The Zarqa River Basin, Jordan
Reviving Hima Sites
Acknowledgements

IUCN ROWA would particularly like to thank all the local committee members (Bani Hashem, Hashmiyha, Duliel and Halabat) who have provided valuable inputs through project implementation & showed their commitment and spirit towards natural restoration through their local initiatives.

We would also like to thank Dr. Jonathan Davies (IUCN, Coordinator of the Global Drylands Initiative) for commenting, reviewing and advising on the various elements of this project.

Special acknowledges go to the Ministry of Agriculture for its coordination, support & interest in updating the National Rangeland strategy, as well as The Arab Women Organization for the coordination & facilitation of local Environmental Management plans.

Project Team
Eng. Fida Haddad
(IUCN, Project Manager)

Eng. Amer Madat
(AWO, Senior Field Coordinator)

Author
Ms Lara Nassar
(IUCN, Regional Documentation & Information Officer)

Design & Layout
Al Teif Al Thaleth for Medial Equipments

Funding
The European Union

This project is implemented by IUCN - ROWA, Global Drylands Initiative

"This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of The International Union for Conservation of Nature and can in no way be taken to reflect the views of the European Union."

IUCN began implementing the EU funded project “Securing Rights and Restoring Lands for Improved Livelihoods” in 2010, with field projects identified in Botswana, Jordan, Mali and Sudan. In Jordan, the project is implemented by the International Union for Conservation of Nature – Regional Office for West Asia (IUCN- ROWA), partnered with the Ministry of Agriculture (MOA) and The Arab Women Organization (AWO).
The Jordan Badia extends over 90% of Jordan’s landscape, with Bedouins and other villages using it for livestock grazing as part of their main economic activity. Traditional grazing systems have declined over the years, subjecting the lands to a number of environmental pressures that further stem from industrialization, urbanization and agricultural intensification. Traditional grazing systems have the ability to reverse this degradation and restore the land to its optimum productivity and levels of biodiversity.

With local community & key stakeholders playing a role in re-introducing traditional grazing systems and adapting to environmental conditions, the Hima system was revived. The Hima system allows communities to conserve areas of key resources in order to regulate their use. Improvements in rangeland biodiversity and fodder production are observed within as little as one year of establishing these Hima sites.

**Environmental Challenges: The Zarqa River Basin**

With a population of 6.3 million, Jordan has to struggle with limited natural resources and serious environmental challenges. Desertification and declined standards of living have forced the locals to abandon pastoralism and immigrate to urban centers. Desertification and over grazing patterns have allowed for inevitable outcomes; poverty and unemployment.

The Zarqa river basin faces a number of environmental risks that bring about desertification and land degradation. Its plant cover has fallen victim to the growing water demand, leading to large scale ground water extraction that further depletes its aquifers. Indigenous plant biodiversity has decreased drastically, shifting productive land to arid and industrialized zones limiting its production for fodder. The local community’s answer to such stressful situations is purchasing fodder and making use of the arid land for grazing larger numbers of livestock.
In short, roots of the problem lie in the country’s rapid population increase, land and water mismanagement, and lifestyle change. The roots of these problems include:

1. Land tenure: private land owners exploited lands unsustainably and at the expense of traditional pastoralists’ in the area.
2. Poor marketing of livestock and agricultural products.
3. Weak coordination between relevant governmental agencies and local communities resulting in conflict approaches to the management of land and natural resources.
4. Potable water scarcity & the lack of sanitation.
5. Bedouin settlement, allowing livestock to over-graze in a specific area.

Options for rangeland management

To sustainably restore and manage rangelands in the Zarqa River Basin, a European Commission funded project seeking to reduce poverty and reintroduce traditional rangeland management techniques such as the Hima system was established. The word Hima (Arabic: حمى) originally means “protection” and refers to an area set aside for conservation. Its a traditional conservation system used by Bedouins to organize grazing and keep lands protected and conserved. The Securing Rights and Restoring Lands for Improved Livelihoods project is designed to set a positive example for protecting rangelands and regain its biodiversity.

Fundamental aspects for achieving this vision include:

- Securing rights and access to land tenures;
- Improving governance of land and natural resources; and
- Enhancing income generation.

Towards Solutions

A Framework for change

A framework for change has been created by which local communities’ have secured rights to manage their land and resources. The initiative created a greater sense of resource ownership, leading to their protection, restoration and sustainable management.

The project is implemented, by IUCN ROWA in collaboration with the Ministry of Agriculture and the Arab Women Organization, in four Jordanian villages (Duleil, Hashemeyeh, Bani-Hashem and Hallabat) within the Zarqa River Basin. All of these areas represent major problems in most Jordanian rangelands.

