from agriculture)
- Improvement of separate collection of plastics (especially from agriculture), paper and metals
- Decrease of the amount of waste to be landfilled
- Limiting environmental pollution and risks for contamination of drinking water
- Waste, which is not reused or recycled, will be fully treated in a landfills located in a suitable location in the Jordan Valley
- Improvement of economic situation if recycling and reusing schemes are introduced and practiced
- Maintain a healthy environment for farm animals
- Reduce the need for commercial fertilizers and thus limit feeding costs for farmers
- Increase the organic matter content of soils
- Minimize the potential of contamination of spring water and shallow aquifers

### Organization / Responsibilities:
- Municipalities and local councils
- Ministry of Environmental Affairs (regulator)
- Ministry of Local Governance
- Ministry of Agriculture
- Palestinian Water Authority (regulator)
- Ministry of Health
- Ministry of Planning

### Costs and Revenues:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation costs</td>
<td>$200,000</td>
</tr>
<tr>
<td>Construction costs</td>
<td>$60,000,000</td>
</tr>
<tr>
<td>Operation costs</td>
<td>$300,000/year</td>
</tr>
<tr>
<td>Annual Revenues</td>
<td></td>
</tr>
</tbody>
</table>

### Implementation Period
- Landfill construction: 2020 – 2023

### Other remarks:
- Short Term action
- Preparation cost $200,000

### Landfill construction cost

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste generation in 2015 (kg/c-yr)</td>
<td>400</td>
</tr>
<tr>
<td>Percentage increase per year</td>
<td>1.250%</td>
</tr>
<tr>
<td>Percentage to landfill</td>
<td>65%</td>
</tr>
<tr>
<td>Construction cost per ton in $</td>
<td>$10</td>
</tr>
<tr>
<td>Life time in years</td>
<td>30</td>
</tr>
<tr>
<td>Generation amount of solid waste in year 2050 (ton/year)</td>
<td>301,519</td>
</tr>
<tr>
<td>Percentage of solid waste to landfill</td>
<td>195,987</td>
</tr>
<tr>
<td>Cost of landfill</td>
<td>$58,796,127</td>
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</table>

### Running cost (just labor)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Cost (Per month)</th>
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<tbody>
<tr>
<td>Labor cost</td>
<td>$2,500</td>
</tr>
<tr>
<td>Number of employees</td>
<td>10</td>
</tr>
<tr>
<td>Annual cost</td>
<td>$300,000</td>
</tr>
</tbody>
</table>
Name: P2 – Environmental Management Project
Location: Jordan Valley, Palestine
Type of Intervention: Policy and legislative improvement

Objectives:
To enable:
- To develop integrated environmental management plan
- Improvement of urban and environmental planning capacities
- Enhance environmental data collection
- Improvement of the enforcement regarding (waste) water, air quality, waste (penalties and incentives), and water resources (groundwater aquifers and shallow groundwater that contributes to spring water)
- Make one organization responsible for environmental issues in the Jordan Valley, Empowerment of this organization on monitoring, and enforcement (waste, wastewater etc.)
- Special attention will be given to the generated wastewater from the industrial activities
- To improve the public awareness in the Valley with regard to waste collection and management, littering, wastewater collection, environmental protection and related health issues. In addition, focus will take into consideration additional environmental issues such as wastewater collection, treatment, and potential reuse and the pollution of water resources especially the springs.
- Institutional strengthening

Map:

Intervention:
Protecting, preserving and improvement of the environment through monitoring and law enforcement
Raising the awareness of the residents of the study area regarding the local environment and its elements and possible sources of pollution

Preparation:
- Planning

Construction / realization:
- Highlighting the key elements of the environment in the study area
- The determination of the key threats to the elements of the environment
- Identification of the most vulnerable environmental areas/locations
- Legislation of relevant law along with penalties
- Information campaign for inhabitants and
- Assessment of the environmental hot spots
- Setting up the implementation plan including all the relevant aspects such technical, financial, logistics, etc.
- Writing of information material
- Preparation of workshops etc.

- Companies
- Workshops
- Flyers, brochures, leaflets, TV material and publicity, etc.

**Operations:**
- Monitoring
- Law enforcement

**Results / Impacts:**
- Improvement of urban and environmental planning capacities
- Improvement of the enforcement regarding (waste) water, air quality and waste (penalties and incentives)
- Clear understanding regarding which organization is responsible for environmental issues in the Jordan Valley.
- Empowerment of one specific organization on monitoring, and enforcement (waste, wastewater etc.)
- Improve the awareness regarding the protection and the preservation of the environment
- Acquire environmental data
- Improvement of the knowledge and increase of public awareness of the inhabitants and companies in the Jordan Valley regarding the consequences of environmental pollution (littering, dumping, health issues) and the possibilities of waste collection and management, waste water collection and environmental collection. Final result will be improvement of environmental and health quality.

**Organization / Responsibilities:**
- Ministry of Environmental Affairs
- Ministry of Agriculture
- Palestinian Water Authority
- Ministry of Planning
- Ministry of Local Governance
- Ministry of Health

**Costs and Revenues:**
- Preparation costs: $1,000,000
- Construction costs:
- Operation costs:
- Annual Revenues:

**Implementation Period**
- Preparation time: 0.5 year
- Construction time: 2016 – 2018

**Other remarks:**
Costs are ball-park estimates based on subjective sense
**Name:**
P3 – Wastewater collection and treatment

**Location:**
Jericho, Palestine

**Type of Intervention:**
Waste water collection and treatment

**Objectives:**
1. To improve an adequate and safe collection of waste water for all the communities in the study area (by constructing wastewater collection networks)
2. To treat the generated wastewater from the different communities and lay the ground for safe reuse of wastewater for agricultural purposes from the constructed wastewater treatment plant
3. To address all the generated wastewater from the industrial activities either located in the study area or the wastewater that is being generated externally but might get introduced to the study area. Options might imply enforcing in-situ treatment plants

**Map:**

**Intervention:**
Connect all wastewater generation units (buildings) to wastewater collection networks
This will be attained through the construction of 5 wastewater treatment plants in the 5 clusters in the study area and the potential expansion of the existing Jericho wastewater treatment plant

**Preparation:**
- Analyses of the current status of the sewerage
- Planning and design for improvement/expansion of the sewerage

**Construction / realization:**
- Tendering and construction/expansion of the sewerage system in the Jericho area
- Tendering and rehabilitation/expansion of cesspits in the more remote areas
- Tendering for waste water collection with trucks
- Tendering for the feasibility/engineering and EIA studies for the conveyance of the effluent along with the WWTP location selection and design
- Tendering for wastewater collection with trucks
- Tendering and construction of the wastewater collection networks and WWTP’s
- Training for operators
system and connection to the WWTP
- Analyses of technical state and capacity of cesspits in remote places, where sewerage is not feasible
- Planning and design of improvement of the cesspits and increased tanker capacity
- Investigation of the possibility of combining the effluent from the Nablus East WWTP and Tubas South WWTP
- Planning and design of a wastewater collection networks and WWTP’s
- EIA’s and licenses
- Setting up Organizational structure
- Finance planning

Operations:
- Data collection
- Assessment of the existing sewerage systems (baseline conditions)
- Need assessment
- Preparation of the engineering designs (plans and profiles)
- Preparation of bill of quantities
- Financial analysis (costing)
- Construction
- Technical and financial management
- Surveying
- Excavations
- Rehabilitation
- Tendering
- Fee collection

Results / Impacts:
- Realization/expansion/improvement of the current wastewater collection system to a system to which all wastewater producers are connected without leakage of wastewater
- Improvement of environmental situation
- Improvement of public health situation
- Improvement of a WW collection system by realizing a sewerage system in combination with cesspits for remote areas, so wastewater producers are connected without leakage of wastewater.
- Produced wastewater will be fully treated
- Generation of about additional 1.

Organization / Responsibilities:
- Municipalities and village councils
- Palestinian Water Authority (regulation)
- Ministry of Agriculture (farmers support)
- Farmer / Water User Association (beneficiary)

Costs and Revenues:
- Preparation costs: $2,200,000
- Construction costs: $250,000,000
- Operation costs: $17,000,000 /yr

Implementation Period
- Collection: 2016 – 2020
- Treatment: 2020 – 2025

Other remarks:
- Short Term actions: Analysis and improvement of cesspits and of collection by tanker trucks
- Short term action: Analysis of current state of sewerage
- Middle term action: improvement/expansion of the sewerage system

<table>
<thead>
<tr>
<th>Preparation costs</th>
<th>$2,200,000</th>
<th>Cutoff value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of treatment ($/person)</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>502,531</td>
<td></td>
</tr>
<tr>
<td>Percentage of population connected to collection networks</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cost of treatment</td>
<td>$251,265,500</td>
<td></td>
</tr>
<tr>
<td>Operation costs (annual)</td>
<td>$33</td>
<td>Per person</td>
</tr>
<tr>
<td>Operation costs (annual)</td>
<td>$16,583,523</td>
<td></td>
</tr>
</tbody>
</table>
Name: P4 – Fish Farm Pollution Control Project
Location: Jericho area, Palestine
Type of Intervention: Inventory and assessment

Objectives:
To limit the environmental pollution from the current pilot fish farm and potential future fish farms in the study area.
The current four pilot fish farms in Jericho are not well lined against leakage. This project will assess the technical state of the fish farms and prepare for adequate lining and groundwater protection. The project will also focus on options for reusing the wastewater of the fish farms and on developing environmental standards for the management of current and future fish farms.

Intervention:
Assessment of the potential pollution loads, pollution pathways for disposal/usage, economic feasibility, marketing potential aspects, and spatial distribution of fish farms. There are four farms in Jericho (total of 4 ponds, each has 4000 fish, with water volume of 100 m³ each)

Preparation:
- Evaluation of the technical state (closed bottom, or leakage to the groundwater) and the manner of operation (what happens with the waste water → reuse in agriculture or spillage to the Jordan

Construction / realization:
- Improve the technical status of this Pilot Fish farm and its way of operation if required

Operations:
- Reuse of waste water
- Source of water for such pools (availability and quality)
- Technical and financial management
- M&O
River) of the Pilot Fish Farm in the Jerico area
(What is the exact location and capacity?)
- Make improvement plan for the pilot fish farm and
set standards for possible future fish farms

Results / Impacts:
- Knowledge of technical state (closed bottom, or leakage to the groundwater) and the manner of operation of
the current pilot fish farm (what happens with the waste water → reuse in agriculture or spillage to the
Jordan River)
- Rehabilitation plan for this Fish farm to prevent pollution of the ground water or uncontrolled/untreated
spillage of the water to the river, including planning and costs
- Standards for future fish farms
- Improvement of environmental situation

Organization / Responsibilities:
- Ministry of Environmental Affairs (regulator)
- Ministry of Economy and Trade
- Ministry of Agriculture
- Palestinian Water Authority (regulator)
- Ministry of Health (for safe use)
- Farmer associations
- Ministry of Planning

Costs and Revenues:
- Preparation costs: $ 50,000
- Construction costs: $ 500,000

Implementation Period
- Preparation time: 0.5 years
- Construction time: 2016 – 2019

Other remarks:
- Short Term
- Costs are ball-park estimates based on subjective sense
### Name:
P5 – Land and Water Quality Protection Project

### Location:
Jordan Valley, Palestine

### Type of Intervention:
Assessment projects

### Objectives:
- To study the vulnerability of the study area to contamination (considering the groundwater, surface water, and soil)
- To construct vulnerability maps for the study area
- To rank the land use according to vulnerability assessment

### Map:

![Map of the study area](image-url)

### Intervention:
Assessment of the vulnerability to contamination for the entire area

### Preparation:
- Data collection specifically for soil, groundwater, geologic formations, topography, etc.
- Digitization of all the relevant data (preferably in GIS format)
- Selection of the proper vulnerability method

### Construction / realization:
Use of the vulnerability assessment method to prepare the maps that shows the spatial distribution of vulnerability levels for the study area

### Operations:
- Preparation of the vulnerability maps for the study area
- Ranking of the different land parcels and covers according to the vulnerability level to contamination
**Results / Impacts:**
- Preservation of the environment
- Preservation of the water resources (mainly springs and groundwater)
- Better planning for sustainable land use

**Organization / Responsibilities:**
- Ministry of Environmental Affairs
- Palestinian Water Authority
- Palestinian Energy Authority
- Ministry of Planning
- Ministry of local Governance

<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation costs:</td>
<td>Preparation time: 3 months</td>
</tr>
<tr>
<td>Construction costs: $200,000</td>
<td>Construction time: 2016 – 2017</td>
</tr>
<tr>
<td>Operation costs:</td>
<td></td>
</tr>
<tr>
<td>Annual Revenues:</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:**
- Short Term action
- Costs are ball-park estimates based on subjective sense
**Objectives:**
The aim of this intervention is to remediate former Israeli military bases, sites, and settlements within the Palestinian study area. This will include soil, waste, and groundwater pollution assessment. Also, the project will include plans for remediation.

