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# TERMS OF REFERENCE FOR THE MASTER PLAN DEVELOPMENT STRATEGY IN THE JORDAN VALLEY

Final Report

July 17, 2007

This publication was produced for review by the United States Agency for International Development. It was prepared by <Dr. Brent Tegler>.

# **TERMS OF REFERENCE FOR MASTER PLAN DEVELOPMENT STRATEGY IN THE JORDAN VALLEY**

FINAL REPORT

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BUSINESS EXPANSION AND QUALITY (SABEQ)

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DELIVERABLE N<sup>o</sup>: 2.5.1.1\_REPORT PROVIDING A  
METHODOLOGY FOR A DEVELOPMENT PLAN FOR  
THE JORDAN VALLEY

**DISCLAIMER:**

*The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.*

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## 1 INTRODUCTION

In 2004, the USAID funded program *Achievement of Market-Friendly Initiatives and Results* (AMIR) completed the *Jordan Valley Preliminary Land Use Master Plan* (JV-PLUMP) project. The project provided a comprehensive five-volume assessment of social, economic and environmental conditions in the Jordan Valley (JV) and produced maps of infrastructure, facilities, conservation areas, tourism zones, parcel ownership and land use (see Appendix 1 JV-PLUMP Table of Contents, Volumes 1-5). The JV-PLUMP was reviewed and approved by the cabinet of the Hashemite Kingdom of Jordan (HKJ).

While the JV-PLUMP provides an excellent assessment of existing and proposed land use within the JV in broad terms, the mapping does not provide detailed information defining activities within the various land use categories defined, due to the scale at which the study was undertaken. For example within an area of existing agricultural land use mapped as “Farm Units”, additional information on the type of agriculture present, such as the crops grown or the method of irrigation used, is not provided. Another example is within an area of proposed land use mapped as “Municipal Expansion”, where additional details on the location and type of roads, residential densities, commercial lands, *etc.* that may be included within an area of municipal expansion are not provided.

Within the JV there is a need to develop detailed land use plans (sometimes referred to as “secondary plans” or “local plans”) that are necessary to guide sustainable land use within areas designated for municipal, industrial and tourism growth, *etc.* Detailed land use plans will use the JV-PLUMP as a base and through a consideration of the demand for new land uses and consultation with stakeholders, further build on that base to provide opportunities for sustainable growth that considers issues of social responsibility, economic growth and ecological balance.

The JV-PLUMP provides guidance for new development in the JV within the following categories as shown on the Land Use maps (Appendix 2):

- “Tourism Area”, where there are areas of potential tourist interest and development;
- “Proposed Investment Lands (Sigma Study Area)”, an area of potential development located around the north end of the Dead Sea;
- “Agricultural Area”, areas that may not currently be used for agriculture but which have the potential for use as range lands, cropping, animal farms and fish farms;
- “Municipal Expansion”, located around existing urban areas that are undergoing growth;
- “Mixed Use Areas”, areas generally associated with existing villages that have the potential to accommodate a variety of residential, commercial and institutional land uses;
- “Recreational Areas”, intended for development of active recreation facilities such as a *sports city*;
- “Institutional Lands”, areas that may be suitable for the development of public facilities for infrastructure, educational training centers, vocational schools, cultural heritage centers, handicapped centers, conference facilities, cemeteries, *etc.*; and
- “Industrial Area”, associated with existing areas of industrial development or associated with villages in the JV where there is the potential for the development of

light industry compatible with the environment and where possible industry associated with agricultural production and processing.

The JV-PLUMP also provides guidance for the protection of existing land uses and for the protection of sites of cultural and/or environmental significance. Following the legend used in the Land Use maps, these areas include the following:

- “Farm Units”, areas of existing agriculture;
- “Protected Area”, includes areas protected under existing legislation and additional areas proposed for protection;
- “Important Bird Area”, are shown as an overlay on other land uses and are intended to show areas where current or proposed land uses may be modified to ensure they are conducted in a manner that is sensitive to birds, particularly migrating birds;
- “Protected Cultural Heritage”, valued cultural heritage sites that should be protected from other conflicting land uses;
- “Existing Industrial Area”, recognizing areas of current industrial land use;
- “Border Zone”, showing areas of infrastructure associated with HKJ’s border crossings; and
- “Potash Regions”, industrial land use areas located at the southern end of the Dead Sea.

## **2 BACKGROUND**

The Jordan Valley is part of the Great Rift Valley, an extensive geological fault line that stretches 5,000 kilometers between Turkey and East Africa. The JV is one of the world’s most important anthropological areas due to the very early (9000 years BP) agrarian civilizations that utilized fertile soils irrigated by natural springs. The region is significant also for its complex religious history. The JV is a unique, important and scenic ecological corridor. Where the Dead Sea is located at approximately 400 m below sea level, there are contrasting fertile and desert, valley and mountain landscapes forming part of an intercontinental bird migration corridor. Within the HKJ the JV stretches from the Syrian border in the north to the Red Sea in the south, a distance of over 350 km. The western boundary of the JV within the HKJ is defined by the country’s border with Israel and the Palestinian Territories; the eastern boundary of the JV is defined by the 300 metre contour line above sea level (ASL) north of the Dead Sea and the 500 metre contour line ASL to the south.

The JV represents a significant region within the HKJ due to the fresh and saline water resources present and the socio-economic conditions that arise from these, including:

- Ecological and cultural sites of global importance;
- A large proportion (40%) of Jordan’s irrigated agricultural lands;
- The presence of health and nature based tourism opportunities;
- Resource-based industries (potash and other minerals); and
- The supply of fresh water to areas within and outside the JV.

Within the JV there are more than 55 villages with a total population of approximately 191,000 in 2004. This constitutes 3.5% of the HKJ’s total population. The JV has one of the country’s highest population growth rates (4.5%), with a predicted population of 238,000 in

2010 and 314,000 in 2020. A description of the three major regions of the JV, north, middle and south, are provided below.

The northern JV area is characterized by a generally larger, agriculturally based population producing fruits (oranges, lemons, limes, melons, bananas, *etc.*) and vegetables (tomatoes, cucumbers, leafy vegetables, *etc.*) for both domestic consumption and export. Agriculture in the northern JV is dependent on a sophisticated water capture and distribution system managed by the Jordan Valley Authority (JVA) which captures water from the Jordan and Yarmouk Rivers as well as from a number of dams which capture surface water runoff and springs that come from deeply incised Wadis (valleys) entering the JV from areas of higher elevation located to the east. The JVA distributes water from the 110 km long King Abdullah canal which stretches from the Yarmouk River in the north southward to a point approximately 10 km north of the Dead Sea. In this region, there is limited small scale industry, an interesting cultural heritage of Roman, Islamic, and other sites, a living heritage of basket and rug weavers, and a broad swath of environmentally sensitive land and Important Bird Areas (IBA) designated because of their importance for bird migration along the Jordan and Yarmouk Rivers.

The middle JV area is centered on the Dead Sea, a site known internationally for its location at over 400 metres below sea level (BSL). The area has only a small population of indigenous human settlements given the relatively infertile saline soils associated with the Dead Sea. The middle JV is characterized by universally important cultural heritage sites including the Baptismal site of Jesus, increasing health and spa tourism development, nature-based tourism associated Wadi Mujib Nature Reserve and internationally competitive potash, salt and mineral extraction related industries along the southern shore of the Dead Sea. Due to water capture and diversion within Jordan, Israel and Syria the Dead Sea no longer receives much of its original water inputs, resulting in a sea level decline of up to one metre each year and a sea surface area now less than half of its original extent; consequently there is a rapidly increasing area of exposed shoreline.