Socioeconomic development initiatives will be funded to establish comprehensive training models based on their traditional knowledge and methods of adapting to environmental challenges. Target communities are to be fully involved in rangeland restoration activities and special emphasis will be given to building individual and institutional capacities for environmental management. Governance will engage women and marginalized groups to develop and take part in the planning and management process.
The resultant benefits of improved livelihoods and environmental restoration are to be sustained through accessing markets and acquiring negotiation skills that enable them to present their cases to the government and other stakeholders to demand their rights. The government’s role is therefore to update policies and legislations to become supportive to that process and present appropriate incentives.

The project methodology is based on two key points: Stakeholders dialogue for concerted actions, and the participatory management cycle. The first step highlights dialogues and collaborative activities. Stakeholders include land users from the local community, and service providers from the governmental and non-governmental institutions that support the community. The decision making process takes place within the integrated management framework of natural resources, following a consensual approach. Such approaches lead to mutual understanding of integrated management and a greater ability to develop and implement management plans and natural resource regulations.

Using a different approach: Stakeholder Dialogues & the Participatory Management Cycle

The initiative uses a participatory approach which assists in organizing and guiding the stakeholder dialogue in taking informed decisions that lead to concrete outcomes. The phases of the cycle can be divided into three main categories:

1. The phase of forming the "vision", "assessment" and "strategies" providing an appropriate environment for achieving the shared long-term vision and strategy for improving livelihoods.

2. The phase of "planning" and "implementation" that sets priorities for strategic interventions, developing and carrying out implementation plans.

3. The phase of "reflecting" which is considered as an ongoing phase throughout project implementation.

Upon project completion the newly established pastoral (Himas) established by local initiative, will set positive models in pastoral land protection and management including organizing grazing, restoration of indigenous plant cover, better surface water management and finally, agricultural awareness about growing plants compatible with fragile ecosystem of drylands, that are capable of surviving droughts and frost. Participatory communal management of Himas will have substantiated local communities’ right to sustainably use the Hima and protect it from violations.

Hima: Local positive models

Encouraging the Hima systems in each of the villages necessitated tribal community meetings attended by government officials, directors of governmental departments and representatives of the Environment and Water Committee at the Parliament. Local community committees were formed, each under the name “Hima Committee”. Some of these committees created a “Tribal Charter” inviting signatories to practice proper rangeland management and contribute to the restoration of the indigenous plant cover in their areas.

Land tenure constraints have created a major barrier to organizing grazing and improving the environmental situation in the targeted communities. Private land and land owners were reluctant to involve other parties in using these lands for grazing purposes or establishing Hima systems. The current system of land tenure gives these types of tenure the right of land use regardless of environmental consequences. The project addresses this complexity by launching these Hima sites in lands not located within the boundaries of tribal tenures to serve as a positive model of participatory management.

1. Tribal document or agreement
and qualified infrastructure. 97% of the village’s households are supported by the father with negligible contributions from mothers, which is in line with gender roles in Bedouin communities and culture. Income sources vary including raising livestock, working in nearby factories, trade and civil service jobs. Many households keep 5-10 heads of sheep or goat for home use and sell what is left. A study on poverty in Jordan classified Hashemeyeh as one of the poverty pockets in the country with 30% of its inhabitants below the poverty line. While unemployment is a major poverty factor, the lack of women empowerment and low education levels within families are further aggravating the situation.

The deterioration of pastures has overarching implications on the Hashemeyeh community. While livestock owners suffer from land degradation, pollution and high cost of production inputs like fodder, housewives complaints revolve around the declining ability of households to maintain food self-sufficiency. A study reveals that the local community is well aware of the main source of deterioration and the fact that they contribute in its degradation through over grazing practices and rangeland mismanagement.

Following project implementation, the Hashemeyeh community realized through a PRA study and field survey that the main challenges for applying sustainable cultivation and grazing practices include the lack of communal awareness concerning their rights to manage land and natural resources. On the other hand, several earlier projects have created a negative impression towards the community by blocking them out of any decision-making processes.

To address these challenges, a local committee was formed representing all Hashemeyeh community segments and different stakeholders. This committee acts as a networking hub to spread obtained knowledge to the rest of their community. Pasture development, grey water reuse, producing environment-friendly compost and drafting strategic plans for dryland resources are among the many things that this community has gained. Their vision was established to serve livestock owners and lead to human development in the area.