**Intervention:**
Cleaning activities after the Israeli withdrawal from settlements and military bases.

**Preparation:**
- Assessment of the existing conditions in the relevant sites of withdrawal
- Determination of the proper methods of cleanup
- Securing the necessary tools for cleanup
- Activities and operations related to the cleanup

**Map:**

**Construction / realization:**
Environment in such areas will be safe

**Operations:**
- Handling
- Disposal
- Containment
- Testing
- Quality assessment
- Monitoring

**Results / Impacts:**
- Preservation of the environment
- Preservation of the water resources (mainly springs and groundwater)
- Better planning for sustainable land use and safety

**Organization / Responsibilities:**
- Ministry of Environmental Affairs
- Palestinian Water Authority
- Ministry of Planning
- Ministry of local Governance

**Costs and Revenues:**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation costs</td>
<td>$ 300,000</td>
<td></td>
</tr>
<tr>
<td>Construction costs</td>
<td>$10,000,000</td>
<td></td>
</tr>
</tbody>
</table>

**Other remarks:**
Costs are ball-park estimates based on subjective sense
**Name:**
P7 PAL – Waste water collection, treatment, and reuse Master Plan

**Location:**
Jordan Valley, Palestine

**Type of Intervention:**
Master Planning

**Objectives:**
To lay down a solid basis for a new wastewater management system in the Palestinian part of the Jordan Valley. This system integrates the full aspects related to the generated wastewater (either within the study area or externally originated and introduced in – for instance from Nablus and Tubas cities).

In other words, this intervention will lead to a comprehensive plan for the development of the wastewater infrastructure (collection, treatment, and reuse) to meet both the short-term and long-term development and urban plans of the area.

This will eventually include:
1. Technical and financial planning for the realization of sewer systems and expansion of the existing plants of wastewater treatment (that of Jericho)
2. Planning for full coverage (as possible) of the wastewater collection networks for the communities of the study area
3. Planning for full reuse of the treated wastewater in the study area including the financial aspects and farmers support (or subsidy)
4. Development of efficient policies for wastewater services

**Map:**

**Intervention:**
- Carry out an integrated comprehensive master plan for the entire area for the wastewater sector

**Preparation:**
- Data management and collection
- Setting up methodologies and plans
- Field visits and public meetings
- Consultations with official authorities and perhaps legislative committees and bodies

**Construction / realization:**
- Purpose
- Planning process
- Existing conditions and projections (mainly land planning and use both current and future, socio economic conditions, and forecasts of flow spatially and temporarily)
- Evaluation of existing facilities (wastewater collection networks, sewer lines, manholes, outfalls, treatment plants, use and reuse schemes)
• Evaluation of un-sewered areas (current practices of wastewater disposal)
• Institutional evaluation
• Future facility improvements
• Evaluation of potential construction alternatives

**Operations:**
• Study of current conditions
• Analysis
• Forecasts
• Management plans
• Conclusions
• Decisions to be recommended

**Results / Impacts:**
• Better understanding of all the aspects associate with the wastewater sector regarding the existing conditions (status and flows) and potential future situation along with treatment specific requirements and the reuse potential
• Integration with other development plans of other sectors

**Organization / Responsibilities:**
• Ministry of Environmental Affairs (regulator)
• Palestinian Water Authority (regulator)
• Ministry of Agriculture
• Farmer associations
• Ministry of Planning
• Water User Associations or Water Service Providers

**Costs and Revenues:**
• Preparation costs: $ 500,000

**Implementation Period**
• 2016 – 2018

**Other remarks:**
Costs are ball-park estimates based on subjective sense
<table>
<thead>
<tr>
<th>Name: P8 PAL – Reuse of the treated wastewater</th>
<th>Location: Jordan Valley, Palestine</th>
<th>Type of Intervention: Construction and operation</th>
</tr>
</thead>
</table>

## Objectives:
This project aims at the construction of all the infrastructure associated with the reuse of the treated wastewater in the areas where the agriculture type permits such a use.

## Intervention:
Take full advantage from the reuse of the treated wastewater in the area for agricultural irrigation in order from the one hand to lessen the stress on the water resources and to gain economic benefits.

## Preparation:
- EIA studies
- Public awareness
- Stakeholder comprehensive meetings
- Feasibility studies

## Construction / realization:
- Purpose
- Planning process
- Existing conditions and projections (mainly land planning and use both current and future, socio economic conditions, and forecasts of flow spatially and temporarily)
- Evaluation of existing facilities (wastewater collection networks, sewer lines, manholes, outfalls, treatment plants)
- Hydraulic assessments
- Master planning
- Land suitability
- Land availability
- Land acquisitions

- Evaluation of un-sewered areas (current practices of wastewater disposal)
- Institutional evaluation
- Future facility improvements
- Evaluation of potential construction alternatives

**Operations:**
- Study of current conditions
- Analysis
- Forecasts
- Management plans
- Conclusions
- Decisions to be recommended
- Wastewater conveyance
- Wastewater storage
- Wastewater distribution

**Results / Impacts:**
- Increase the availability of water for the usage in agricultural irrigation in compliance with regulations
- Economic benefits
- Reduction in soil salinization

**Organization / Responsibilities:**
- Ministry of Environmental Affairs (regulator)
- Palestinian Water Authority (regulator)
- Ministry of Agriculture
- Farmer associations
- Ministry of Planning
- Water User Associations or Water Service Providers

**Costs and Revenues:**

<table>
<thead>
<tr>
<th></th>
<th>Preparation costs: $ 500,000</th>
<th>Construction costs: $110,000,000</th>
</tr>
</thead>
</table>

**Implementation Period**
- Preparation: 2020 – 2021
- Construction: 2021 – 2026

**Other remarks**
- Reuse cost ($/persons) $221
- Total cost of reuse $110,808,085.50
E  Ecological Restoration
<table>
<thead>
<tr>
<th>Name:</th>
<th>EI Nature Protection and Management Plan</th>
<th>Location:</th>
<th>Jordan Valley, Palestine</th>
<th>Type of Intervention:</th>
<th>Planning</th>
</tr>
</thead>
</table>

**Objectives:**
The aim of this project is to make a detailed assessment of the nature and ecological status in the Palestinian LJV, including the nature areas designated earlier by the Israeli Military Authorities, and will lead to defining plans and policies for nature preservation and protection areas, including grazing lands and parks, under Palestinian Law and ecological development and protection plans.

**Map:**
![Map of Jordan Valley, Palestine](image)

**Intervention:**
The intervention includes integrated comprehensive surveys on Flora; Fauna (including endangered species); Topographic features (soil, geology, elevations, etc.); Habitats; Regional vegetation communities; Locations of significant species; Additional elements such as habitat trees. It encompasses related Data management and collection; Setting up methodologies and plans; Comprehensive field visits and public meetings; Consultations with official authorities.

**Construction / realization:**
- Planning for the project (consultation with official and relevant bodies)
- Preparation of available data (site maps, roads, parcels, land use, land cover, topography, soil, geology, rainfall contours, temperature distribution, etc.)
- Survey work (utilization of GPS and GIS, field work, meetings, etc.)
- Data processing and classification

**Operations:**
<table>
<thead>
<tr>
<th>Preparation:</th>
<th>Results / Impacts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Data management and collection</td>
<td>Better understanding and facilitation of/for the following:</td>
</tr>
<tr>
<td>- Setting up methodologies and plans</td>
<td>- Vegetation mapping</td>
</tr>
<tr>
<td>- Comprehensive field visits and public meetings</td>
<td>- Assessment of aquatic ecology</td>
</tr>
<tr>
<td>- Consultations with official authorities</td>
<td>- Threatened species survey and assessment</td>
</tr>
<tr>
<td></td>
<td>- Threatened species management</td>
</tr>
<tr>
<td></td>
<td>- Environmental impact assessment</td>
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<tr>
<td></td>
<td>- Biodiversity planning</td>
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<td></td>
<td>- Wildlife assessment</td>
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<tr>
<td></td>
<td><strong>Organization / Responsibilities:</strong></td>
</tr>
<tr>
<td></td>
<td>- Ministry of Environmental Affairs</td>
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<td></td>
<td>- Ministry of Agriculture</td>
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<tr>
<td></td>
<td>- Farmer associations</td>
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<td></td>
<td>- Ministry of Planning</td>
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<tr>
<td></td>
<td><strong>Costs and Revenues:</strong></td>
</tr>
<tr>
<td></td>
<td>- Preparation costs: $ 500,000</td>
</tr>
<tr>
<td></td>
<td>- Construction costs: $ 5 million</td>
</tr>
<tr>
<td></td>
<td><strong>Implementation Period</strong></td>
</tr>
<tr>
<td></td>
<td>- Preparation time: 6 months</td>
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<tr>
<td></td>
<td>- Construction time: 2 years</td>
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<tr>
<td></td>
<td><strong>Other remarks:</strong></td>
</tr>
<tr>
<td></td>
<td>Costs are ball-park estimates based on subjective sense</td>
</tr>
<tr>
<td>Name:</td>
<td>Location:</td>
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<tr>
<td>E2 Jordan River Ecological Restoration Project</td>
<td>Jordan Valley, Palestine</td>
</tr>
</tbody>
</table>

**Objectives:**
The overall objective of this intervention is to restore in co-operation with Jordan and Israel the good ecological status of the Lower Jordan River Basin, and the role of the Jordan River as a strategic water conveyor (Green Infrastructure), and ecological reservoir, in line with the recommendations of FoEME’s Environmental Flow Study.