The southern JV area is characterized by a more arid environment, which is home to nomadic Bedouin who utilize environmentally sensitive rangelands. Wadi Araba, which forms a large part of the southern JV, has been identified for a special land use study in part to address, in part, the needs of local populations, but also in recognition of potential groundwater resources. There is also a proposed Red Sea to Dead Sea Canal soon to undergo an environmental impact and feasibility study. The canal is intended to restore and maintain the level of the declining Dead Sea, to generate electricity as water flows down into the Dead Sea and using the electricity generated, produce fresh water through desalinization.

## **2.1 RELEVANT LAND USE PLANNING STUDIES COMPLETED IN THE JORDAN VALLEY**

1. Establishment of the Jordan Valley Authority (Law 18. "The Jordan Valley Development Law" No. 18 of 1977)

The JVA is part of the Ministry of Water and Irrigation (MoWI), a Ministry it shares with the Water Authority of Jordan (WAJ). The mandate of the JVA is to carryout integrated social and economic development of the JV. During the period 1972-1988, a land use planning exercise was conducted by the JVA whereby approximately 350,000 denims (35,000 hectares) of land were developed and provided with irrigation infrastructure. Six dams were constructed and physical infrastructure for public utilities, schools, health centers and hospitals were constructed. Currently, a project is underway to accurately survey and register with the Department of Lands and Survey all privately owned land within the JV; in June 2007 the project was approximately 50% completed and was to 100% complete by the end of 2007.

2. Jordan Rift Valley Tourism Development Project: Action Areas (OTH International 1979)

The Jordan Rift Valley Tourism Development project developed a Master Plan that identified three main "action areas": (1) areas around Suweimah Village at the north end of the Dead Sea; (2) the Zara Archeological Site located mid-way along the east shore of the Dead Sea; and (3) the Al-Himmah hot spring located in the northern JV near the Yarmouk River. The Master Plan provided a development strategy based on the existing tourism facilities, the socio-economic context, and the potential markets for health (curative) tourism.

3. Tourism Development Project of the East Coast of the Dead Sea (Sigma Consulting Engineers 1994, 1996, 1997)

A tourism development program and plan for the east coast of the Dead Sea was prepared within a study area approximately 60 km long and 5 km wide (often referred to as the "Sigma Study"). The Development Master Plan produced in three volumes identified 23 potential zones for tourism development and provided detailed land use plans for two areas referred to as the Suweimeh Sector (which included the potential zones 3, 4, 5 and 6) and the Zara Sector (which included the potential zones 12, 13 and 14). The Sigma Plan accommodated projected tourism growth requiring up to 10,800 hotel rooms by the year 2010. The JVA has indicated all development lands identified in the Sigma study have been allocated as of 2007.

4. Preliminary Land Use Master Plan for the Jordan Valley (USAID AMIR Program 2004)

As discussed in the introduction the JV-PLUMP was a comprehensive regional scale initiative providing land use mapping for the JV. In 2007 the Ministry of Municipal Affairs (MoMA) completed similar land use mapping for the HKJ; within the JV the MoMA followed the mapping from the JV-PLUMP. Information provided in JV-PLUMP reports and maps should be used as the starting point for more detailed planning exercises in the JV.

## 2.2 CURRENT STATUS OF LAND USE PLANNING IN THE JORDAN VALLEY

Currently there are no detailed long-range (5-10 year) plans available to guide development growth in the Jordan Valley. Urban growth, which is occurring as a result of the high population growth rate (4.5%), is generally managed on a case-by-case basis as applications for new development are submitted to local Municipalities and the JVA. There are some examples where hard copy mapping maintained by the JVA has been amended to accommodate the expansion of existing villages (municipal areas) and where areas within villages have been specified for specific kinds of development such as “commercial development” along main roads. Mapping maintained by the JVA which has been amended to expand municipal lands, includes approval signatures based on HKJ Cabinet approval due to the fact that the responsibility for these areas is transferred from the JVA to the MoMA.

In addition to urban growth, there is considerable investment interest in tourism related development in the JV. The Sigma Study provides a detailed long range plan for tourism development in two areas (Suweimeh and Zara) on the east coast of the Dead Sea. The land parcels identified for development by the Sigma Study have been allocated to a variety of private and government investors. Based on information provided in June 2007 by the JVA Investment Unit, the status of investment projects on the east shore of the Dead Sea is as follows (for details see Appendix 3):

- Seven projects have been implemented covering an area of 2206 denims (220.6 ha) with a total investment of 115 MJD;
- Four projects are under construction covering an area of 219 denims (21.9 ha) with a total investment of 228 MJD; and
- Fifteen projects are to be implemented during 2007-2008 covering an area of 2731.8 denims (273.2 ha) with a total investment of 1816.2 MJD.

The “Proposed Investment Lands (Sigma Study Area)” as shown on the JV-PLUMP mapping encloses a large (over 30,000 ha) area along the northeastern shore of the Dead Sea. The JV-PLUMP study team recommended that this area be re-studied taking into consideration current issues identified during consultations held as part of the JV-PLUMP project. Further, the study team made recommendations for land uses within areas not currently developed. (see Dead Sea parcel by parcel recommendations provided in Appendix 4). While these recommendations do not include the results of a fully integrated and detailed planning study they can be used to provide direction for future planning studies, such as the detailed integrated planning study to be undertaken by this project.



### 3 ISSUES TO BE ADDRESSED BY MASTER PLAN DEVELOPMENT STRATEGY

Based on an examination of the current status of planning in the JV and discussions held with government officials and the private sector, three focus areas have been identified for this study. Justification for the need and a brief description of the intent and tasks for each of the three study focus areas is provided below.

#### **Study Focus A: Conduct Detailed Planning Studies within Priority Areas of the JV**

Detailed land use plans are needed immediately to facilitate and direct, in a sustainable manner, the demand for growth in the JV. Currently there is a demand for growth by private investors within the Proposed Investment Lands (Sigma Study Area) around the Dead Sea and within some urban areas (villages).

The government has indicated there are development proposals for areas around the Dead Sea that require immediate review. This study must therefore begin by undertaking a rapid evaluation of the existing proposals in order to determine if they are appropriate within the context of a larger vision being developed for the Dead Sea investment lands. The intent of the rapid evaluation is to provide assurance to investors there are opportunities for development, while ensuring development meets the vision, priorities and guidelines that are to be developed by a more detailed master land use plan.

Detailed land use plans developed by this study must be based on a vision that considers the following principles:

- creative and diverse;
- incorporates the best of international thinking while being uniquely Jordanian;
- works within the limits of the environment, particularly in regard to water;
- respects stakeholder opinions; and
- is responsive to the projected demand for growth (residential, tourism, commercial, industrial, *etc.*).

#### **Key tasks to be completed in the development of detailed land use plans include at a minimum the following broad categories of tasks:**

- Consultation with stakeholders for initial input and to report back to stakeholders on proposed land use plans (public, private, local communities, all levels of government);
- Assessment of growth demands (population growth, tourism, commercial, industrial, agriculture, *etc.*);
- Assembly and mapping of base line information (land use, topography, drainage, vegetation, infrastructure, protected areas, cultural sites, *etc.*);
- Completion of infrastructure planning required in support of development (water supply, wastewater management, storm water management, transportation, electricity, telecommunications, *etc.*);
- Development of detailed guidelines required to manage development (water use, landscaping, architecture, scenic viewpoints, *etc.*); and

- Preparation of detailed land use plans for the proposed investment lands as well as up to three selected growth areas in the JV.

### **Study Focus B: Improve the Capacity to Undertake and Implement Detailed Land Use Planning**

Currently the JVA and/or Local Municipalities are not preparing detailed land use plans needed to accommodate and guide long-term growth and development in the JV. In addition, the JVA has indicated that implementation of the detailed Sigma land use plan for the Suweimeh and Zara areas of the Dead Sea (prepared by Sigma Consulting Engineers), requires the use of consultants to assist in the evaluation of development proposals. In some cases the land use recommendations of the Sigma Study have not been implemented in favor of the distribution of land parcels to private investors, who may not develop the lands according to the land use defined by the Sigma Study.