Moving towards achieving that vision, grazing and cultivation techniques have been already put into practice, shifting their current agricultural system to better sustainable ones like using treated grey water for irrigation and cultivating corn instead of barley. Through these sustainable behavioral changes, the community has showcased the benefits of including the local community in any set environmental solution, further allowing them to fund raise for new desertification combating projects.

Hallabat: Combined Efforts

Located 25 km northeast of the Zarqa city, the Hallabat villages have a total population
of around 7,000 mainly from the Bani-Sakhr tribe that follows a Bedouin lifestyle. Cold in winter and hot in summer, the villages have a typical desert climate with an annual rainfall average of 120-150 mm.

The Hallabat Municipality has very limited resources, with the inhabitants having to struggle with challenges imposed by the existence of one preliminary medical care center, lack of infrastructure, absence of sufficient sanitation systems and environmental services.

The community of Hallabat have faced particular hardship since abandoning their former mobile lifestyle and settling. Increased unemployment and decreased income are due to the deterioration of pastures, which present the main income source with no present alternatives available. The Average monthly income of a household is JD160 with many families owning 7-17 heads of sheep, using their milk products for home use while selling young lambs to meet other financial needs.

The above challenges have led to a declined vegetative cover and the loss of valuable grazing plants in Hallabat. While fodder costs have been rapidly increasing further consuming a significant portion of families’ incomes; pastoralists currently lack the skills necessary for increasing milk production and marketing it.

The community sought to create a Hima in their area to demonstrate sustainable management of rangeland and livestock production. However, the local community was reluctant to allocate an area from their tribal lands for that cause, pushing for an agreement with the Antiquities Department to establish a Hima on 150 dunums of public lands and therefore reviving sustainable traditional grazing and cultivation practices.

Activities in this Hima intervention include rehabilitating the Hallabat Palace wetland for irrigation practices and livestock grazing. The economic benefits of this pilot will be granted mainly to less fortunate widows. The success of this exercise is promising, since the local community is considering allocating around 200 dunums of their private and tribal lands for up-scaling the Hima approach.

**Duliel: Adapting to change**

Duliel (Arabic: الضليل ) originally meaning “Shade” is located 15 km northeast of Zarqa city is the home of 37,000 inhabitants including 13,000 non-Jordanian workers. Both the nomadic tribal and settled rural lifestyles are prevalent among citizens as the area is inhabited by Bani-Hassan tribes and tribes from Irbid, Ajloun, Beer sheba and other clans of Palestinian origin. The town has a typical desert climate, cold in winter and hot in summer, with an annual rainfall average of 150-200 mm.

Duliel has various governmental departments covering medical care, education, social and labor affairs among others. Civil society organizations have strong presence in Duliel including issues like social development, special education and rehabilitation, youth and livestock breeding. Nonetheless, the Duliel district is considered one of the poorest areas in the Kingdom. Several families own 10-15 heads of sheep and others keep cows for their products. Most farms belong to owners from outside the district while locals work therein for daily wages.

Duliel’s long history of dense tree cover and abundant water has been replaced in the past few decades by rapid desertification due to the expansion of investments and industrial waste. Industrial waste such as plastic doesn’t only affect land use, but causes the deaths of thousands of sheep per year. Other key challenges for pastoral livelihoods include land tenures, as most of the land is either governmental or designated for military exercises. The area moreover lacks rainwater-harvesting techniques that can provide for pastoral agriculture in light of the poor rainfall and effects of climate change.

Working with the locals in the area, an awareness
campaign targeting 200 women and other community members used a participatory video approach to identify their problems and document their suggestions. These approaches have allowed the community to develop a vision for restoring rangeland plants by 20-30%, which will later reflect on the economic and social situation of livestock owners in their areas.

A Hima was established with proper rangeland management aiding in the revival of indigenous plants necessary for sustainable pastoralism. Livestock can later graze in the Hima that is now barren and exclude cultivation in the area. Managed grazing will no longer be a desertification factor but rather contribute in spreading the seeds in wider areas. The outcomes shall encourage the adoption of this experience in other areas of Duleil, while the resultant benefits of the community especially women will alleviate poverty and improve living standards. Change takes time in practice, but will be complemented with training local community members on effective marketing methods to come up with different investments.

**Bani-Hashem: Political Support Does Count**

Bani-Hashem consists of four communities located 21 km north of the Zarqa city and has a total population of 15,000 mostly of Bedouin origin. The area had been characterized by a rich plant cover and abundant water resources, which encouraged Bedouin tribes to settle there since the 1850s. Yet with population growth, urbanization and the tendency towards employment in the civil service, natural resources started to deteriorate. A particular incident in 1954 further accelerated this deterioration when a malaria outbreak drove the inhabitants away from water resources after which they started selling their lands and abandoned agriculture and pastoralism.