**Map:**
![Map of Jordan River Basin](Image)

**Intervention:**
This project will depend on the gradual improvement of water quality, water supply and environmental flow into the river, and will include:
1. Restoration of ecological (flora, fauna) status of the river, based on environmental flows and good water quality;
2. Design and implementation of dedicated ecological restoration projects and eco-parks along the borders of the Jordan River;
3. Expansion of currently assigned nature reserves associated with the Jordan River, based on important

**Construction / realization:**
- Recognize the high level of uncertainty, variability, and dynamicity in the ecosystems
- Reflect a common vision among stakeholder through a participatory approach

**Operations:**
- Use all relevant forms of scientific and local knowledge
- Study of existing conditions (assessment of baseline conditions)
- Analysis and evaluation
flora, fauna and bird areas, also in accordance with the Ramsar Convention;
(4) Design and develop dedicated river recreational areas for the urban population with picnic facilities

**Preparation:**
Based on the Nature Protection and Management Plan.

<table>
<thead>
<tr>
<th><strong>Results / Impacts:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eventually, this intervention once its outcomes are implemented will lead to:</td>
</tr>
<tr>
<td>• Protecting or restoring the natural structure of ecosystems to maintain ecosystem services</td>
</tr>
<tr>
<td>• Guarantee the right interaction between all the eco-system elements in the study area</td>
</tr>
<tr>
<td>• Involve stakeholders through participation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Organization / Responsibilities:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ministry of Environmental Affairs</td>
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<tr>
<td>• Ministry of Agriculture</td>
</tr>
<tr>
<td>• Farmer associations</td>
</tr>
<tr>
<td>• Ministry of Planning</td>
</tr>
<tr>
<td>• Ministry of local Governance</td>
</tr>
<tr>
<td>• Palestinian Water Authority</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Costs and Revenues:</strong></th>
<th><strong>Implementation Period</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Preparation costs: $ 500,000</td>
<td></td>
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<tr>
<td>• Construction costs:$ 10 ,000,000</td>
<td></td>
</tr>
<tr>
<td>• Preparation time: 1 year</td>
<td></td>
</tr>
<tr>
<td>• Construction time:10 years</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Other remarks:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs are ball-park estimates based on subjective sense</td>
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</tbody>
</table>
Urban and Economic Development
<table>
<thead>
<tr>
<th>Name: U1 Urban and Infrastructure Development Master Plan</th>
<th>Location: LJV</th>
<th>Type of Intervention: Planning &amp; Construction</th>
</tr>
</thead>
</table>

**Objectives:**
The aim of this project is to develop detailed urban, infrastructure and land use plans for the LJV, taking into account the foreseen population and economic projections of the independent Palestinian State.

**Map:**
![Map of LJV and surrounding areas](map.png)

**Intervention:**
To develop the a comprehensive and detailed urban, infrastructure and physical land use plan to meet the projected requirements for housing and urban facilities for both existing towns and villages as well as projected needs for population and economic growth. The plan would also address the need for expansion of secondary and primary roads, and the linkage to national highway system and public transport requirements. This includes planning, management and training aspects. The project also includes the planning of two new towns (see projected location in map indicated in pink), one in the northern Jordan Valley around the area of Kardala and Bardala, and the other in the central Jordan Valley, around the area of Kirbet ar Ras al Ahmar. These towns would have a population of around 150 thousand each, and would be built on the basis of environmentally friendly infrastructure.

**Preparation:**
Conduct Physical Master Plans for localities in cooperation with the Jordan Valley Authority and Ministry of Local Government to ensure meeting the growth needs of the region and being environmentally friendly by minimizing the negative impact of development.

**Construction / realization:**
- Conduct physical planning for existing towns and villages, including roads, residential areas, land development and identify how they can become more environmentally friendly
- Start rehabilitation and construction of secondary roads in the region
- Rehabilitate, construct and connect LJV highway system with the national highway system within the West Bank
- Construct two towns in the Central and Northern JV of up to 50 thousand housing units each with all relevant infrastructure

**Results / Impacts:**
Urban development and housing needs met

**Sustainability:**
Such types of projects depends on population growth and needs, thus its sustainability can not be calculated or in other words guaranteed.
### Organization / Responsibilities:
- Jordan Valley Authority
- Ministry of Housing and Public Works
- Ministry of Planning
- Ministry of Transportation
- All other relevant governmental authorities

### Costs and Revenues:
cost estimates derived from interviews with urban planners, Rawabi management and PIF investment management.
- Planning costs: $10,000,000
- Implementation: $1,000,000,000 (Billion)

### Implementation Period
- Preparation time: 3 Yr. starting 2015
- Implementation Time: on-going up to 2050

### Investment Priorities (SIWI Criteria)
- Social: 45
- Regional Political: 78
- National Political: 89
- Environmental: 50
- Economic: 71
- Overall: 67
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location: LJV</th>
<th>Type of Intervention: Planning</th>
</tr>
</thead>
</table>

**Objectives:** Identify educational and vocational training needs based on current data and future population growth projections.

**Intervention:** Conduct an assessment of the LJV area to identify the number and quality of schools and vocational training centers and where they need to be located, as well as any rehabilitation to existing schools to ensure their utility, coupled with an assessment of specialization needs for vocational and higher education in the short and long term population and development projections.

**Construction / realization:**
- Conduct a needs assessment of the Educational Facilities for the LJR
- Prepare an education strategy and master plan for the LJR

**Results / Impacts:**
Improve education opportunities

**Sustainability:**
This project is sustainable as there will always be financial support to the educational system and vocational training centers as one of the main priorities.

**Organisation / Responsibilities:**
- Ministry of Education
- Ministry of Higher Education
- Public – Private Academic Partnership

**Costs and Revenues:**
- Preparation costs: $250,000 (cost of study and assessment)

**Implementation Period**
- Preparation time: 1 Yr. starting 2015

**Investment Priorities (SIWI Criteria)**
- Social: 53
- Regional Political: 72
- National Political: 84
- Environmental: 48
- Economic: 77
- Overall: 67
<table>
<thead>
<tr>
<th>Name: U3 School Building Program</th>
<th>Location: LJR</th>
<th>Type of Intervention: Planning &amp; Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives:</td>
<td>Map:</td>
<td></td>
</tr>
<tr>
<td>Based on the educational needs assessment, construct and rehabilitate schools where needed.</td>
<td></td>
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<tr>
<td>Interventions: Build modern and efficient elementary and secondary schools to accommodate the needs of young population (1,000 to 1,500 students per school), including a transportation system for students to get to their schools. The education curricula will include environmental education, water management and water harvesting, agriculture and regional and eco-tourism.</td>
<td>Construction / realization:</td>
<td></td>
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<tr>
<td>Results / Impacts:</td>
<td></td>
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</tr>
<tr>
<td>Improved access to world class education in the LJR</td>
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<tr>
<td>Sustainability:</td>
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<tr>
<td>This project is sustainable as its educational and is based on population growth and the need of more schools.</td>
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<tr>
<td>Organization / Responsibilities:</td>
<td></td>
<td></td>
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<tr>
<td>• Ministry of education</td>
<td></td>
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<tr>
<td>• Ministry of public works</td>
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<tr>
<td>• Ministry of planning</td>
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<tr>
<td>Costs and Revenues: per school of 6,000 m² ($800/m²) to include equipment and busses...Etc.</td>
<td>Implementation Period</td>
<td></td>
</tr>
<tr>
<td>• Preparation costs: $100,000</td>
<td>• Preparation time: 6 months after assessment</td>
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</tr>
<tr>
<td>• Construction costs: $ 4.8 million</td>
<td>• Construction time: 24 months</td>
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<tr>
<td>Investment Priorities (SIWI Criteria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social: 70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Political: 77</td>
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<td></td>
</tr>
<tr>
<td>National Political: 91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental: 39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic: 69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall: 69</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Name:</strong></td>
<td>U4 Higher Education and Vocational Training Program</td>
<td><strong>Location:</strong></td>
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</tbody>
</table>

**Objectives:**
This program aims at establishing a university in the Northern Jordan Valley to accommodate residents and to utilize hands on education and training to meet the developmental needs and the growing population, including agricultural and environmental research, tourism development and other areas;

A Vocational Training Centre to ensure access to professional trainers and experts who will offer training and information, that will be utilized to develop residents’ skills and identify their career choices and development objectives in the areas of focus such as tourism, agriculture and water management.

**Intervention:**
- Establish a university in the Northern Jordan Valley
- Establish a modern and advanced vocational training center in the LJV

**Preparation:**
- Dependent on the education needs assessment conducted

**Construction / realization:**
- Build a modern university in the Northern JV
- Build an advanced and highly specialized vocational training center

**Results / Impacts:**
Higher education and vocational training opportunities provided to JV residents

**Sustainability:**
This project is sustainable as it is based on the need for higher education and vocational training opportunities

**Organization / Responsibilities:**
- Ministry of higher education
- Ministry of education
- JVA
- Other relevant authorities

**Costs and Revenues: TBD**
- Preparation costs: 300,000 USD (assessment of University establishment, including preliminary curriculum)
- Construction costs: 10 million USD (construction and development of curriculum)

**Implementation Period**
- Preparation time: 2 Yrs.
- Construction time: 2 Yrs.

**Investment Priorities (SIWI Criteria)**
Social: 67
Regional Political: 69
National Political: 77
Environmental: 33
Economic: 76
Overall: 64
| Name: | US Health Care Services Development Project |
| Location: | LJV |
| Type of Intervention: | Planning & Construction |

**Objectives:**
This project aims at assessing needs to health care services in the LJV, and plan for the establishment of HC centres, to identify the existing infrastructure, current and projected needs, including Primary health care centres and clinics, secondary health care centres and tertiary or specialized care to ensure timely access to health services for LJV residents, as well as the provision of Mobile Veterinary Clinics for access to livestock farms;

**Intervention:** Identify HC needs in the LJV, and in the short term, provide human resources necessary for the operation of existing health care centres, ensure access to required health care equipment, including emergency vehicles to transport patients to secondary and tertiary care centres in a timely manner; In the long term, it aims at establishing a specialized secondary and tertiary hospital in the Northern JV to serve the growing population in the area – May be connected to the University to be established in the region with a specialized training hospital; and it aims at establishing Mobile Veterinary clinics that would provide access to livestock farms to vet. Services

**Preparation:**
- Conduct assessment to identify the short and long term HC needs

**Construction / realization:**
- In the short term, Rehabilitate, equip and staff existing primary health care centres
- In the short term, establish Mobile Veterinary Clinics
- In the Medium Term, Establish a hospital in the Northern JV

**Results / Impacts:**
Health Care needs of the population are met

**Sustainability:**
Healthcare is a priority, thus the projects are funded

**Organization / Responsibilities:**
- Ministry of Health
- Ministry of Planning
- Jordan Valley Authority

**Costs and Revenues:**
Cost estimates derived from Ministry of Health Development Strategy in the Aghwar Region
- Preparation costs: $1,000,000
- Construction costs: $10,000,000

**Implementation Period**
- Preparation time: 2 Yr.
- Construction time: ongoing.

**Investment Priorities (SIWI Criteria)**
- Social: 53
- Regional Political: 63
- National Political: 80
- Environmental: 10
**Name:** U6 Electricity and Telecommunications Development Project  
**Location:** LJV  
**Type of Intervention:** Planning and Construction

### Objectives:
This project aims at expanding the electricity grid to cover all residential areas in the JV to ensure universal access to electricity; and to develop Telecommunications Networks to ensure access by residents to both voice and data telecommunications.

### Intervention:
Expand the Electricity Grid to cover all residential areas to ensure universal access to electricity.
Construct and expand telecommunications network to ensure access by residents to voice and data telecommunications.