The JVA Strategic Plan 2003-2008 recognizes a changing role for the JVA and the challenges faced by growth and development (Appendix 5 JVA Strategic Plan 2003-2008 Executive Summary). While Goals 1 and 2 of the Strategic Plan recognized the importance of JVA's ongoing role in water management, Goals 3 and 4 identified the need for JVA's greater involvement in land development and an improved capacity of JVA to monitor and manage growth. The JVA Strategic Plan goals are as follows:

#### **Goal One: Water Resource Development and Management**

Meet the needs of current and future water users by managing, developing, protecting and sustaining both existing and new water resources, and to do this in a way which takes into account both economic and environmental considerations, and involves the private sector where appropriate.

#### **Goal Two: Water Supply and Distribution**

Ensure that JVA's existing water delivery and distribution infrastructure, systems and facilities are managed in an efficient, transparent and equitable manner, and involve the private sector where appropriate

#### **Goal Three: Land Development and Management**

Develop, manage, regulate and protect land and related resources in the Jordan Valley in order to maximize their economic usefulness while taking into account environmental considerations, and involve the private sector where appropriate.

#### **Goal Four: Organizational Performance Improvement and Development**

Develop and reorganize JVA to enable it to better achieve its new mission and improve its performance and effectiveness in providing quality service to its stakeholders.

### **Key tasks to be completed to improve the capacity to undertake and implement detailed land use planning include, at a minimum, the following tasks:**

- Examination of the existing institutional framework and capacity for long range planning within the JVA, MoMA, Department of Lands and Survey (DLS), Ministry of Tourism and Antiquities (MoTA) and other government agencies relevant to land use planning in the JV;

- Identify counterparts within relevant government agencies to participate in the development of detailed land use plans prepared by this study;
- Identify training needs and opportunities for existing government staff and, where warranted, identify the requirements for additional government staff and skills areas that will in the long term allow government to undertake and implement detailed land use planning in the JV;
- After reviewing the existing institutional planning framework make recommendations that identify a lead government agency to conduct land use planning; the structure and organization of the lead agency; and the procedures for undertaking and implementing land use planning, including how the lead agency interacts with and involves other relevant government agencies.

**Study Focus C: Advice the HKJ on financial mechanisms available for remuneration when government land is approved for private development.**

The government of the HKJ has indicated it is seeking advice on the full range of financial mechanisms that may be used when government land is made available for development. While reasonable financial return to the government is an important consideration, it is also recognized that there are indirect social, economic and environmental benefits to the people of the HKJ that may be of equal or greater importance to consider. It is also recognized that overly regulated or cumbersome financial mechanisms may reduce or delay potential private development reducing potential social and financial benefits to the HKJ.

**Key tasks to be completed to advise the HKJ on financial mechanisms include, at a minimum, the following tasks:**

The intent of this study focus area is to provide a review and description of strategies and options available to the government in regard to financial and contractual agreements related to the transfer of government land for development. Development may include a wide range of possible activities such as hotels, residential development, a variety of commercial operations (stores, restaurants, recreation facilities, *etc.*), health facilities, research institutions, educational institutions, museums, *etc.* The study should consider how financial arrangements may vary according to different types of development. In considering financial arrangements the study should, among other things describe methods of land valuation, options for revenue sharing, and possible shareholder agreements.

#### 4 GENERAL OBJECTIVES OF THE MASTER PLAN DEVELOPMENT STRATEGY

1. The principles of *Sustainable Development* should form the foundation for new development within the JV, these principles include: Social Progress – Ecological Balance – Economic Growth
2. The JV-PLUMP 2004 vision for a sustainable future and the understanding of current conditions and future needs should be incorporated in to detailed land use planning, notwithstanding, modification of the JV-PLUMP land use recommendations may be an outcome of more detailed study.
3. There is a need to develop an implementation strategy for the JV-PLUMP. This will require the identification of, and capacity building within, a lead agency and the development of detailed guidelines for sustainable land use.
4. There is considerable potential for tourism development within an area identified by the JV-PLUMP as the “Proposed Investment Lands (Sigma Study Area)”. These lands located along the northeastern coastline of the Dead Sea currently have a number of proposed investment projects that require evaluation.
5. In order to provide direction for long-term sustainable development within the Proposed Investment Lands there is a need undertake a detailed integrated land use planning study to prepare a Master Plan Development Strategy.
6. High population growth within the JV combined with the indirect effects of growth in the tourism sector necessitates comprehensive planning initiatives be undertaken within urban growth areas within the JV.
7. There is a need to improve the capacity of government to undertake and implement detailed land use planning in the JV.
8. The government of the HKJ should encourage and facilitate new development in the JV within the limits of the environment, while maximizing the benefits derived.

## 5 SPECIFIC OBJECTIVES OF THE MASTER PLAN DEVELOPMENT STRATEGY

For each of the three study focus areas defined above a more detailed outline of the tasks is provided below. The detailed outline is intended to more clearly define the activities to be carried out in this study, however this should not preclude consultants from identifying and undertaking additional tasks and activities relevant to the study, particularly where they have been identified through stakeholder consultations. The numbering of tasks does not reflect a sequence in which tasks are to be completed; while some tasks may logically come before others, it is envisioned many of the tasks will be carried out simultaneously.

### **Study Focus A: Conduct Detailed Planning Studies within Priority Areas of the JV**

This study must recognize the Proposed Investment Lands (Sigma Study Area), the area surrounding the northeast coast of the Dead Sea, require the immediate preparation of a detailed land use plan. As such, this area will be the primary focus of the master plan development strategy during the initial phases of the study (first 3 to 6 months).

The study will also prepare detailed land use plans for up to three additional areas that are to be selected through consultation with stakeholders. It is anticipated the additional areas will be selected based on existing or known future population, tourism, commercial and/or industrial development growth pressures. The additional areas may be associated with areas mapped by the JV-PLUMP as agricultural area, protected area, protected cultural heritage, villages, municipality expansion, mixed use area, recreational area, institutional lands, industrial area (see Section 1. Introduction).

#### ***Task A1: Consultation with stakeholders for initial input and as a part of reporting back to stakeholders on proposed land use plans (public, private, local communities, all levels of government).***

There is a considerable body of knowledge distributed among the general public, local communities, all government ministries within the JV and within Amman, and the private sector. The sustainability of land use plans will be greatly enhanced by obtaining, understanding and incorporating the knowledge of stakeholders.

Consultation with stakeholders should seek to obtain information on the following topics as well as other topics that may be identified during stakeholder consultations:

- the range of tourism opportunities in the JV desired by international and domestic tourists (*e.g.* cost, ecotourism, health tourism, length of stay, distance traveled for tourism, method of travel, preferred accommodation, *etc.*);
- the diversity of land use development that should occur in the JV and where such development should occur (*e.g.* tourism, residential, commercial, industrial, agricultural, environmental protection, cultural heritage protection, institutional, educational, *etc.*);
- the existing and potential future employment opportunities in tourism, commercial enterprises, industry, and agricultural production and processing, *etc.*;
- the formal, non-formal and mature-learner educational needs within the JV (*e.g.* schools to serve a growing population, technical training for participation in tourism, commercial and industrial related growth and development, re-training of mature-learners seeking employment in a changing workforce environment, *etc.*);

- up to three additional areas in the JV where detailed land use plans are to be developed by this study to address issues of development growth; and
- through public presentation of conceptual land use plans stakeholder feedback should be obtained and used to refine the detailed land use plans prepared for the Proposed Investment Land (Sigma Study Area) and for up to three additional areas in the JV feedback as discussed above.

