



## *Securing Rights and Restoring Land for Improved Livelihood*

*Prepared by:*

*Local Dry Lands Resources Management Committee*

With support from: IUCN, AWO and MoA



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## Introduction:

Hashmiyha is located 10 km to the north of the city of Zarqa (the governorate center) where it forms a stripe between Mafraq in the North, Zarqa to the South, Hashmiyha to the East and Berine province to the West.

Hashmiyha was named after the Hashemites of the modern era. Hashmiyha was inhabited by the Romans as there are ruins of Roman premises and columns with names of rulers in the Roman era. In the Ottoman Empire, Hashmiyha gained a strategic

location as it was a stop for the trading caravans to and from the Hijaz. Moreover, it is the pilgrims' way that goes in line with the road established by the Turks at that time. The road was paved with black stones and was later replaced with the railway instead of this road. There are also remains of two buildings that are exactly one mile away from each other. Today, Hashmiyha is a major crossroads linking the Governorates of Irbid, Zarqa and Mafraq which gave it great importance.

The population of Hashmiyha is about 60 thousand citizens, distributed in the following numerous communities: Hashmiyha in the center, Abu Alzhigan Douqarah, Ein Nimrah, Gariseh, Dhaba'an, Alqaniah, Tawaheen Aludwan, Alhasab, Alraheel, Um Alsuliah, the villages of Bani Hashim and Alsuhnah. Those communities have different population densities, as Hashmiyha has the highest density of about 55% of the total population and the tribal life is dominating in the area that is inhabited by Bani Hassan and Beni Sakhr tribes.

Hashmiyha is 550 m above sea level and it has a desert climate characterized by cold and rain in winter and heat and drought in summer. The rainfall ranges between (200-250) mm, and most of its territory are plain with some mountainous parts.

## The Environmental Situation

Hashmiyha has been a breathing space for the people of Zarqa, especially Sukhna area. The environmental change that took place in both areas resulted in the development and progress in the area that is characterized by production and industries, hosted the military camps and became the center for many industries in Jordan.

At present, Hashmiyha is one of the most polluted areas in Jordan due to the pollution resources and various types. The following main sources cause air pollution in Hashemiah and unpleasant smells: The Jordan Petroleum Refinery, Hussein Thermal Plant and Khirbat Alsamrah Plant for Natural Refinement in addition to the factories that pollutes that air through fuel burning, oil refining and wastewater treatment.

The local people complain of ignorance by the officials to their requests and appeals regarding adding filters to the refinery and stopping the industrial expansion on its territory, but to no



avail. This reflected negatively on the development of land use and loss of livestock for the pasture that were fertile .

### Grazing Situation

The nature and livelihood of communities in Alhashimaih depend on livestock and raising cattle as this is their key source of living that provides their basic needs of food and clothing .

At present, there are many families that own about five to fifteen goats which provide them with dairy products used as food source and an aide to the family's income. The number of goats in Alhashimaih amounted at 12124 goats, 33585 sheep and 6 camels. There are investors in livestock in the area as there are about 1574 cattle owned by investors, not by the local people who raise sheep and goats as these are cheaper than cattle .

It is noted that the area had a higher percentage of livestock as sheep and camels and wild birds were the main source of income for the local people. As a result pastures degradation, livestock gradually decreased. Moreover, urbanization, agricultural growth and environmental pollution, resulted from industry, caused the dry lands to lose their sustainable production. This degradation is clearly seen by the decline of the vegetation cover, the disappearance of plants with pastoral original value, the collapse of pastoral livestock production systems and impoverished pastoral communities .

**The impact of deterioration of the previous sources and environmental pollution can be summarized as follows :**

- Increased death of sheep.
- Low average of productivity per head of sheep
- Low production of wool.
- Low productivity of milk
- Increase of the disease rate among sheep .