**Preparation:**
Map Electricity and Telecommunications needs to meet current and future population growth projections.

**Construction / realization:**
- Expand the grid to reach all residential areas
- Expand the telecommunications network to cover the whole region

### Results / Impacts:
Residents in the short and long term have access to electricity and telecommunications.

### Organization / Responsibilities:
- Palestinian Energy Authority
- Ministry of telecommunications
- PalTel
- Jerusalem Electricity Undertaking
- Ministry of Planning
- Ministry of Public Works
- Jordan Valley Authority

### Costs and Revenues: Estimates derived from PalTel and Energy Authority:
- Preparation costs: $2,000,000
- Construction Costs: $200,000,000

### Implementation Period
- Preparation time: 1 Yr.
- Implementation time: ongoing (up to 5 yrs.)

### Investment Priorities (SIWI Criteria)
- Social: 39
- Regional Political: 55
- National Political: 72
- Environmental: 15
- Economic: 71
- Overall: 50
**Name:** U7 Develop Renewable Energy Resources  
**Location:** Jordan Valley, Palestine  
**Type of Intervention:** Development projects

<table>
<thead>
<tr>
<th>Objectives:</th>
<th>Construction / realization:</th>
</tr>
</thead>
</table>
| - To construct renewable energy generation schemes | - Reflect a common vision among the residents of the study area that such a project is vital for the area and its future development  
- Appreciate the economic and environmental gains of such schemes |

<table>
<thead>
<tr>
<th>Preparation:</th>
<th>Operations:</th>
</tr>
</thead>
</table>
| - Selection of the optimal sites for the construction of the renewable energy schemes  
- Consideration of land ownership  
- Integration of such schemes with the power transmission lines for the served communities  
- Scope for operation and maintenance  
- Develop legal framework  
- Attract investment | - Distribution of electricity  
- Fee collection  
- O&M  
- Technical and financial management  
- Provide investment incentives to investors  
- Provide land and infrastructure for implementation |

<table>
<thead>
<tr>
<th>Results / Impacts:</th>
<th>Organization / Responsibilities:</th>
</tr>
</thead>
</table>
| - Preservation of the environment  
- Improvement of the financial status of the residents  
- Improvement of the social conditions | - Palestinian Energy Authority  
- Ministry of Environmental Affairs  
- Ministry of Planning  
- Ministry of local Government |

<table>
<thead>
<tr>
<th>Costs and Revenues:</th>
<th>Implementation Period</th>
</tr>
</thead>
</table>
| - Preparation costs: $ 2,000,000 for research, development and planning  
- Construction costs: $ 20,000,000 implementation of renewable energy schemes | - Preparation time: 1 year  
- Construction time: ongoing up to 2020 |

**Investment Priorities (SIWI Criteria)**  
Social: 29  
Regional Political: 50  
National Political: 68  
Environmental: 34  
Economic: 68  
Overall: 50
<table>
<thead>
<tr>
<th>Name: U8 Import and Export Logistics Center</th>
<th>Location: Near Karama Bridge</th>
<th>Type of Intervention: Planning and Construction</th>
</tr>
</thead>
</table>

**Objectives:**
Create a logistics consolidation centre in the JV to facilitate export and import of goods to/from and through Jordan

**Map:**
- Intervention
  - Establish a Logistics Consolidation Centre near the Karama Bridge to facilitate the movement of goods and reduce the cost of transportation. The centre would include refrigeration facilities and trucks that would continue the cooling chain for fresh produce and cooled products

**Preparation:**
- Prepare implementation study and provide for land and infrastructure

**Construction / realization:**
- Private sector investment, with land and infrastructure provided by the government

**Operations:**
- Operated by private sector company (ies) under supervision of Palestinian customs

**Results / Impacts:**
Reduced transaction costs for exports and imports

**Organization / Responsibilities:**
- Ministry of National Economy
- Ministry of Finance (customs)
- Jordan Valley Authority

**Costs and Revenues: Estimations from the Private Sector Coordination council**
- Preparation Costs: $ 200,000
- Implementation costs:$ 1,800,000

**Implementation Period**
- Preparation time: 6 months
- Construction time: 1 yr.

**Investment Priorities (SIWI Criteria)**
- Social: 51
- Regional Political: 75
- National Political: 83
- Environmental: 17
- Economic: 83
- Overall: 62
<table>
<thead>
<tr>
<th><strong>Name:</strong></th>
<th>U9 Adam/ Damia Bridge Rehabilitation Project</th>
<th><strong>Location:</strong></th>
<th>Adam/Damia Bridge King Abdallah I Bridge</th>
<th><strong>Type of Intervention:</strong></th>
<th>Planning and Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td></td>
<td><strong>Map:</strong></td>
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<tr>
<td>Adam/Damia Bridge rehabilitated and operational for commercial traffic</td>
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<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td><strong>Construction / realization:</strong></td>
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<tr>
<td>Rehabilitate and open Adam bridge for agricultural goods and commercial traffic as an additional outlet for imports and exports to or through Jordan</td>
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<tr>
<td><strong>Preparation:</strong></td>
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<tr>
<td>• Conduct a study and prepare a construction plan</td>
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<tr>
<td><strong>Results / Impacts:</strong></td>
<td></td>
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<tr>
<td>Facilitated export and import route from the Northern JV into Jordan</td>
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<tr>
<td><strong>Organization / Responsibilities:</strong></td>
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<tr>
<td>• Ministry of Finance</td>
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<tr>
<td>• Ministry of Public Works and Housing</td>
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<td>• Ministry of Planning</td>
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<tr>
<td>• Ministry of National Economy</td>
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<tr>
<td>• JVA</td>
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<tr>
<td><strong>Costs and Revenues:</strong></td>
<td>Estimates derived from actual cost of rehabilitation of Allenby Bridge by JICA</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Preparation costs: $300,000</td>
<td></td>
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<tr>
<td>• Implementation costs: $ 90,000,000</td>
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<tr>
<td><strong>Implementation Period</strong></td>
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<tr>
<td>• Preparation time: 1 Yrs.</td>
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<tr>
<td>• Construction time: 4 Yrs.</td>
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<tr>
<td><strong>Investment Priorities (SIWI Criteria)</strong></td>
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<td></td>
</tr>
<tr>
<td>Social: 45</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Regional Political: 68</td>
<td></td>
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<tr>
<td>National Political: 79</td>
<td></td>
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<tr>
<td>Environmental: 17</td>
<td></td>
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<tr>
<td>Economic: 82</td>
<td></td>
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<tr>
<td>Overall: 58</td>
<td></td>
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</tr>
<tr>
<td>Name:</td>
<td>U10 Renewable Energy Research Center</td>
<td>Location:</td>
<td>Jordan Valley</td>
<td>Type of Intervention:</td>
<td>Research and Manufacturing</td>
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</tr>
<tr>
<td>Objectives:</td>
<td>To create a center for renewable energy research leading to the manufacture of related devices and access to utilities.</td>
<td>Map:</td>
<td></td>
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</tr>
<tr>
<td>Intervention</td>
<td>To create a research and development centre for renewable energy which would utilize the potentials in the lower part of the Jordan River Basin to reduce energy costs and protect the environment in the area, while also creating jobs and increasing the renewable energy body of knowledge.</td>
<td>Construction / realization:</td>
<td>• Build research centre</td>
<td>• Build production facilities</td>
<td></td>
</tr>
<tr>
<td>Preparation:</td>
<td>• Identify areas of research and prepare a business plan</td>
<td>Operations:</td>
<td>• Produce equipment and machinery required for implementation of alternative and renewable energy</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Identify needed technical and technological assistance to be achieved through international consultations and twinning with similar research centres in Europe and the other countries</td>
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<tr>
<td></td>
<td>• Establish the research centre</td>
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<tr>
<td></td>
<td>• Identify private sector investors to finance research and establish production facilities for equipment and machinery</td>
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<tr>
<td>Results / Impacts:</td>
<td>Renewable, environmentally friendly energy alternatives available for the development of the Lower Part of the Jordan River Basin</td>
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<tr>
<td>Organization / Responsibilities:</td>
<td>• Palestinian Energy Authority</td>
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<td></td>
<td>• Ministry of Planning</td>
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<td>• Ministry of National Economy</td>
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<td>• JVA</td>
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<tr>
<td>Costs and Revenues: Estimates from ECOPEACE - Palestine</td>
<td>Preparation costs: $1,000,000</td>
<td>Implementation Period</td>
<td>Preparation time: 1 Yrs.</td>
<td>Construction time: 1 Yrs.</td>
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<tr>
<td></td>
<td>Implementation costs: $15,000,000</td>
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<tr>
<td>Investment Priorities (SIWI Criteria)</td>
<td>Social: 44</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Regional Political: 48</td>
<td></td>
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<tr>
<td></td>
<td>National Political: 61</td>
<td></td>
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<tr>
<td></td>
<td>Environmental: 39</td>
<td></td>
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<tr>
<td></td>
<td>Economic: 70</td>
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<tr>
<td>Overall: 52</td>
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</tr>
<tr>
<td>Name:</td>
<td>Location:</td>
<td>Type of Intervention:</td>
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<tr>
<td>U11 King Abdullah I Bridge Rehabilitation Project</td>
<td>King Abdallah I Bridge</td>
<td>Planning and Construction</td>
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</tr>
</tbody>
</table>

**Objectives:**
King Abdallah I Bridge, which formulates the shortest distance between Amman and Jerusalem, across the Jordan River, rehabilitated and operational for tourists.

**Intervention**
Rehabilitate and open King Abdullah I bridge for easy movement of tourists between Jordan and Palestine as an additional outlet

**Preparation:**
- Conduct a study and prepare a construction plan

**Construction / realization:**
- Rehabilitate the bridge
- Create a Customs Clearance Area

**Results / Impacts:**
Facilitated movement of tourists between Jordan and Palestine

**Organization / Responsibilities:**
- Ministry of Finance
- Ministry of Public Works and Housing
- Ministry of Planning
- JVA

**Costs and Revenues: Estimations Derived from Actual Cost of rehabilitation of the Allenby Bridge by JICA**
- Preparation costs: $200,000
- Implementation costs: $60,000,000

**Implementation Period**
- Preparation time: 1 Yrs.
- Construction time: 2 Yrs.

**Investment Priorities (SIWI Criteria)**
- Social: 35
- Regional Political: 77
- National Political: 78
- Environmental: 20
- Economic: 70
- Overall: 56
Name: U12 – Development of a national spatial plan for the lower part of the Jordan River Basin

Location: Jordan Valley, Palestine

Type of Intervention: Planning and mapping

Objectives:

9. To map the existing land use classes and land covers for the lower part of the Jordan River Basin to the utmost possible fine resolution

10. To map all the physical features including basically the following:
   a. Soil type
   b. Topographic elevations
   c. Vegetation cover

11. Development of a projected land use classes for the study area based on the activity levels of all potential drivers and considerations including:
   a. Economic
   b. Social
   c. Political
   d. Cultural
   e. Touristic
   f. Water resources
   g. Environmental systems
   h. Sustainable development

12. Development of GIS-based maps along with documentation of the developed maps

Map:

Intervention:
- Conduct a comprehensive detailed surveying for the study area
- Digitize all the spatially surveyed information
- Utilization of the orthophotos for the study area
- Development of GIS maps for the present and projected land use classes

Construction / realization:
- Similar to preparation

Operations:
- Study of current conditions
- Analysis and forecasts at the Ministerial level
- Management plans
- Conclusions
- Decisions to be recommended
- Public consultation
- Digitization
### Preparation:
- Assessment of all physical features that exist in the study area
- Preparation of orthophotos for the study area
- Preparation of digitization team
- Specialized team in many aspects must be created

### Results / Impacts:
- Better understanding of the existing land use classes and land cover classifications
- Obtaining an updated land use map for the study area
- Better long-term planning since that will be aided by a trustworthy spatial mapping to the area

### Organization / Responsibilities:
- Municipalities and local councils
- Ministry of Planning
- Ministry of Environmental Affairs
- Ministry of Local Government
- Ministry of Agriculture
- Palestinian Water Authority

### Costs and Revenues:
**Preparation costs:** $200,000 - $300,000

### Implementation Period
2015 – 2016
<table>
<thead>
<tr>
<th>Name:</th>
<th>Utilization of Dead Sea Minerals for economic production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Jordan Valley</td>
</tr>
<tr>
<td>Type of Intervention:</td>
<td>Research and Manufacturing</td>
</tr>
</tbody>
</table>

**Objectives:**

To extract salts and minerals from the dead sea for utilization by Palestine as both production inputs for cosmetics and other production, as well as for export as raw of processed materials.