***Task A2: Assessment of the demand and opportunities for growth (e.g. tourism, population growth, commercial/industrial development, agriculture)***

There is a need for market feasibility studies, economic analysis and forecasting, and demographic studies as well as environmental assessments to inform land use planning. An understanding of growth demand combined with stakeholder consultation is essential to ensure land use plans respond to a changing world in ways that inform and respond to the communities of people that live, work and recreate within the planning landscape.

- assemble and review existing information on projected tourism growth by contacting relevant government, non-government and tourism industry sources [e.g. JVA, MoTA, Ministry of Industry and Trade (MoIT), Jordan Tourism Board (JTB), Jordan Investment Board (JIB), Jordan Tourism Development Corporation (JTDC), Jordan Hotel Association (JHA), Jordan Inbound Tour Operators Association (JITOA), Jordan Restaurant Association (JRA), Jordan Society for Tour and Travel Agents (JSTTA), Jordan Tour Guides Association (JTGA), Aqaba Development Corporation (ADC), National Tourism Authority (NTA), National Tourism Council (NTC), Royal Jordanian Airlines (RJA), World Tourism Organization (WTO), and World Travel and Tourism Council (WTTC), *etc.*] and consider recommendations provided in Jordan's National Tourism Strategy 2004-2010;
- assemble and review existing information on population growth and the growth of urban areas in the JV by contacting relevant government sources [e.g. JVA, MoMA, DLS, Department of Statistics (DoS), Local and Regional Councils in the JV, *etc.*];
- assemble and review existing information on the growth of agricultural production and secondary industries related to the processing, marketing and transportation of agricultural products domestically and internationally by contacting relevant government, aid-agencies, and private sector sources [e.g. JVA, MoA, MoMA, MoIT, German Aid Agency (GTZ), Japan Aid Agency (JICA), USAID, Agriculture Marketing Association (AMO), National Centre for Agricultural Research and Technology Transfer (NCARTT), General Union of Jordanian Farmers (GUJF), Jordan University Plant Production Division, *etc.*] and consider recommendations provided in The National Strategy for Agricultural Development 2002-2010;
- assemble and review information on other potential areas of economic growth and development in the JV by contacting relevant government and non-government sources [e.g. MoIT, MoPIC, Ministry of Information and Communication Technology (MOICT), Ministry of Higher Education and Scientific Research (MoHESR), *etc.*] and consider recommendations provided in Jordan Vision 2020.

***Task A3: Assembly and mapping of base line information (land use, topography, drainage, vegetation, infrastructure, protected areas, cultural sites, etc.)***

Geographically accurate and up to date base line information accessible in a digital format is essential to a land use planning study. Various government departments have assembled or are in the process assembling digital data sets that will be available to this project. There is

also a need to collect and assemble additional relevant and current land use, environmental and cultural information for the land use planning exercises to be conducted in this study.

- contact relevant government agencies to establish data sharing agreements and to obtain necessary digital data [e.g. JVA, MoWI, MoMA, DLS, DoS, Ministry of Public Works and Housing (MoPWH), Ministry of the Environment (MoE), Royal Society for the Conservation of Nature (RSCN), *etc.*];
- obtain current, high resolution, geographically corrected satellite imagery for those areas of the JV where detailed land use plans are to be completed;
- ground truth existing data and satellite imagery to produce a digital data set of sufficient detail and quality to conduct detailed land use planning at a scale of 1:10,000. Report figures created to convey concept land use plan information may be created at smaller scales (e.g. 1:20,000 or 1:50,000);
- the data layers should include, but not be limited to, the following themes:
  - existing land use as mapped on JV-PLUMP;
  - land ownership;
  - existing and proposed infrastructure related to transportation (e.g. main and secondary roads, rail lines, public transportation routes, bridges, tunnels, *etc.*)
  - existing and proposed infrastructure related to other services (e.g. utility corridors, electrical generation sites, communication towers, gas pipelines, buried cables, *etc.*)
  - existing and proposed management of fresh water (e.g. dams, springs, wells, pumping stations, distribution lines, canals, water storage facilities, storm water management facilities, desalinization plants, *etc.*);
  - existing and proposed wastewater management (e.g. wastewater pipelines, pumping stations, treatment plants, outlets, *etc.*);
  - topography (e.g. contour lines, steep slopes, cliffs, sink holes, *etc.*);
  - known mineral resources;
  - drainage (e.g. springs, intermittent water courses, wetlands, ponds, lakes, *etc.*)
  - vegetation (e.g. breakdown of existing natural communities such as forest, steppe, desert, *etc.*);
  - areas of environmental concern (e.g. protected areas, important bird areas, habitat of rare species, *etc.*)
  - areas of cultural significance (e.g. historic buildings/structures, religious sites, significant viewscapes, known locations of archeological significance, historic routes, trails, rights-of-way, *etc.*)

#### ***Task A4: Completion of infrastructure planning required in support of development***

Development planning may recommend improvements to the existing infrastructure noted in Task 3 necessary to service and support any proposed land use plan. Recommendations for infrastructure improvements shall be made based on the professional judgment of engineers in consultation with other members of the planning team and appropriate government ministries and departments.

The availability of fresh water for domestic use has been identified as a primary constraint for new development in the JV (and elsewhere in the HKJ). As such, this study must work closely with the WAJ and the JVA to determine the opportunities and constraints in regard to water supply and waste water treatment. Guidelines developed in Task 5 below must establish very progressive and aggressive controls on water use and re-use.

Infrastructure improvements may include, but not be limited to, the following:

- Water supply;
- Wastewater management;
- Storm water management;
- Public and private transportation;
- Electricity supply; and
- Telecommunications.

***Task A5: Development of detailed guidelines required to manage development***

The intention of land use planning is to guide sustainable development. This is accomplished in part by a land use plan that identifies land uses that are appropriate for the environment while meeting the present and future social and economic needs of the people that live, work and recreate within the communities of the land use plan. Sustainable development is also achieved through the preparation and application of guidelines that respond to known social, economic and environmental issues and concerns identified by stakeholders. Guidelines may include for example, set-backs from environmentally or culturally sensitive features identified on the land use plan, they may also provide architectural and landscape design criteria to which new development must conform, and they may specify water use and re-cycling systems that must be used.

This study will develop detailed guidelines intended complement detailed land use plans and that will, at a minimum, address the following:

- Efficient domestic fresh water use within residences, tourist hotels, restaurants, institutions for government, health, education and research, commercial and industrial places of work, *etc.* to provide guidelines that require the use of water conserving fixtures such as low flow showers, low volume, dual flush, and dry toilets;
- Recycling of grey water, to include guidelines regarding dual water waste water systems to facilitate re-use, and re-use of grey water on-site, *etc.*
- Recreational use of fresh water will include guidelines that may restrict some uses including, indoor and/or outdoor swimming pools, hot tubs, water parks, *etc.*
- Industrial water use will include guidelines that may prohibit water demanding industries and/or require total water recovery and re-cycling on-site, *etc.*
- Landscaping associated with residences, tourist facilities, institutional, commercial and industrial sites, public open space, street plantings, *etc.* to include water conserving guidelines such as “hardscaping” or “xeriscaping” or as provided by the Centre for the Built Environment ([www.csbe.org](http://www.csbe.org));
- Rainwater (storm water) management guidelines to capture and manage rainwater runoff from natural and hard surfaces (roads, buildings, parking areas, *etc.*) created by development in order to reduce the risk of erosion and to use rainwater efficiently;
- Building architecture guidelines related to energy conservation, in particular to reduce the demand for air conditioning;
- Building architecture guidelines related to architectural styles such as height, roof line, exterior finishes, *etc.*