The area has semi Jordan Valley weather, hot and dry in summer and moderate in winter with an average annual rainfall of 170-220 mm. It is a desertification hotspot due to climate change, droughts, and human social activities that include overgrazing and quarrying. Income sources include; jobs in the military and civil service system, while 20% of households rely completely on livestock raising.

There are several environmental problems due to the lack of a sanitation system as most houses have cesspits, which leak into the soil causing contamination. Quarrying, on the other hand, cause contamination in the air and soil. As for present water resources, they are contaminated with sewage water pumped into the Zarqa River from Al-Kherbeh As-Samra treatment plant.

Despite the above mentioned factors, livestock remained a core socio-economic element in the life of Bani-Hashem’s communities, meeting some of their basic nutritional needs and providing an additional source of income. The current number of livestock in the area is around 5,000 heads whose owners have several complaints such as lack of sufficient pastures, high costs of fodder, difficulties in marketing livestock products, water scarcity and the spread of livestock diseases.

To address these problems a Hima was established with a vision of achieving ecologically sustainable rangeland management and, supporting social, ecological and economic activities. The Hima land is being rehabilitated and indigenous plants are being restored to contribute in improving living standards in Bani-Hashem. Through the Ministry of Agriculture’s support, the local community obtained the Prime Ministry’s approval to allocate 1000 dunum of rangelands for use and management by the community.

To ensure sustainability, a tribal charter was drafted and signed by community members pledging for its protection from violations. The charter acquired an official status by involving law enforcement authorities in its application, while a local committee was formed to coordinate the management of Hima following tribal traditions.

Awareness campaigns have created a wider understanding of the Hima concepts for the sustainable use of rangeland natural resources. To further institutionalize the management of Hima a private society was recently established that coordinates the actions of the community members to make the restoration of the dryland a sustainable income-generating source that improves local standards of living. This has therefore revived the indigenous plant cover and reduced resource conflicts between tribes in the area.
What has Changed?

With overgrazing and desertification causing degradation of natural resources in the Zarqa River Basin, the local community had no choice but to adapt and work together for a better future. As a result, the sites have improved environmentally and socially; tribal conflicts over natural resources have reduced, grazing seasons are better managed and indigenous biodiversity has revived. Solving overgrazing will no longer portray livestock immobility, but rather properly managed grazing periods. These solutions have prepared a way forward that builds on the capacities of the local community and increased women involvement. These played a major role in improving their livelihoods through securing their managing rights and building the relationship with government institutions. Adaptive solutions are not constrained by funding but rather rely on available resources and communal efforts that present a successful case for donors, which will in turn help obtain funding.

The Future

With the project coming to an end in 2013, the focus lies on its self-sufficiency. The project approach and methodology have touched upon major behavior and social change, allowing the local community use their pastures efficiently and manage their natural resources. Capacity building is currently directed to keeping this objective alive, while government departments aid and assist in this process. Governmental support will target institutions that manage the Hima sites therefore legitimizing and recognizing the importance of such combined efforts in managing and protecting arid lands.

Tangible benefits of the project are an indispensable sustainability factor. Local communities need to see actual benefits of their improved pastoral practices and newly built capacities and acquired rights. Improved levels of living will encourage sustaining these practices and further developing them.

Upon all that, the Hima concept will be upscaled and applied in wider geographical areas. At that point, larger numbers of communities will have changed their pastoral practices and consequently improved their lives. Hima will no longer mean small confined pieces of dryland, but a whole new approach of rangeland and natural resource management that will later contribute in updating the rangeland strategy in Jordan.
About IUCN

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGOs, the UN and companies together to develop policy, laws and best practice.

IUCN is the world’s oldest and largest global environmental organization, with more than 1,200 government & NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN’s work is supported by over 1,000 staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world.

www.iucn.org

About REWARD

The Regional Water Resources & Drylands Programme (REWARD) is implemented in the larger Region of West & Central Asia, North Africa and forms part of & directly contributes to the Water & Nature Initiative (WANI). The goal of REWARD is the mainstreaming of ecosystem services into water & dryland management planning and policies, to support sustainable use of water resources for poverty reduction, economic growth and the protection of the environment.

www.iucn.org/westasia/

About the Global Dryland Initiative

The Global Drylands Initiative contributes to strengthening the resilience of dryland ecosystems & livelihoods further conserving drylands biodiversity. The Initiative builds on and strengthens local knowledge and institutions that enable people to govern their resources sustainably. This is therefore achieved by strengthening rights and governance from the local to the national level as well as globally.