Although the communities have strong social relations, the research team concluded that poor cooperation and low voluntary and teamwork among minor producers is reflected in the lack of providing solutions to problems affecting rangelands, especially the environmental pollutions and maintaining rangelands as shown in Figure 1

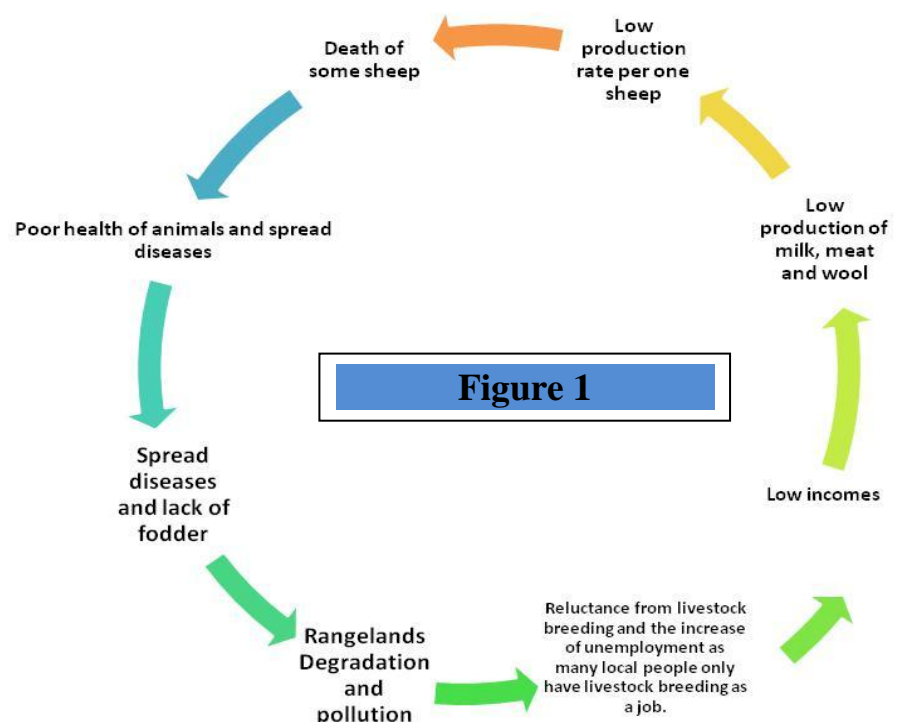
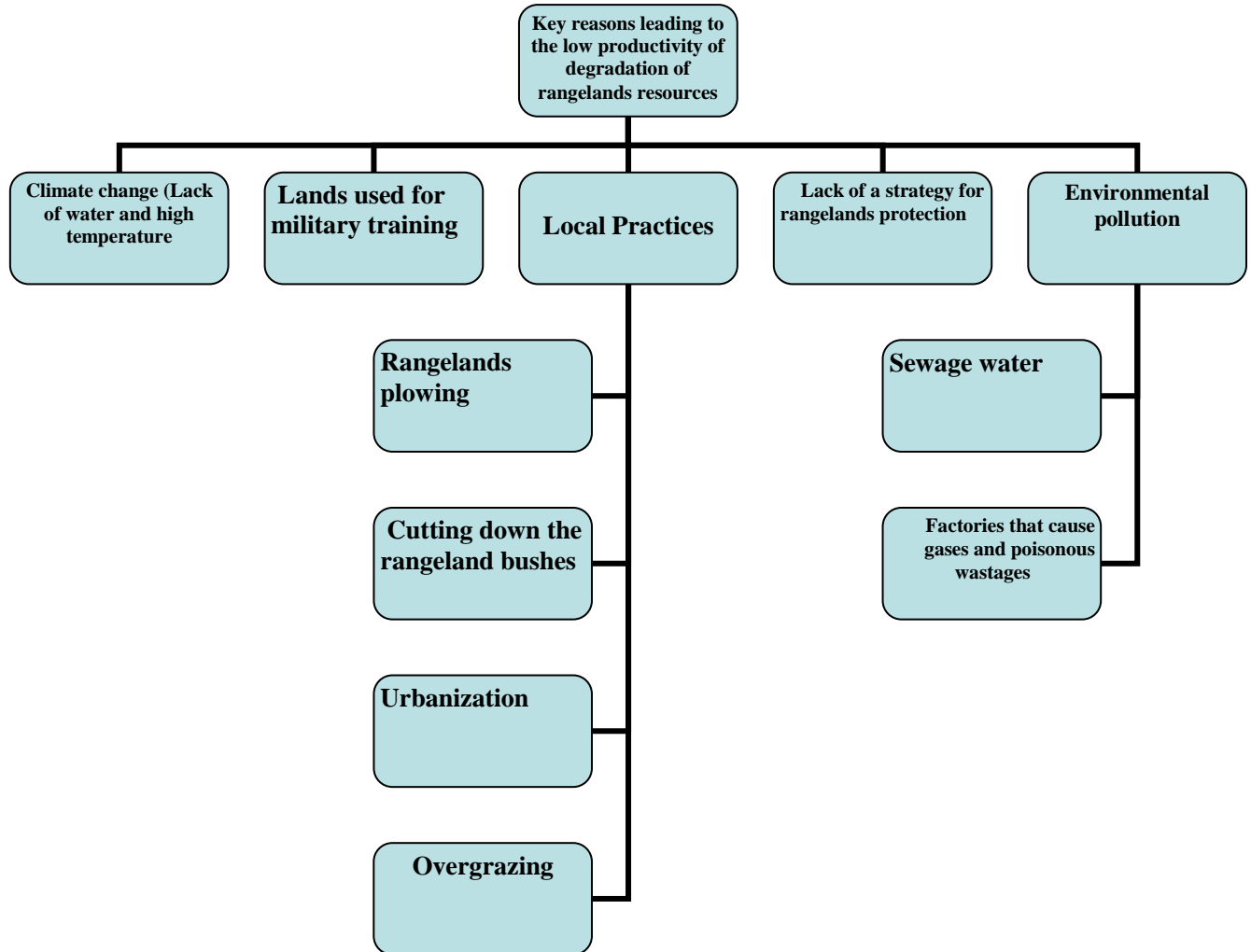