- Environmental protection guidelines to protect, restore and link natural areas and to incorporate natural space into areas of development in manner that encourages public enjoyment while not compromising the ecological integrity of natural areas;
- Cultural, religious, historic, and archeological guidelines to protect valued features and to incorporate features in areas of development in a manner that respects and validates the feature while not compromising their protection;
- Green space guidelines, including requirements for public open space;
- Views cape guidelines to protect scenic viewpoints and views capes;
- Utility installation guidelines may specify installation of above and below ground utilities;
- Signage guidelines may specify the type, size, and location of public and private signage;
- Public trails, walkways, access guidelines to accommodate pedestrian friendly land uses and to limit motorized access where appropriate;
- Agricultural guidelines to protect areas of suitable soils and available water for agricultural use including croplands, rangelands and urban garden plots;
- Agricultural guidelines to encourage diverse, water conserving crops;
- Agricultural guidelines that may enhance and promote the local economy by encouraging local processing and marketing of agricultural products (value added);
- Transportation guidelines that avoid conflicts between major roads and highways and other land uses such as tourism, residential, and commercial areas in order to create streetscapes that are accessible and encourage public use thereby creating a sense of place;
- Transportation guidelines that facilitate and encourage public transit systems;
- Transportation guidelines that facilitate inter-regional movement of people, goods and services;
- Transportation guidelines to ensure road design meets safety standards, and accommodates traffic demand parking requirements, *etc.*
- Monitoring guidelines to permit evaluation of land use plan implementation.

***Task A6: Preparation of detailed land use plans for the proposed investment lands and up to three selected growth areas in the JV***

Detailed land use plans and supporting documentation including land use mapping, policies, and guidelines will be produced by the study. Concept land use plans will be produced to permit review, discussion and input by stakeholders prior to the preparation of the final land use plans. Documentation should include a description of the methods used to conduct the study, sources of data, field work conducted, the methods used to ensure stakeholder involvement and the input provided by stakeholders.

Each land use plan (one for the Proposed Investment Lands and up to three additional plans) will consist of a policy document that will guide future development. Evaluation of new investment proposals or other new development will be based on meeting the policies and guidelines outlined in the land use plan.

Each land use plan will contain the following information:

- The planning context outlining the legal (government) authority and history of land use in the plan area;
- The overall goals of the plan related to social responsibility, economic growth and ecological balance;
- Plan development objectives related to key areas such as water, natural environment, cultural heritage, agriculture, tourism, transportation, infrastructure, housing and employment, *etc.*;
- Plan implementation process including roles and responsibilities of the government and private sector as well as an outline of proposed phased development of infrastructure and land uses intended to meet the demand for growth;
- Land use schedules providing detailed land use mapping related to water, natural environment, cultural heritage, agriculture, tourism, transportation, infrastructure, housing and employment, *etc.*, and
- Detailed planning guidelines relevant to the land use plan as discussed in Task 5.

### **Study Focus B: Improve the Capacity to Undertake and Implement Detailed Land Use Planning**

Land use planning which facilitates and guides growth and development is the responsibility of the government and it is an ongoing process that relies on expertise from a variety of disciplines with continuous updating of relevant information. This study is intended to increase the capacity and organizational framework of government in order to improve future land use planning.

#### ***Task B1: Examination of the existing institutional framework and capacity to undertake long range planning in the JV***

There is a need to better understand the current mechanism(s) of land use planning in the JV both in legal terms (*i.e.* authority and responsibility) and in terms of where relevant expertise needed for planning resides within government (*e.g.* agricultural specialists in MoA, transportation planning specialists in MoPWH, *etc.*). It is recommended that the following government ministries and departments be contacted better understand these latter two issues:

- JVA, in particular the Investment Unit, planning section, and mapping section to better understand current approaches to land use planning and to availability and format (digital?) of up to date land use information;
- WAJ and the MoWI to better understand the process of water allocation and waste water treatment for new development;
- MoMA and local Municipalities to better understand their role administering municipal areas in the JV and the availability and format of up to date land use information;
- MoTA to determine how best to utilize the tourism expertise within the ministry in land use planning exercises in the JV and to determine the availability, format and most recent data available in regard to tourism use and demand and in regard to antiquities; and

- MoIT to determine how best to utilize their expertise in addressing long range planning for industrial growth in the JV that may be related to mineral extraction at the Dead Sea or secondary agricultural processing and marketing;
- MoE to determine how best to utilize their expertise in land use planning that includes the protection of environmental lands and to determine the availability and format of up to date land use information on natural areas;
- MoA to determine their role in land use planning of agricultural lands and secondary processing industries in the JV;
- DLS to determine the status of the current cadastral project registering land in the JV and the availability, format and most recent data available;
- Housing and Urban Development Corporation to determine their role in urban land use planning and development; and
- Any other ministries or departments considered important to land use planning exercises in the JV.

***Task B2: Identify counterparts within relevant government agencies to participate in the development of detailed land use plans prepared by this study***

This study will work with counterparts from relevant government agencies in order to benefit from their knowledge of the existing planning framework and sources of information, and to engage them in an integrated long range land use planning exercise.

- This study may work within an existing government office in part or in whole and/or government staff may be assigned on a temporary basis to work with the consultant study team;
- Some selected counterparts may undertake a study tour (Europe, North America, etc.) of consultant planning offices and government planning offices to explore methods of long range land use planning used outside the HKJ.

***Task B3: Identify training needs and opportunities for existing government staff***

This study will provide direction in regard to staff requirements and skills in order for the government to undertake and implement detailed land use planning in the JV.

- Identify the type of college and university programs producing graduates relevant to planning the government should seek to attract;
- Identify mature student educational opportunities for existing government staff to upgrade their skills both within the HKJ and internationally;
- Identify skill areas that are currently needed within government to better undertake long range land use planning

***Task B4: Review the existing institutional planning framework within government and make recommendations that identify possible improvements***

Land use planning is complex, requiring a wide range of skills that generally do not all exist within a single government ministry or department. Nonetheless it is important that a single government agency take the lead in land use planning and that there process that engages other government ministries and departments and all stakeholders in a clearly articulated and transparent planning and regulatory process.

To accomplish this task this study will complete the following:

- Identify the most appropriate lead government agency to conduct land use planning;
- Determine the structure and organization of the lead agency and the manner in which it works with other government ministries and departments;
- Identify the process for undertaking land use planning, including, the timing and location(s) for land use planning studies, the information that must be assembled and used in a comprehensive land use planning exercise, the public consultation process, and the expected outputs; and
- Identify the methods by which the implementing agency leads and works with other relevant government agencies throughout the planning process.

**Study Focus C: Advice the HKJ on financial mechanisms available for remuneration when government land is approved for private development.**

Government facilitates development through sustainable land use planning that protects valued cultural and environmental features while making land available for people to live, work and recreate. In addition, government often provides the infrastructure needed to service new communities. When a land use plan is created and the infrastructure needs identified, land which is owned by the government may be made available to private investors to carry out development guided by the land use plan.

The first step in the process of attracting private investors is the preparation of conceptual land use plans that are innovative and sustainable. The steps of making the land use plan a reality may involve a variety of private, public or joint private-public ventures. Financial agreements between government and private investors may involve competitive bidding, shared financing, government financial incentives, leasing or sale of land, and shareholder agreements, *etc.*

This study will provide advice on the methods available to government to attract private investment in new development and on the range of financial mechanisms that may be used to sell, lease and/or enter into agreements with private investors when government land is made available for development. Research of this study focus area should consider examples from within the HKJ (*e.g.* Aqaba) as well as international models in the Middle East (*e.g.* Mediterranean coast region in Egypt) and elsewhere.