**Intervention**

To create a research and development centre for the extraction of Dead Sea Minerals and Salts, which would be utilized for production of cosmetics and other production inputs, as well as for export as raw materials for production by other countries.

**Preparation:**

- Identify areas of research and prepare a business plan
- Identify needed technical and technological assistance to be achieved through international consultations and twinning with similar research centres in Europe and the other countries
- Establish the research centre
- Identify private sector investors to finance research and establish production facilities for equipment and machinery
- Establish extraction facilities and packing and packaging production lines.

**Construction / realization:**

- Build research centre
- Build production facilities

**Operations:**

- Produce equipment and machinery required for implementation

**Results / Impacts:**

Potential economic benefits from the Dead Sea Salts and Minerals for both research and development as well as job creation.

**Organization / Responsibilities:**

- Palestinian Natural Resources Authority
- Ministry of Planning
- Ministry of National Economy
- JVA

**Costs and Revenues: Estimates from ECOPEACE - Palestine**

- Preparation costs: $1,500,000
- Implementation costs: $22,000,000

**Implementation Period**

- Preparation time: 1 Yrs.
- Construction time: 1 Yrs.
<table>
<thead>
<tr>
<th>Investment Priorities (SIWI Criteria)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social: 44</td>
</tr>
<tr>
<td>Regional Political: 48</td>
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<tr>
<td>National Political: 61</td>
</tr>
<tr>
<td>Environmental: 39</td>
</tr>
<tr>
<td>Economic: 70</td>
</tr>
<tr>
<td>Overall: 52</td>
</tr>
</tbody>
</table>
Tourism
<table>
<thead>
<tr>
<th>Name: T1 Cultural Heritage Protection and Management Plan.</th>
<th>Location: Palestine, All LJV</th>
<th>Type of Intervention: Management &amp; Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td></td>
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<tr>
<td>- To develop an integrated Cultural Heritage Projection and Management Plan for the LJV.</td>
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<tr>
<td>- To facilitate and coordinate the declaration of the JV as a World Heritage Site.</td>
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<tr>
<td>- To select potential authentic tourism attractions (destinations) through a methodological approach that represents the value of the JV (Historic urban and industrial sites, Valleys, Panoramic Locations and other key tourism sites and features).</td>
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<tr>
<td>- To provide detailed assessment and descriptions of potential sites based on literature and field investigations.</td>
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<tr>
<td>- To develop an overall site specific financial, technical and protection and development management plans.</td>
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<tr>
<td>- To provide provisional training to create the Cultural and Natural Heritage Preservation Centre (CNHPC) and to Cultural and Natural Heritage site specific management staff.</td>
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<tr>
<td><strong>Intervention:</strong> To create a regional conservation and management plan</td>
<td><strong>Construction / realization:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Preparation:</strong></td>
<td>- Data collection, surveys and mapping.</td>
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<tr>
<td>- Planning with stakeholders (Concept Approach).</td>
<td>- Data analysis and classification.</td>
<td></td>
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<tr>
<td>- Theme research and comparative studies.</td>
<td>- Protection, Conservation and management plan.</td>
<td></td>
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<tr>
<td>- Technical and legal protection plans.</td>
<td><strong>Operations:</strong></td>
<td></td>
</tr>
<tr>
<td>Sustainability: It creates sustainable systems for the protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 80%, Tourism SIWI Criteria average is 72%).</td>
<td><strong>Results / Impacts:</strong></td>
<td></td>
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<tr>
<td>Environmental Impact: It will provide a better anticipated mitigation measures.</td>
<td>- Prevent Cultural Heritage from being an obstacle for all development plans in all sectors.</td>
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<td></td>
<td>- Provide comprehensive vision and action plans for the cultural heritage and tourism development.</td>
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<td></td>
<td>- Provide the guidance and strategic objectives for sustainable development in the JV.</td>
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<td></td>
<td>- Provide the necessary data, tools and strategies for the protection, management and development of the cultural heritage in the JV (Centre for Cultural Heritage Preservation).</td>
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<tr>
<td><strong>Organization / Responsibilities:</strong> MOTA, MEA, MOC</td>
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<tr>
<td><strong>Costs and Revenues:</strong></td>
<td><strong>Implementation Period:</strong></td>
<td></td>
</tr>
<tr>
<td>- Preparation costs: $200,000</td>
<td>- Preparation time: 6 months</td>
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<tr>
<td>- Construction costs: $1,800,000</td>
<td>- Construction time: 3 years</td>
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<tr>
<td>- Operation costs: (Centre for Cultural Heritage), 0.12/year</td>
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<tr>
<td>- Annual Revenues: Indirect Revenues</td>
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<tr>
<td><strong>Other remarks:</strong> The coordination and the integration between the cultural heritage management plan and the natural heritage management is inevitable. Due to the nature of the Jordan valley, it is recommended to undertake the two projects and their management measures under the same institutional structure that should to establish the Natural and Cultural Heritage Preservation Centre.</td>
<td></td>
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<tr>
<td>Name: T2 Tourism Branding and Promotion.</td>
<td>Location: Palestine, All LJV</td>
<td>Type of Intervention: Tourism Promotion</td>
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<tr>
<td><strong>Objectives:</strong></td>
<td></td>
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</tr>
<tr>
<td>• To promote the JV as an authentic tourism attraction (destination).</td>
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<tr>
<td>• To integrate the promotion tourism attractions of the JV into the promotion of the Palestinian and regional tourism in general.</td>
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<tr>
<td>• To promote cultural and natural heritage sites in local, regional and international markets.</td>
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<tr>
<td>• To promote cultural activities and community based tourism.</td>
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<tr>
<td>• To develop promotion materials, international publications and websites as well as information centres.</td>
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<tr>
<td>• To promote cultural and sport activities as well as events in the JV in the context of the promotion of Palestinian tourism.</td>
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<tr>
<td>• To develop tourism promotion activities like trade shows, familiarization tours as well as B to B conferences and meetings.</td>
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<tr>
<td><strong>Intervention:</strong> To create and conduct a local, regional and international promotion activities.</td>
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<tr>
<td><strong>Preparation:</strong></td>
<td></td>
<td></td>
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<tr>
<td>• Planning with stakeholders (Concept approach).</td>
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<td></td>
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<tr>
<td>• Theme research and comparative studies.</td>
<td></td>
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<tr>
<td>• Market review.</td>
<td></td>
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<tr>
<td>• Concept development.</td>
<td></td>
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<tr>
<td><strong>Construction / realization:</strong></td>
<td></td>
<td></td>
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<tr>
<td>• Data collection, surveys and mapping.</td>
<td></td>
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<tr>
<td>• Data analysis and classification.</td>
<td></td>
<td></td>
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<tr>
<td>• Branding and Marketing Strategy</td>
<td></td>
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<tr>
<td><strong>Operations:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Management and Protection Plan.</td>
<td></td>
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<tr>
<td>• 2 - 5 years of operational support.</td>
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</tr>
<tr>
<td><strong>Sustainability:</strong> It provides market access that will create a sustainable demand for the tourism offer in the JV as well as the national and regional levels (SIWI Criteria 70%, Tourism SIWI Criteria average is 72%).</td>
<td></td>
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<tr>
<td><strong>Environmental Impact:</strong> No Significant Environmental Impact.</td>
<td></td>
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</tr>
<tr>
<td><strong>Results / Impacts:</strong> It will provide access of the tourism product to the local, regional and international markets.</td>
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<tr>
<td><strong>Organization / Responsibilities:</strong> MOTA, HILTOA and AHA</td>
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<tr>
<td><strong>Costs and Revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Preparation costs: $100,000</td>
<td></td>
<td></td>
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<tr>
<td>• Promotion Material costs: $400,000</td>
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<tr>
<td>• Operation costs: $1,000,000</td>
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<tr>
<td>• Annual Revenues: Tourism demand will increase</td>
<td></td>
<td></td>
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<tr>
<td><strong>Implementation Period</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Preparation time: 1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Construction time: 4 years</td>
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<tr>
<td><strong>Other remarks:</strong> Branding the JV as a destination is the main challenge to attract the attention of the local and international markets. This can also initiate regional marketing programs and cooperation for the JV as a unit.</td>
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</tr>
</tbody>
</table>
## Name: T3 Museum of Natural and Cultural History of the Rift Valley

### Location: Palestine, Jiftlick or Toubas Area

### Type of Intervention:
- Tourism Attraction: Interpretation of the Rift Valley

### Objectives:
- To provide an authentic tourism attraction (destination).
- To upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare the Palestinian northern part of the JV to tourism industry (internal and inbound).
- To plan and realize the development of Natural and Cultural History Museum in the LJV in Jitlik or Toubas.
- To include a presentation and an illustration of the geological, geomorphological, and geographic unique history of the Rift Valley.
- To include a presentation of key natural and cultural heritage objects and artefacts.
- To train the necessary staff for the management of the museum (curators, guides, gift shops, restaurant etc.)

### Intervention:
- To develop the museum concept, museum presentations and museum construction.

### Preparation:
- Planning with stakeholders (Concept approach).
- Theme research and comparative studies.
- Feasibility and Market review.
- Museum Concept development.

### Construction / realization:
- Museum thematic collections and presentations.
- Construction (Concept and detailed Designs).
- Construction and mounting museum displays.

### Operations:
- Management and curation Plans.
- 2 - 5 years of operational support.

### Sustainability:
- It provides a sustainable system to interpret cultural and natural heritage resources in the JV (SIWI Criteria 79%, Tourism SIWI Criteria average is 72%).

### Environmental Impact:
- Full Mitigation is necessary through design, construction and operational periods.

### Results / Impacts:
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal interventions, the museum is expected to attract about 0.5 -0.8 million visitors per year. During operational period, the museum will provide more than 250 direct jobs, 350 adjacent jobs as well as more than 1500 indirect jobs.

### Organization / Responsibilities: MOTA, MEA, MOC

### Costs and Revenues:
- Preparation costs: $ 5,500,000
- Construction costs: $ 40,000,000
- Annual Operation costs: $ 6,000,000
- Annual Revenues: $8,000,000

### Implementation Period:
- Preparation time: 10 Years
- Construction time: 5 Years

### Other remarks:
- The scale of this project is important to have a strong impact on the tourism industry and programs. It is of a great value to have this distinguished destination to attract and upgrade the visitor experience in the JV. The museum will serve as the portal to the JV through its experience; the visitor will be exposed to other potential destinations and will be able to plan other visits to the rest of the JV.
Objectives:
- To facilitate the creation and the growth of the tourism business environment around the site in respect of the site catchment vulnerability especially in regards with the extensive use of the area that includes the archaeological site and the major spring of the area (Ein essultan).
- To conduct a full study of the catchment area and provide a comprehensive a conservation and development zone plan that will rearrange tourist mobility around the site and its services.
- To construct the necessary pedestrian paths, roads, parking areas as well as information centre.
- To equip the area with the necessary direction signs, interpretation panels and street furniture.

Intervention: To rehabilitate the immediate area surrounding the archaeological site of Ancient Jericho.

Preparation:
- Planning with stakeholders (Concept approach).
- Feasibility study.
- Archaeological surveys.
- Concept development.