***Task C1: Review and describe strategies and options available to the government in regard to financial and contractual agreements related to the transfer of government land for development***

The study should consider a wide range of possible financial arrangements between government and private investors, such as:

- land valuation for sale or lease;
- options for revenue sharing;
- shareholder agreements;
- *etc.*

The study should consider how financial arrangements may vary according to the type of development, such as:

- Hotels;
- Residential development;
- Commercial operations (stores, restaurants, recreation facilities, *etc.*);
- Health facilities;
- Research institutions;
- Educational institutions;
- Museums;
- Outdoor recreation facilities;
- *etc.*

Each of the possible financial mechanisms should be described in terms of the following:

- Merits and drawbacks;
- Examples within and outside the HKJ;
- Legal integrity;
- Method and ease of implementation;
- Benefits to investors;
- Benefits to government; and
- Social and economic benefits to the people of the HKJ.

## 6 STUDY DELIVERABLES

Deliverables from the three study focus areas include the following:

### ***Study Focus A:***

Detailed land use plans for the Proposed Investment Lands (Sigma Study Area) and up to three additional areas identified within the study. Land use plans will be prepared following the guidance provided in this TOR and will include land use mapping, policies, and guidelines. Documentation should also include a description of the methods used to conduct the study, sources of data, field work conducted, and stakeholder involvement, including the input provided by stakeholders.

### ***Study Focus B:***

A document prepared following the guidance provided in this TOR that will provide direction in regard to staff requirements and skills for government to undertake and implement detailed land use planning in the JV. Including the structure and organization of the lead agency, the manner in which it works with other government ministries and departments and the process for undertaking and implementing land use planning.

### ***Study Focus C:***

A document prepared following the guidance provided in this TOR outlining strategies and options available to the government in regard to financial and contractual agreements related to the transfer of government land for development

## 7 TEAM REQUIRED AND LEVEL OF EFFORT

The staff required conducting the study, their area of expertise, international or local consultants, and the level of effort over the projected 18-month study are shown in the table below.

<b>Master Plan Development Strategy in the Jordan Valley – Study Team</b>		
<b>Area of Expertise</b>	<b>International/Local Consultant</b>	<b>Level of Effort (months)</b>
<b>Project Manager</b> - Integrated Land Use Planner	International	18
Integrated Land Use Planner	Local	18
Infrastructure Engineer	Local	8
Tourism Development Specialist	International	8
Development Economist	International	8
Social Scientist	Local	12
Financial Analyst (Real Estate/ Tourism)	Local	12
Architect/Urban Designer	Local	8
Transportation Engineer	Local	8
Environmental Specialist	International	8
Landscape Architect	Local	8
Archeologist	Local	8
Support Staff – Project Administration	Local	18
Support Staff – GIS Analyst	Local	18
Support Staff – Driver	Local	18
Support Staff – Technician	Local	18

## 8 PROJECT PHASES AND TIMING

The following chart presents the key project phases and their timing for completion within the study. It is critical to note that the first task identified for the project is to undertake a rapid evaluation of existing investment proposals directed at the Proposed Investment Lands (Sigma Study Area) in order to facilitate their approval (where appropriate) within the context of a larger vision being developed for the Dead Sea investment lands in the first three months of the project.

Master Plan Development Strategy in the Jordan Valley – Project Phases & Timing																		
Project Focus Areas and Tasks	Project Cycle (months)																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Focus Area A: Conduct Detailed Planning Studies</b>																		
Evaluation of Existing Investment Proposals																		
Task A1: Consultation with stakeholders																		
Task A2: Assessment of the demand and opportunities for growth																		
Task A3: Assembly and mapping of base line information																		
Task A4: Completion of infrastructure planning																		
Task A5: Development of detailed guidelines																		
Task A6: Preparation of detailed land use plans																		
<b>Focus Area B: Improve Capacity</b>																		
Task B1: Examination of the existing institutional framework																		
Task B2: Identify counterparts																		
Task B3: Identify training needs and opportunities																		
Task B4: Review the existing institutional planning framework																		
<b>Study Focus C: Advise the HKJ on financial mechanisms</b>																		
Task C1: Review and describe strategies and options																		

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**APPENDIX 2: LAND USE MAPPING COMPLETED IN JV-PLUMP**

Insert the nine A3 Land Use maps here

### APPENDIX 3: INVESTMENT PROJECTS ON THE EAST SHORE OF THE DEAD SEA

PROJECTS HAVE BEEN IMPLEMENTED					
#	Company	Parcel number\ block	Area (Dunum)	Type of Project	Value of Investment MJD
1	The National Company for Hotels and Tourism (MovinPick Hotel)	Parcel number58 \ block number 39 of Farshet Aeen Gazal from Ma'in village	71	Five Star Hotel with a total capacity of 250 rooms	35
2	The National Company for Hotels and Tourism (Expansion of MovinPick Hotel)	Parcel number70\ block number 39 of Farshet Aeen Gazal from Ma'in village	18	Five Star Hotel with a total capacity of 100 rooms	10
3	Business Tourist Company (Marriot Dead Sea Hotel)	Parcel number57\ block number39 of Farshet Aeen Gazal from Ma'in village	62	Five Star Hotel with a total capacity of 250 rooms	38
4	Dead Sea Spa Hotel	Parcel number61\ block number39 of Farshet Aeen Gazal from Ma'in village	45	Five Star Hotel with a total capacity of 120 rooms	10
5	King Abdullah II Conference Center	Parcel number265\ block number3 Of North Sowiema	68	Conference Center	20
6	Amman Tourist Beach Municipality of Greater Amman	Part of Parcel number88\ block number39 of Farshet Aeen Gazal from Ma'in village	142	Parks, swimming pools and utilities	2
7	Soymah National Park Ministry of Tourism	Parcel number D1\ block number 17 of Malah Ghour Alramh	1800	Children play ground, restaurants and utilities	-
<b>Totals</b>			<b>2206</b>	<b>720 rooms</b>	<b>115</b>

TOURISM PROJECTS UNDER CONSTRUCTION					
#	Company	Parcel number\ block	Area (Dunum)	Type of Project	Value of Investment MJD
1	The Saudi Jordanian Company (Kempinski Hotel)	Parcel number 72\ block number 39 of Farshet Aeen Gazal from Ma'in village	70	Five Star Hotel with a total capacity of 450 rooms	80
2	Ayam Al-Shams International Company	Parcel number 276 of Sowiemah Block number 3	37	Five Star Resort with a total capacity of 230 rooms  Water park	35  15
3	Social Securities Corporation (Crowne Plaza)	Parcel number 64 block number 39 of Farshet Aeen Gazal from Ma'in village	70	Five Stars Hotel with a total capacity of 420 rooms	70
4	Social Securities Corporation (Holiday Inn)	Parcel number 7 of Sowiemah coast	42	Five Stars Hotel with a total capacity of 102 rooms	28
<b>Totals</b>			<b>219</b>	<b>1200 rooms</b>	<b>228</b>



TOURISM PROJECTS THAT WILL BE IMPLEMENTED DURING 2007- 2008					
#	Company	Parcel number\ block	Area (Dunum)	Type of Project	Value of Investment MJD
1	Crystal Company for Tourism Investments	Parcel number1+ number 2 in Al-zara zone \ Abu Al- assal block	142	Five Star Hotel with a tourist village	200
2	AlSanabel Company for Tourism Investments	Parcel number 14\block number 2 of sowiemah coast	44	Five Star Hotel with a total capacity of 200 rooms	20
3	Bella Company For Tourism Investments	Parcel number15A \block number 2 of sowiemah coast	21	Four Star Hotel with a total capacity of 40 rooms	10
4	Ethad Tourism company Integrated Joint Investment.\ Union Bank	Parcel number 21\ block number 3 of Sowiemah Farm	42	Five Star hotel with a total capacity of 200 rooms	25
5	Role Resort	Parcel number 249+252\ block number 3 of Sowiemah Farm	121	Five Star Hotel with a total capacity of 300 rooms and 100 beach cabins	150
6	King Abdullah II Fund for Development	Parcel number 282 +287+290	1383	Hotels beach cabins, villas, malls and links	500
7	Sharam Company for Tourism Investments	Parcel number 63 of Sowiemah	55.3	Five Star Hotel	38
8	Alkear Jordanian Company for Investment Project	Parcel number 13 of Sowiemah block	64	Hotels, tourist village malls and cultural centers	13
9	Aljazeera Beach Company	Part of Parcel 13 of Sowiemah block	45.0	Three, four, five star Hotels	43
10	Altechniat company for construction and services	Parcel number 13 Of Sowiemah block	50	Hotel, Tourist village, malls and cultural centers	11
11	Saraya Dead Sea project	D2	1260	Hotel, tourist village, mall, links	660