Construction / realization:
- Site Urban concept and detailed designs.
- Site Rehabilitation.

Operations:
- Management Plan (responsibilities of MOTA and the Municipality).

Sustainability: It creates a sustainable zone protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 79%, Tourism SIWI Criteria average is 72%).

Environmental Impact: Full Mitigation is necessary through design, construction and operational periods.

Results / Impacts:
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- It will expand and distribute the benefits of Ancient Jericho visitors among the immediate services available around the site.
- In combination with all JV portal interventions, the Ancient Jericho expanded area will be able to receive additional 0.8m visitors per year (in the last 5 years, Jericho was receiving about 1 m. daily visits per year). During operational period, this area will be able to open the business to create more than 250 direct jobs, 350 adjacent jobs as well as more than 1500 indirect jobs.

Organization / Responsibilities: MOTA, MOLG, Municipality of Jericho.

Costs and Revenues:
- Preparation costs $ 300,000
- Construction costs: $ 6,000,000
- Operation costs: $ 300,000
- Annual Revenues: $ 720,000

Implementation Period
- Preparation time: 1 year
- Construction time: 4 years

Other remarks: Revenues are only calculated from the parking area so the management. The archaeological site linked to the spring will create a better entry fee collection left in the context of Pal-Tourism 16. The rehabilitation of the area will generate additional private investment responding to better business environment and controlled by the landscape protection guidelines.
**Name:** T5 Rehabilitation of salt industry sites, Rusheidyeh  
**Location:** Palestine, Mallahat Er Rusheidiyeh (North edge of the Dead Sea)  
**Type of Intervention:** Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites

**Objectives:**
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience to understand the Dead Sea related salt industry from Bronze period until present (in the north edge of the Dead Sea).
- To well prepare and introduce tourism attractions in the Palestinian southern part of the JV to tourism industry (internal and inbound).
- To rehabilitate the landscape and the site area to present its economic and cultural value behind this historic industry.

**Intervention:** To create a new cultural heritage attraction.

**Preparation:**
- Feasibility studies.
- Theme research and comparative studies.
- Archaeological surveys.
- Concept development.
- Site Study: Archaeological excavations.

**Construction / realization:**
- Site presentation concept designs.
- Site museum concept design.
- Site Rehabilitation.

**Operations:**
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 74%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design and for construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, the salt industry site will provide an additional optional attraction in the JV. The site is expected to attract about 0.1 - 0.2 million visitors per year. During operational period, the site will provide more than 10 direct jobs, 10 adjacent jobs as well as more than 150 indirect jobs.

**Organization / Responsibilities:** MOTA, MLG and MOPW

**Costs and Revenues:**
- Preparation costs: $1,300,000
- Construction costs: $3,000,000
- Operation costs: $200,000
- Annual Revenues: $500,000

**Implementation Period**
- Preparation time: 6 years
- Construction time: 4 years

**Other remarks:** The site is composed of an archaeological mound, landscape, salt drying fields and other landscape features. It represents three main successive salt production traditions that probably goes back to the Bronze period (from 5000 years ago till present). The industrial site as well as the archaeological site will bring important knowledge about the salt production, salt trade as well as the socio economic life around it.
**Name:** Rehabilitation of Ancient Jericho

**Location:** Palestine, Jericho

**Type of Intervention:** Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites

**Objectives:**
- To upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce tourism attractions in the Palestinian southern part of the JV to tourism industry (internal and inbound).
- To widen the exposure of the archaeological remains of Ancient Jericho to have the site more attractive to tourists and better understood by them.

**Intervention:** To upgrade an existing cultural heritage attraction.

**Preparation:**
- Feasibility studies.
- Theme research and comparative studies.
- Archaeological surveys.
- Concept development.
- Site Study; Archaeological excavations.

**Construction / realization:**
- Site presentation concept designs.
- Site museum concept design.
- Site Rehabilitation.

**Operations:**
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 69%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design and for construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, Ancient Jericho site will be linked to Ein Sultan Spring and will serve as a portal to understand other optional attraction in the JV.
- The site is expected to attract about 0.3 - 0.4 million visitors per year. During operational period, the site will provide additional than 20 direct jobs, 30 adjacent jobs as well as more than 300 indirect jobs.

**Organization / Responsibilities:** MOTA, MLG and MOPW

**Costs and Revenues:**
- Preparation costs: $1,300,000
- Construction costs: $ 3,000,000
- Operation costs: $ 400,000
- Annual Revenues: $ 800,000

**Implementation Period**
- Preparation time: 8 years
- Construction time: 4 years

**Other remarks:** The archaeological site is disappointing visitors as it has limited exposure in comparison to its important reputation. It is also a challenge to both archaeologists and rehabilitation/conservation architects as it is a very vulnerable site. The work on the site requires the involvement of the research and education institutions during the long period of excavation and site rehabilitation (partnership between MOTA and University of Rome is already established for the site). Those institutions are mainly universities Palestinian and other who also might co-finance the process.
**Objectives:**

- To upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley). And experience the richness of the archaeological remains of the Hisham’s Palace site.
- To well prepare and introduce tourism attractions in the Palestinian southern part of the JV to tourism industry (internal and inbound).
- To widen the exposure of the archaeological remains of Hisham’s (expose the largest intact mosaic in the ME) and have the site more attractive to tourists and better understood by them.

**Intervention:** To upgrade an existing cultural heritage attraction.

**Preparation:**

- Feasibility studies.
- Theme research and comparative studies.
- Concept development.
- Site Study: Archaeological excavations.

**Construction / realization:**

- Site presentation concept designs.
- Site Rehabilitation.

**Operations:**

- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 68%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design and for construction and operational periods.

**Results / Impacts:**

- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, Hisham’s Palace site will serve as an optional attraction in the JV.
- The site is expected to attract about 0.3 - 0.4 million visitors per year. During operational period, the site will provide additional than 20 direct jobs, 30 adjacent jobs as well as more than 300 indirect jobs.

**Organization / Responsibilities:** MOTA

**Costs and Revenues:**

- Preparation costs: $1,200,000
- Construction costs: $2,500,000
- Operation costs: $400,000
- Annual Revenues: $800,000

**Implementation Period**

- Preparation time: 3-4 years
- Construction time: 1 years

**Other remarks:** Several international experts evaluated the mosaic in order to have it accessible to visitors. Several concept designs were developed including ones supported by UNESCO. This is already an advance stage in terms of concept design.
<table>
<thead>
<tr>
<th>Name: T8: Rehabilitation of Tel Abu el ‘Alayek</th>
<th>Location: Palestine, Jericho</th>
<th>Type of Intervention: Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites</th>
</tr>
</thead>
</table>

### Objectives:
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce tourism attractions in the Palestinian southern part of the JV to tourism industry (internal and inbound).
- To expand the exposure of the chronological history (Roman Period) of the city of Jericho to have the city more attractive to tourists and better understood by them.

### Intervention:
- To create a new cultural heritage attraction.

### Preparation:
- Feasibility studies.
- Theme research and comparative studies.
- Archaeological surveys.
- Concept development.
- Site Study: Archaeological excavations.

### Construction / realization:
- Site presentation concept designs.
- Site museum concept design.
- Site Rehabilitation.

### Operations:
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

### Sustainability:
- It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 70%, Tourism SIWI Criteria average is 72%).

### Environmental Impact:
- Full Mitigation will be necessary through design and for construction and operational periods.

### Results / Impacts:
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, Tel Abu el ‘Alayek will provide an additional optional attraction in the JV. The site is expected to attract about 0.1 - 0.2 million visitors per year. During operational period, the site will provide more than 10 direct jobs, 10 adjacent jobs as well as more than 150 indirect jobs.

### Organization / Responsibilities:
- MOTA, MLG and MOPW

### Costs and Revenues:
- Preparation costs: $1,300,000
- Construction costs: $3,000,000
- Operation costs: $200,000
- Annual Revenues: $600,000

### Implementation Period
- Preparation time: 3 years
- Construction time: 3 years

**Other remarks:** The site is well located on the current tourism trails as well as on the Wadi Quilt hiking trail which is well visited by pilgrimage and experiential tourists. The work on the site requires the involvement of the research and education institutions during the long period of excavation and site rehabilitation. Those institutions are main universities Palestinian and other who also might co-finance the process.
| Name: | T9 Rehabilitation of Khirbet el Biyadat or Tel Ouja |
| Location: | Palestine, Ouja |
| Type of Intervention: | Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites |

**Objectives:**
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce the Palestinian middle part of the JV to tourism industry (internal and inbound).
- To expand the exposure of the chronological history (Chalcolithic to Islamic Periods) of Ouja and in the JV to have it more attractive to tourists and better understood by them.

**Intervention:** To upgrade an existing cultural heritage attraction.

**Preparation:**
- Feasibility studies.
- Theme research and comparative studies.
- Concept development.
- Site Study: Archaeological excavations.

**Construction / realization:**
- Site presentation concept designs.
- Site Rehabilitation.

**Operations:**
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 73%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, the Khirbet Biyadat or Tel Ouja will provide an additional optional attraction in the JV. The site is expected to attract about 0.2 - 0.3 million visitors per year. During operational period, the site will provide more than 20 direct jobs, 40 adjacent jobs as well as more than 200 indirect jobs.

**Organization / Responsibilities:** MOTA, MLG and MOPW

**Costs and Revenues:**
- Preparation costs: $1,800,000
- Construction costs: $ 4,000,000
- Operation costs: $ 400,000
- Annual Revenues: $1,000,000 - $1,500,000

**Implementation Period**
- Preparation time: 8 years
- Construction time: 4 years

**Other remarks:** The work on the site requires the involvement of the research and education institutions during the long period of excavation and site rehabilitation. Those institutions are mainl universities Palestinian and other who also might co-finance the process.
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
</tr>
</thead>
<tbody>
<tr>
<td>T10 Rehabilitation of Khirbet el Makhrouq</td>
<td>Palestine, Jiftlick</td>
<td>Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites</td>
</tr>
</tbody>
</table>

**Objectives:**

- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce the Palestinian middle part of the JV to tourism industry (internal and inbound).
- To expand the exposure of the chronological history (Chalcolithic to Islamic Periods) of Jiftlick and in the JV to have it more attractive to tourists and better understood by them.

<table>
<thead>
<tr>
<th>Intervention:</th>
<th>Construction / realization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To upgrade an existing cultural heritage attraction.</td>
<td>Site presentation concept designs.</td>
</tr>
<tr>
<td>Preparation:</td>
<td>Site Rehabilitation.</td>
</tr>
<tr>
<td>Feasibility studies.</td>
<td>Operations:</td>
</tr>
<tr>
<td>Theme research and comparative studies.</td>
<td>Management Plan.</td>
</tr>
<tr>
<td>Concept development.</td>
<td>Site Promotion and Marketing.</td>
</tr>
<tr>
<td>Site Study: Archaeological excavations.</td>
<td>2 - 5 years of operational support.</td>
</tr>
</tbody>
</table>

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 73%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design and for construction and operational periods.

**Results / Impacts:**

- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, Khirbet el Makhrouq will provide an additional optional attraction in Jiftlick and the JV. The site is expected to attract about 0.1 - 0.2 million visitors per year. During operational period, the site will provide more than 10 direct jobs, 10 adjacent jobs as well as more than 150 indirect jobs.

**Organization / Responsibilities:** MOTA, MLG and MOPW

**Costs and Revenues:**

- Preparation costs: $1,800,000
- Construction costs: $ 4,000,000
- Operation costs: $ 200,000
- Annual Revenues: $ 500,000 - $1,000,000

**Implementation Period**

- Preparation time: 8 years
- Construction time: 4 years

**Other remarks:** The work on the site requires the involvement of the research and education institutions during the long period of excavation and site rehabilitation. Those institutions are main universities Palestinian and other who also might co-finance the process.
**Name:** Rehabilitation of Tel el Hamma  
**Location:** Palestine, Ein el Beida  
**Type of Intervention:** Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites

### Objectives:
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To expand the exposure of the chronological history (Chalcolithic to Islamic Periods) of KB and Ein Beida as well as the JV to have it more attractive to tourists and better understood by them.

### Intervention:
- To create a new cultural heritage attraction.

### Preparation:
- Feasibility studies.
- Theme research and comparative studies.
- Archaeological surveys.
- Concept development.
- Site Study: Archaeological excavations.

### Construction / realization:
- Site presentation concept designs.
- Site museum concept design.
- Site Rehabilitation.

### Operations:
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

### Sustainability:
It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (SIWI Criteria 73%, Tourism SIWI Criteria average is 72%).

### Environmental Impact:
Full Mitigation will be necessary through design and for construction and operational periods.

### Results / Impacts:
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal sites, Tel el Hamma will provide an additional optional attraction in the JV. The site is expected to attract about 0.2 -0.3 million visitors per year. During operational period, the site will provide more than 20 direct jobs, 40 adjacent jobs as well as more than 200 indirect jobs.

### Organization / Responsibilities:
MOTA, MLG and MOPW

### Costs and Revenues:
- Preparation costs: $2,300,000  
- Construction costs: $3,000,000  
- Operation costs: $400,000  
- Annual Revenues: $1,000,000 - $1,500,000

### Implementation Period:
- Preparation time: 11 years  
- Construction time: 4 years

### Other remarks:
The work on the site requires the involvement of the research and education institutions during the long period of excavation and site rehabilitation. Those institutions are main universities Palestinian and other who also might co-finance the process.
**Name:** T12 Archaeological Landmarks Features  
**Location:** Palestine: All the JV  
**Type of Intervention:** Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites

### Objectives:
- To upgrade visitor experience during their travel in the area (understanding and enjoying the natural and cultural history of the rift valley).

### Intervention:
- To create new cultural heritage attractions available for travellers.

### Preparation:
- Site Selection and Assessment Research
- Archaeological surveys and Documentation
- Concept development.

### Construction / realization:
- Site presentation concept designs.
- Site Rehabilitation.
- Site Interpretation.

### Operations:
- Management Plan.

### Sustainability:
It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (important historic/archaeological and natural features and monuments). SIWI Criteria is 55%, Average Tourism SIWI Criteria is 72%.

### Environmental Impact:
Full Mitigation will be necessary through design, construction and operational periods.

### Results / Impacts:
- Upgrade the visitor experience in the JV and on Palestine in general.
- Protect the degradation of cultural and natural heritage resources and enhance their importance.

### Organization / Responsibilities: MOTA, MLG and MOPW

### Costs and Revenues:
- Preparation costs: $ 300,000
- Construction costs: $ 1,200,000
- Operation costs: Monitored and maintained by the CNHPC.
- Annual Revenues: (No direct revenue)

### Implementation Period
- Preparation time: 1 year
- Construction time: 3 years

### Other remarks:
In addition to the historic value of the selected features to be rehabilitated, the selection criteria are more influenced by the visibility of the site on roads, walking track, hiking trails as well as panoramic locations. This is not to disregard the aesthetic importance historic and the protection intention.
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
</tr>
</thead>
<tbody>
<tr>
<td>T13</td>
<td>Palestine, Al-Maleh, Toubas</td>
<td>Tourism Attraction, Rehabilitation of Cultural and Natural Heritage Sites</td>
</tr>
</tbody>
</table>

**Objectives:**
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce the Palestinian northern part of the JV to tourism industry (internal and inbound).
- To develop the Spa Thalassotherapy and Balneotherapy Centres into an attractive tourism destination. This includes water source restoration, management and promotion activities.
- To train the needed staff on Spa management, hot springs therapy as well as monitoring and planning visitor’s needs.

**Intervention:** To create a new tourism attraction

**Preparation:**
- Feasibility studies (Re-examine Location).
- Concept development.
- Detailed plans and Designs.
- Training.

**Construction / realization:**
- Water Source Rehabilitation.
- Construction.

**Operations:**
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources. And a medical care centre for local and inbound tourism. It will also create a sustainable business environment (SIWI Criteria 66%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal attraction sites, the medical centre will provide a unique service in the JV as well as in Palestine. The site is expected to attract about 10000 visitors per year. During operational period, the site will provide more than 15 direct jobs, 10 adjacent jobs as well as more than 50 indirect jobs.

**Organization / Responsibilities:** MOTA and MOH

**Costs and Revenues:**
- Preparation costs: $300,000
- Construction costs: $3,000,000
- Operation costs: $200,000
- Annual Revenues: $300,000 (Residence Capacity over 30 persons).

**Implementation Period**
- Preparation time: 1 year
- Construction time: 4 years

**Other remarks:** It will be the only centre of its kind that provides this service in Palestine. And can attract both local and inbound tourism.
**Name:** T14 Jesus Village  
**Location:** Jericho  
**Type of Intervention:** Tourism Attraction, Faith Tourism

### Objectives:
- To provide an authentic tourism attraction (destination). And to upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce the Palestinian JV with diverse attractions to tourism industry (internal and inbound).
- To integrate faith tourism experience with cultural experience.
- To develop the Jesus Village into an attractive tourism destination. This includes restoration, management and promotion activities.
- To train the needed staff on housekeeping and management, monitoring and planning pilgrims experience and the additional cultural activities.

### Intervention:
- To create a new tourism attraction

### Preparation:
- Feasibility studies.
- Concept development.
- Detailed plans and Designs.
- Training.

### Construction / realization:
- Construction.

### Operations:
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

### Sustainability:
It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (Baptism site). It will also create a sustainable cultural and business environment (SIWI Criteria 64%, Tourism SIWI Criteria average is 72%).

### Environmental Impact:
Full Mitigation will be necessary through design, construction and operational periods.

### Results / Impacts:
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- In combination with all JV attraction sites, Jesus village will provide a unique service and cultural experience in the JV as well as in Palestine. The site is expected to attract about 20000 overnight visitors and more than 200000 daily visits per year. During operational period, the site will provide more than 30 direct jobs, 10000 adjacent jobs as well as more than 5000 indirect jobs.

### Organization / Responsibilities: MOTA

### Costs and Revenues:
- Preparation costs: $500,000
- Construction costs: $3,000,000
- Operation costs: $200,000
- Annual Revenues:$ 500,000  
(Residence Capacity over 100 persons)

### Implementation Period
- Preparation time: 1 year
- Construction time: 4 years

### Other remarks:
Having the location close (walking distance) to the Baptism Site and the Mount of Temptation is added value to the project.
<table>
<thead>
<tr>
<th>Name: T15 Hiking Trail Development</th>
<th>Location: Hezma-Jericho, Kofor-Malek-Ouja, Nablus-Jiftlik, Toubas-Ein Beida Trails.</th>
<th>Type of Intervention: Tourism Attraction, Experiential Tourism</th>
</tr>
</thead>
</table>

**Objectives:**
- To upgrade visitor experience (understanding and enjoying the natural and cultural history of the rift valley).
- To well prepare and introduce the Palestinian JV with diverse attractions to tourism industry (internal and inbound).
- This project aims at developing attractive hiking trails for tourists and for local people, particularly between Hezme and Jericho; Kofor Malek and Auja; Nabuls and Jiftlik; Toubas Tayseer and Ein el Beida. This includes planning; road signs and information signs; booklets and promotion activities.
- To train the available staff from the sport centres and the guest houses including local guides on Hiking trail management, monitoring and planning the hikers needs (safety, transport, food and beverage, Cultural and Natural Heritage conservation guidelines etc.).

**Intervention:** To create a new tourism attraction

**Preparation:**
- Feasibility studies.
- Concept development.
- Detailed plans and Designs.
- Training.

**Construction / realization:**
- Community based activities (awareness and training)
- Realization of safety measures.
- Construction.

**Operations:**
- Management Plan.
- Site Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific protection, management and enhancement of cultural and natural heritage resources (4 valleys and adjacent landscape) and a sustainable business environment that highly involves the rural surrounding communities. (SIWI Criteria 77%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- It will expand the market to target experiential tourism seekers.
- In combination with all JV attraction sites, hiking trails will provide unique cultural and natural experiences in the JV as well as in Palestine. Hiking Trails will expand the welfare from tourism to marginal and rural areas.
- Palestine showed an increase in experiential tourism especially hiking. Trail development will provide hiking options of diverse cultural and natural experiences.

**Organization / Responsibilities:** MOTA, MLG and local authorities

**Costs and Revenues:**
- Preparation costs: $ 400,000
- Construction costs: $ 1,600,000
- Operation costs: (managed by existing institution(s)).
- Annual Revenues: It is recently active tourism. Bases for estimating revenues still to be investigated (note that 1$ value in the rural and marginal areas is very effective)

**Implementation Period**
- Preparation time: 1 year
- Construction time: 4 years

**Other remarks:** Trail management is better to be assigned to sport centres or Youth Guest Houses to reduce cost and to closely monitor the visitor’s mobility and needs.
<table>
<thead>
<tr>
<th><strong>Name:</strong></th>
<th><strong>Type of Intervention:</strong> Tourism Attraction, Experiential Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>T16 Sport and Adventure Centre</td>
<td>Location: Palestine, Jericho, Auja, Jiftlick and Ein Beida area.</td>
</tr>
</tbody>
</table>

**Objectives:**
- To well prepare and introduce the Palestinian JV with diverse attractions to tourism industry (internal and inbound) in order to upgrade the visitor experience in the region.
- To develop sport and adventure facilities for local, regional and international tourist.
- To develop and construct adjacent camping facilities.
- To include camping and recreation facilities for family based tourism.
- To create the link with guest houses and youth activities (exploring the nature, hiking and biking).
- To train the needed staff on sport and adventure management, monitoring and planning youth activities.

**Intervention:** To create a new tourism attraction

**Preparation:**
- Feasibility studies.
- Concept development.
- Detailed plans and Designs.
- Training.

**Construction / realization:**
- Construction.

**Operations:**
- Management Plan.
- Centre Promotion and Marketing.
- 2 - 5 years of operational support.

**Sustainability:** It creates a sustainable site specific management and enhancement of sport and adventure activities in the region for both local and inbound tourism. Facilities will provide an attraction for youth and family, but a major income will depend on activities related to the JV (hiking, biking, driving, bird watching, and local or international cultural programs etc.). (SIWI Criteria 72%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods. Safety measures are the most important mitigations under this project.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will partially use the hospitality potentials and increase overnights in the JV as well as in Palestine.
- It will expand the market to target experiential and adventure tourism seekers.
- In combination with all JV attraction sites, those sport and adventure centres will provide a wide range of experiences in open spaces that is not available in the JV as well as in Palestine. They should be water based and nature friendly adventures.
- Sport and adventure centres will expand the welfare from tourism to marginal and rural areas.
- Palestine showed increase activities in experiential and adventure tourism especially linked to water and nature. Those centres will provide new options of diverse adventure tourism linked to cultural and natural experiences.