TOURISM PROJECTS THAT WILL BE IMPLEMENTED DURING 2007- 2008					
#	Company	Parcel number\ block	Area (Dunum)	Type of Project	Value of Investment MJD
12	Dubai capital project	Zone 15	450	Five Star Hotels and specialized Therapeutic Centre	145
13	Social Securities corporation	(A) temporarily is part of parcel number 8 \ block number 2 in the south coast of the Dead Sea	34.5	Restaurant, swimming pools services utilities, 45 Beach cabins	1200
14	Private Project Development Fund for Armed Forces	Mamlouka 12	?	Building restaurants, swimming pools services utilities ,therapeutic center and 45 beach cabins	
15	Project development fund for Armed force	Mamlouka 87	20	Building Fve Star Hotels and its supporting facilities	
<b>Totals</b>			<b>2731.8</b>	<b>930 rooms (under estimate)</b>	<b>1816.2</b>

## APPENDIX 4: JV-PLUMP LAND USE RECOMMENDATIONS FOR DEAD SEA

Map. No. 3 / INVESTMENT LANDS (Sigma Study Area)			
Baptism Site	Tourism Reserve Undeveloped  King Abdullah Bridge	Cultural/Religious Protected Area	Tourism/visitor services RSCN Jordan River Reserve Maghtas IBA Important tourism link
Suweimah	Municipality	Sports or Recreation Open Space to east	Regional “sports city” Could be protected area For youth camp Need regional health facility Focus Group and housing for Dead Sea employees

Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)			
Parcels 25	River Path	Protected Land	Link to Jordan River Trail for hiking and biking
Parcel 26	Katar Land	Protected Land	Suweimah National Park JVA gave Ministry of Tourism and Archaeology 1,000 Dunums for park
Parcel 28	Undeveloped	Protected Land	Integrate into park
Parcel 29	Undeveloped	Protected Land	Suweimah National Park
Parcel 31	Some residential	Protected Land	Integrate into park (Dead Sea National Park and Nature Guide Training Institute with camping facilities and Dead Sea Low Altitude Winter Training Center (for Olympic athletes) Protect IBA
	<p><i>* It is important to design this area as an integrated nature reserve/training area, which would have tremendous appeal to visitors.</i></p> <p><i>* JVA , MOTA, and RSCN could jointly build, operate, and manage this area for significant revenue generation and training</i></p> <p><i>* Although I realize they are revenue generators, with the water conservation thrust of this master plan and the local disinterest in golf, I do not recommend a golf course, unless it was the type that has been developed in the Dominican Republic, i.e., Punta Cana Resort has golf course grass that is drought and salt tolerant, irrigated with gray water from dishes/laundry, organically grown fruits and vegetables, bird tourism, zoning to maintain small human footprint, 2000 acre ecological reserve that includes a 10 acre biodiversity lab and field station, drawing researchers from all over the world.</i></p>		
Parcel 27	Undeveloped Undeveloped (private)	Sports/Recreational Mixed Use	Regional sports city Commercial - Medical regional facility
Parcel 30	Developed	Tourism/Hotel	Dead Sea Spa
Parcel 32	Undeveloped	Municipal	Expansion of Suweimah will be critical to providing housing for Dead Sea hotel employees in the future
Floating	Within Suweimah	JV Bus Transit Station	Locate along road
Parcel 30	Developed	Tourism/Hotel	Dead Sea Spa
Parcel 33	Jordan Intelligence	Institutional or Commercial	JVA Planned Resort for employees, Could include training facilities

Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)			
Parcel 34	Social Security leased (JVA tore down old rest house)	Commercial	Restaurants area needed not hotel to give a more public edge to this end of the Dead Sea and to support the Convention Center
Parcel 35	JVA leased to Social Security	Commercial	Retail and office area including art galleries, sports rental shops (biking), retail shops, etc.
Parcel 36	Wadi	Protected Land	Water run-off
Parcel 37	Undeveloped (plan shows youth camp)	Mixed/Residential (luxury apartments)	Managerial staff housing Long term rental income for JVA
Parcel 38	JVA Employee Housing	Residential	Whether for JVA or other, this is a good land use
Parcel 39	Military Land	Protected Area	Suweimah Public Beach
Parcel 40	Army checkpoint	Protected Area	Suweimah Public Beach
Parcel 41	Undeveloped (15 dunums)	Institutional	Mediterranean Culinary Institute (training)
Parcel 42	JVA		
<i>* This could stay under JVA's ownership through a lease; allows training for tourism and operational support for catering of the Convention Center and planned KH ME Hydrology Center. Could work jointly with farmers and Hydrology Center to create public awareness of foods/menus related to less water intensive crops. Gives these parcels a semi-public edge to the sea.</i> <i>* Recommend conservation of archaeological site across road from parcel 42</i>			
Parcels 43-47	Undeveloped (now public beach and camel rides)d	Institutional	King Abdullah Middle East Hydrology Center (Owned by His Majesty) Could be operated by MWI, JVA, WAJ, and provide state-of-the-art training and research facilities
<i>* Water will be the primary issue in the decades ahead. The Dead Sea is very symbolic of our international loss of water, and Jordan could become a leader in water conservation and management. Facilities would include international standard water and energy conserving building design, research facilities, laboratories, GIS/computer labs, office space, storage space, breakfast café, and training. The Centre can use the convention centre for international meetings, and can house visitors in the surrounding hotels. The Mediterranean Culinary Institute can cater meetings at both. This could be a good revenue generator for JVA, and a teaching facility for MWI's staff.</i>			
Parcel 48	Undeveloped	Mixed Use	Tourism Village (both parcels)
Parcel 49	Undeveloped	Residential and Commercial	
<i>* It will be imperative that there be a safe pedestrian crosswalk for this already planned project. Could incorporate a Red Rocks Amphitheatre for musical performances, festivals, etc., through which JVA could create significant revenue.</i>			
Parcel 50	Undeveloped (leased to Bank currently)	Mixed Use/Commercial	Boat dock and souk Create night-time entertainment to avoid problem at Petra Facilitate non-motorized water boating/sea taxi system. All 3 could be Significant revenue Generators for JVA
Parcel 51	Consolidate with private owner		
Parcel 52	Undeveloped (leased to Sunday Co.)	Tourism/Commercial	Hotel
Parcel 53	Unknown		
Parcel 54	Convention Center	Institutional	Conferences and meetings

Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)			
Parcel 55	Undeveloped (leased to ACCOR)	Tourism/Commercial	Hotel
Parcel 56	Marriott	Tourism/Commercial	Hotel existing
Parcel 57	Movenpick	Tourism/Commercial	Hotel/Spa existing
Parcel 58	Kempinski	Tourism/Commercial	Hotel, Apartments, Spa (Under Construction)
Parcel 59	Dead Sea Spa	Tourism/Commercial	Hotel and Spa existing
Parcel 60	Undeveloped (across road - planned for JVA employee housing)	Mixed Use/Residential	Well designed housing or other residential use, e.g., assisted living
Parcel 61	Undeveloped (JVA leased to Bella Vista)	Tourism/Commercial	Hotel planned
Parcel 62	Power Station (across road from beach)	Institutional	Power Station built
Parcel 63	Undeveloped (JVA leased to Sharm)	Tourism/Commercial	Hotel planned
Parcel 64	Undeveloped (JVA leased to Crowne Plaza)	Tourism/Commercial	Hotel planned
Parcel 65	Undeveloped (Treasury land) Police Tower	Institutional	Dead Sea Heritage Center with World of Salt Museum – could include cultural heritage training facilities
<p><i>* JVA could also retain this under its authority and operate it jointly with DOA/MOTA. It would promote CH and provide a significant day-time educational activity for travelers passing through and local school children, as well as hotel/spa guests and local residents. Training facilities would promote standards of cultural heritage authenticity and cultural value. Its gift shop would promote local handicrafts and agro-products. A design studio would provide local residents and hotels with assistance on following Dead Sea design regulations, and provide information on vernacular architecture. It could also assist with preservation of cultural heritage villages and cultural landscapes, and training for village museum design. It would compliment the Lowest Museum on Earth and provide a valuable resource for all Jordanians.</i></p>			
Parcel 66	Undeveloped beachfront (JVA & Amman Mun.)	Protected Area	Public beach needed (Please provide naturalized beachfront, unlike existing Amman Beach; lighting and visitor services should be set back)
Parcel 67	Water Treatment Plant (beautiful wadi with palms)	Institutional	Water Treatment Plant (infrastructure exists underground – need to build plant)
Parcel 68	Consolidated with parcel 67	Institutional	Wastewater Treatment
Parcel 69	Satellite Receiving Station (existing)	Institutional	Satellite Receiving Station
Parcel 70	Electrical Company (existing)	Institutional	Power Station
Parcel 71	Developed	Tourism/Visitor Information (linked to Dead Sea and Mujib)	Dead Sea Panorama
Parcel 72	Undeveloped beachfront	Tourism/Commercial if lease maintained Protected Land if lease broken	(146 dunums/Crystal City/Dubai Pearl tourism) Across from Dead Sea Panorama road access point

### Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)

*This appears to be the best land along the Dead Sea, which the developer recognized. However, my belief is that the best land should always be under the purview of the government of the country, and therefore I am recommending protected area with limited camping and facilities and relatively undeveloped shoreline. The Amman Beach is wedged into an infrastructure area, and it could be relocated here.*

*It would allow the Dead Sea a long public edge for local and international nature based tourism, allowing people to experience the Dead Sea as it has been seen for thousands of years without hotels. It is a very scenic area that could be tied into the Archaeological Park, and provide more long-term income to JVA and the GOJ than a hotel lease or sale will.*

No Parcel #	Archaeology	Protected Cultural Heritage area	Zara sites
<i>Zara is a well excavated site on the shoreline that links through Roman period to Callirhoe excavated but abandoned site across road – both Roman medium significance sites. Both could be interpreted and become significant cultural heritage sites on the tourism circuit. For revenue generation, could include a small gift shop with archaeological reproduction jewellery, books, maps, t-shirts, etc., and a fruit juice kiosk and shwarma stand – very little fast food available along the Dead Sea.</i>			
Parcel 73	Undeveloped beachfront	Protected Area (Parcel 72 and 73 would be integrated)	Public beach
Parcel 74	Developed with restaurant (lease should be discontinued due to litter, example of negative architectural style)	Tourism/Commercial	Shoreline needs some non-hotel refreshments area; area has hot springs that need preservation could draw nature based tourism
Parcel 75	Agriculture and Res.	Protected area	Recommend that this be a combined tourism/institutional area, linked to Mujib and Zara CH and featuring agricultural pilot Xeric nursery and interpretive garden, perhaps with higher up campsite; this could be a good revenue generator for JVA and land owners. Note: This would also link to the Dead Sea Trail (walking/nature and geology)
Parcel 76	(Princess Basma/Zara)	Institutional	
Mujib	Reserve and IBA	Protected area	Nature based tourism
Mujib	Dam site	Tourism overlay	Fish farm potential and link tourism to Mujib
Parcel 77	Developed (owned by Intelligence Department)	Institutional	Police Station
Parcel 78	Developed	Institutional	JVA Directorate Offices
Parcel 79	Developed	Institutional	2 <sup>nd</sup> Police Station built
Parcel 80	Developed	Institutional	Fire Station built
Parcel 81	Developed	Institutional	Power Station
Parcel 82 Parcel 83	Undeveloped	Mixed/Residential	Area very rocky Limited high end housing. Could do a small commercial tourism attraction like the Arabic World of Tea and Coffee

**Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)**

*Note: Rarely are the Arab world's strong ties to tea and coffee used for tourism purposes, other than drinking. There is ample opportunity to use these common products, tied to the JV's agro potential as a tourism asset. This idea is taken from an existing tourism attraction in Colorado called Celestial Seasonings. This company simply packages tea, but they have used their imaginations to make it into a very successful tourism attraction in Boulder. Included are guest tours through an art gallery of illustrations for their tea boxes, a Tea Sampling Bar with 50 varieties, a Celestial Herb Garden tour, a Mint Room, gift shop, café, and a factory tour to show how they produce the tea bags.*

Parcel 84	Developed	Institutional	Telephone exchange building
Parcel 85	Developed	Institutional	Power Station built
Parcel 86	Undeveloped	Institutional	Parking currently- Could be a staging area for hiking/climbing
Parcel 87 and 88	Undeveloped	Mixed/Residential	High end low density retirement housing
Parcel 89	Undeveloped	Institutional	Military zone across from power station
Wadi Ibn Hammad	Agriculture	Agriculture and protected	Wadi Ibn Hammad IBA
Ibn Hammad	Proposed Dam	Tourism overlay Protected Area	Fish farming/picnic and parkland in protected area with Dead Sea (geological) trail running along edge of site Bird watching
Wadi Karak	Proposed Dam	Tourism overlay Protected Area	Fish farm/picnic area within IBA Bird watching
Mazraa and Mazraa Madineh	Villages	Expansion	Along Dead Sea trail – can provide- can provide services
	Undeveloped	Residential to south and east Farm Units to West and East	
		Agriculture to west	They are already growing sunflowers, date palms, bananas here; opportunity for Xeric plants-pilot.
		Salt Flats	Housing exists pt of area
	Industry/mechanics	Open Space to west Industrial to south Mixed Use along road located in this area buffering industrial	Arab Potash industries
<i>Recommendation is to move garages away from road front and create a nicer commercial presence for locals and tourists buffering the industrial development.</i>			
El Qasr	Archaeological Site	Protected Cultural Heritage	Significant site – tie into Cultural Heritage/ nature based tourism Xeric grasses, oats, alfalfa
Khirbet Esal	Archaeological Site	Protected Cultural Heritage	Significant sites
Rujm Numeira	Archaeological Site	Protected Cultural Heritage	Significant site
Umm Halasheem	Village	Expansion to southwest  Tourism overlay	Focus Group recommendation Linkages to Lots Cave and Lowest Point. Museum

Maps No. 3,4 and 5 / DEAD SEA PARCELS (see figure below)			
		Institutional South	JVA offices
Safi Ramleh	Village	Expansion to northwest	Focus Group recommended cold storage; food processing
<i>Note: Wadi Hasa, the traditional border between Moab and Edom (on St. George's map in Madaba), is just south of Safi Ramleh. This could be exploited as a religious/CH site with a marker and interpretation and be linked to nature based tourism, as quite picturesque.</i>			
		Protected Area	Wadi Al Hasa



Insert Dead Sea Parcel Map 42a here

Insert Dead Sea Parcel Map 42b here

**APPENDIX 5: JVA STRATEGIC PLAN 2003-2008 EXECUTIVE SUMMARY**

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