**Organization / Responsibilities:** MOTA. MOYS

**Costs and Revenues:** Calculated for medium scale 4 centres.
- Preparation costs: $ 2,000,000
- Construction costs: $ 16,000,000
- Operation costs: $ 1,000,000
- Annual Revenues: $ 600,000

**Implementation Period**
- Preparation time: 2 years
- Construction time: 3-5 years,

**Other remarks:** Those centres should be developed adjacent to youth and guest houses and could provide camping services and facilities.
<table>
<thead>
<tr>
<th>Name:</th>
<th>Traveller Road Stations</th>
<th>Location:</th>
<th>Ein Beida and Jiftlick</th>
<th>Type of Intervention:</th>
<th>Traveller Services</th>
</tr>
</thead>
</table>

**Objectives:**
- To well prepare and introduce the Palestinian northern and middle parts of the JV to tourism industry (internal and inbound).
- To create two traveller Road Stations that provide road services and have selling points for local product (gas station, restaurants and gift shops) on road 90 which is the main road NS for local regional and international tourists.
- To create commercial centres for local product (in gross) including the necessary refrigerators and freezing capacity for agricultural product.
- To train the needed staff on Road Station management, developing and marketing local products.

<table>
<thead>
<tr>
<th>Intervention:</th>
<th>To create a new tourism attraction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation:</strong></td>
<td>Feasibility studies.</td>
</tr>
<tr>
<td></td>
<td>Concept development.</td>
</tr>
<tr>
<td></td>
<td>Detailed plans and Designs.</td>
</tr>
<tr>
<td></td>
<td>Training.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction / realization:</th>
<th>Construction.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations:</strong></td>
<td>Management Plan.</td>
</tr>
<tr>
<td></td>
<td>Center Promotion and Marketing.</td>
</tr>
<tr>
<td></td>
<td>2 - 5 years of operational support.</td>
</tr>
</tbody>
</table>

**Sustainability:** It creates a sustainable space for to market and sell the local product in gross as well as for travellers on the road 90 including services for inbound tourists. It will also create a sustainable business environment that highly involves the rural surrounding communities. (SIWI Criteria 76%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods. Safety measures are the most important mitigations under this project.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will expand the market to target travellers on road 90 by providing a competitive product and service.
- In combination with all JV attraction sites, traveller’s centres will provide a wide range of services and products in rest areas in the JV.
- Traveller’s centres will expand the welfare from tourism to marginal and rural areas.

**Organization / Responsibilities:** MOTA, MOYS

**Costs and Revenues:**
- Preparation costs: $ 700,000
- Construction costs: $ 4,500,000
- Operation costs: $ 100,000
- Annual Revenues: (Direct) $ 250,000, (It will create additional commercial activities based on a proportion of the product volume of the immediate area).

**Implementation Period**
- Preparation time: 1 year
- Construction time: 2-3 years

**Other remarks:** None of those is available in the northern part of the JV. Some exist and managed by settlers. Having them managed by Palestinians and selling Palestinian products will strongly compete with the settler’s ones and support the local community. Those are either private investments or cooperatives based on the local community main production (agriculture and handicrafts). Those travellers’ centres can also work as a promotion station for the travellers who are visiting them for the above services.
**Name:**
T 18
Hotel Rooms 4 stars (resort)

**Location:**
Jericho: 1200 rooms (200 / 3yers)
Toubas: 350 rooms (50/5years)

**Type of Intervention:**
Tourism Services & Attraction

<table>
<thead>
<tr>
<th>Objectives:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To upgrade the overnight capacity of the tourism industry in the JV as well as Palestine.</td>
<td></td>
</tr>
<tr>
<td>To well prepare and introduce the Palestinian JV with diverse services to tourism industry (internal and inbound).</td>
<td></td>
</tr>
<tr>
<td>To build 1550 4 stars hotel rooms (200/3 years in Jericho and 50/5 years Toubas-Bardala Area (linked to the Natural and Cultural History Museum of the Rift Valley).</td>
<td></td>
</tr>
<tr>
<td>To support training the needed staff from the local community on hotel management, housekeeping.</td>
<td></td>
</tr>
</tbody>
</table>

**Intervention:** To construct additional 4 stars hotels that has the capacity of 150 - 300 rooms each.

**Preparation:**
- Feasibility studies.
- Concept development.
- Detailed plans and Designs.
- Training.

**Construction / realization:**
- Construction.

**Operations:**
- Management Plan.
- Promotion and Marketing.
- One years of operational support.

**Sustainability:** Responding to the growing demand in Palestine, hotels in those proposed areas will provide better access to the JV as well as the regions. The advantage will also be the additional attractions that will provide more options for both faith tourism as well as adventure tourism. (SIWI Criteria 68%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will use the hospitality and the cultural experience potential and increase overnights in the JV as well as in Palestine.
- In combination with all JV attractions, the 4 stars hotels of resort kind will easily gain 50% occupancy rate during the first 5 years of their function.

**Organization / Responsibilities:** MOTA

**Costs and Revenues:**
- Preparation costs: $2,500,000
- Construction costs: $77,500,000
- Operation costs: $2,500,000
- Annual Revenues: $5,500,000

**Implementation Period**
- Preparation time: 1-2 years per hotel
- Construction time: 3 years per hotel

**Other remarks:** The introduction of hotels in the northern part of the JV is dependent on the creation of the other interventions in Ein Beida area. Therefore, they are considered under the long term plans. This also a privet investment. Public money could be for feasibility and assessment studies and training.
<table>
<thead>
<tr>
<th>Name: The Mud Brick Youth Village</th>
<th>Location: Palestine, Jiftlick or Toubas</th>
<th>Type of Intervention: Tourism Service &amp; Attraction</th>
</tr>
</thead>
</table>

**Objectives:**
- To provide an authentic tourism attraction (destination).
- To well prepare the Palestinian northern part of the JV to tourism industry (internal and inbound).
- To upgrade the overnight capacity in the JV so as in Palestine.
- To provide an authentic stay or a one day visit in a traditional mud brick compounds in a traditional JV village.
- To create a destination for cultural and adventure youth tourism activities in Jiftlick or Toubas area (linked to the Natural and Cultural History Museum of the Rift Valley).
- To train the needed staff on the mud brick village management, housekeeping, monitoring and planning tourism activities.

<table>
<thead>
<tr>
<th>Intervention: To create a new tourism attraction</th>
<th>Construction / realization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation:</td>
<td>Construction.</td>
</tr>
<tr>
<td>Feasibility studies.</td>
<td>Operations:</td>
</tr>
<tr>
<td>Detailed plans and Designs.</td>
<td>Centre Promotion and Marketing.</td>
</tr>
<tr>
<td>Training.</td>
<td>2 - 5 years of operational support.</td>
</tr>
</tbody>
</table>

**Sustainability:** It creates sustainable community based cooperatives/associations that will manage the mud brick village as well as cultural, natural and adventure activities around them. It will create a sustainable business environment that highly involves the rural surrounding communities. (SIWI Criteria 74%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will use the hospitality and the cultural experience potential and increase overnights in the JV as well as in Palestine.
- In combination with all JV portal interventions, the Mud Brick Village is expected to attract about 0.1-0.2m visits and 45000 overnights per year. During operational period, the centre will provide more than 120 direct and more than 30 adjacent jobs as well as more than 200 indirect jobs.

**Organization / Responsibilities:** MOTA, MOYS, MOC, MOLG

**Costs and Revenues:**
- Preparation costs: $ 800,000
- Construction costs: $ 4,300,000
- Operation costs: $1,800,000
- Annual Revenues: $ 2,350,000

**Implementation Period**
- Preparation time: 3 years
- Construction time: 3 years

**Other remarks:** 50 residential mud brick units and 25 exhibition units can be designed in an architectural design competition as one of the Youth Centre activities with young architects from the world. The centre should be able to generate income from subsidized activities related to local and international youth themes.
<table>
<thead>
<tr>
<th>Name:</th>
<th>Location:</th>
<th>Type of Intervention:</th>
</tr>
</thead>
<tbody>
<tr>
<td>T20 Youth and Guest Houses</td>
<td>Aqbet Jaber (100 beds), Ouja (100 beds), Jiftlick (150 beds), Kardala Bardala and Ein el Beida (150 beds)</td>
<td>Tourism Services &amp; Attraction</td>
</tr>
</tbody>
</table>

**Objectives:**
- To upgrade the overnight capacity of the tourism industry in the JV as well as Palestine.
- To well prepare and introduce the Palestinian northern part of the JV with diverse services to tourism industry (internal and inbound).
- To build guest houses with 500 beds capacity distributed in the above mentioned locations.
- To train the needed staff on guest house management, housekeeping, monitoring and planning youth activities.

**Intervention:** To expand the Aoja guest house and to construct additional 3 guest houses that has the capacity of 500 beds to accommodate youth activities in the region.

**Preparation:**
- Feasibility studies.
- Concept development.
- Detailed plans and Designs.
- Training.

**Construction / realization:**
- Construction.

**Operations:**
- Management Plan.
- Promotion and Marketing.
- 1-2 years of operational support.

**Sustainability:** It creates sustainable community based cooperatives/associations that will manage those guest houses as well as cultural, natural and adventure activities around them. (SIWI Criteria 78%, Tourism SIWI Criteria average is 72%).

**Environmental Impact:** Full Mitigation will be necessary through design, construction and operational periods.

**Results / Impacts:**
- It will extend the length of daily visits and increase them in the JV as well as in Palestine.
- It will use the hospitality and the cultural experience potential and increase overnights in the JV as well as in Palestine.
- In combination with all JV attractions as well as youth and sport centres activities, the guest houses will easily gain 50% occupancy rate during the first 5 years of their function.

**Organization / Responsibilities:** MOTA

**Costs and Revenues:**
- Preparation costs: $ 500,000
- Construction costs: $ 3,700,000
- Operation costs: $ 500,000
- Annual Revenues: $ 900,000

**Implementation Period**
- Preparation time:
- Construction time:

**Other remarks:** The creation of those guest houses should be mainly linked to the development of hiking and biking trails as well as sport centres and other youth activities in the JV. They can be built in a ratio of 25-50 beds per 5 years depending on the location.
I Institutional Interventions
<table>
<thead>
<tr>
<th>Name:</th>
<th>Jordan Valley Authority Development Program</th>
<th>Location:</th>
<th>JV</th>
<th>Type of Intervention: Planning</th>
</tr>
</thead>
</table>

**Objectives:**
The aim of this program is to establish a single Palestinian entity that is responsible for development planning and regulation of the Jordan Valley. This authority shall also address political, economic and environmental sustainability management issues.

**Intervention:** Establish the Jordan Valley Authority with the responsibility of coordinating the development plans for the Jordan Valley, consisting of public – private and civil society management system. This program shall include an institutional needs assessment and to develop this authority as authority and regulator of the Palestinian Jordan Valley. This includes: land, water, services management and economic development components; and related capacity development. The JVA will be empowered to provide investment incentives for businesses and residents to be established or re-located.

**Preparation:**
- Obtain local consensus and coordinate with the Ministry of Local Government, as well as president’s office and other relevant ministries and governmental authorities

**Results / Impacts:**
One address responsible for coordinating the development of the JV

**Organization / Responsibilities:**
- Ministry of local government
- Other relevant ministries and governmental authorities

**Costs and Revenues:**
- Preparation costs: $ 1,000,000

**Implementation Period**
- Preparation time: 1.5 yrs.

**Other remarks:**
Palestinian NGO Master Plan for Sustainable Development of the Lower Part of the Jordan River Basin

Interventions

May 2015

Royal HaskoningDHV in partnership with:
CORE Associates

WEPO / EcoPeace Middle East / FoE*
in co-operation with:
SIWI – Stockholm International Water Institute,
GNF – Global Nature Fund

European Union’s Sustainable Water Integrated Management (SWIM Program)

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