Figure 2: shows the key reasons of rangelands deterioration in Hashmiyha



Weak cooperation among the rangeland breeders increases the previously mentioned problems as well as the lack of policies that prevent the previous land use violations. The lack of rangelands development strategies, the rapid increase of population, the increased number of factories, and the expansion at the expense of natural pastures with low rainfall accelerated desertification.

### Project description

The “Securing Rights and Restoring Land for Improved Livelihood” project assumes the responsibility of presenting a model on rangelands and dry areas natural restoration and protection. This project will present the required ecology services that will improve the livelihood of inhabitants through insuring rights in land tenure, improving their management and providing opportunities for generating incomes. This project is implemented by the

Regional Office of West Asia (ROWA) at the International Union for Conservation of Nature, in cooperation with the Ministry of Agriculture and the Arab Women Organization. The project is implemented in four Jordanian sites around Zarqa River basin, which are: Duliel, Alshukhneh (Bani Hashem Villages), Hashemiah, and Halabat, which have the key problems that most communities in the rangelands and dry areas in Jordan are facing.

This project cannot be implemented apart from the efforts made to compact desertification and restoration of rangelands. The National Strategy for Compacting Desertification aims to limit the misuse of resources and land degradation and to achieve sustainable management of the reserved lands with wide societal participation to provide new natural reserves. The National Policy for Rangelands Development aims to end the land degradation and restore their productivity and thus restore the productivity of livestock. In both cases, these plans are hindered by the lack of funding, the lack of qualified implementation resources and the lack of the action plans based on accurate data and land tenure. The project will support the strategy and the plan through funding and implementing integrated social- economic development for the communities in dry areas. It will also provide integrated training models for these communities and will benefit from their traditional knowledge and practices best in adapting with the life requirements of dry areas, by effective management of the available resources. Moreover, the project will involve the target communities in the rangelands restoration activities, and so, it will foster building the capacity of individuals and institutions on environmental management.

Furthermore, the project aims to create reserved rangelands areas called *Hima* that are governed by the local communities, which, in turn, will develop and implement plans for rangelands protection from urbanization and mining projects. Those rangelands are supposed to sustainably utilize their natural resources to improve the communities' standard of living, taking into account the needs and rights of all community groups including women and marginalized groups who will be involved into building capacity programs to fully participate in the planning and governance activities.

Upon the Finalizing of the project, the Hima sites will be a model on rangelands protection and management in terms organizing grazing and natural restoring vegetation cover. The rangelands will provide better distribution of surface water and agriculture, along the contour lines, for the plants and herbs that are compatible with the fragile ecosystem in those areas and have the ability to survive in the drought and frost. The participatory community management for the Hima sites highlights the rights of communities for sustainably using those sites as well as preventing any violation by projects that are inappropriate for these communities.

It is hoped that the success of these sites leads to the adoption of these targeted communities for land use management after practicing those principles in Hima management. It is also hoped that this knowledge is shared, then adopted by the government and finally is supported by the House of Representatives. Therefore, the project team is keen on informing the government and the House of Representatives on its objectives, activities and outputs.

## Project's Methodology

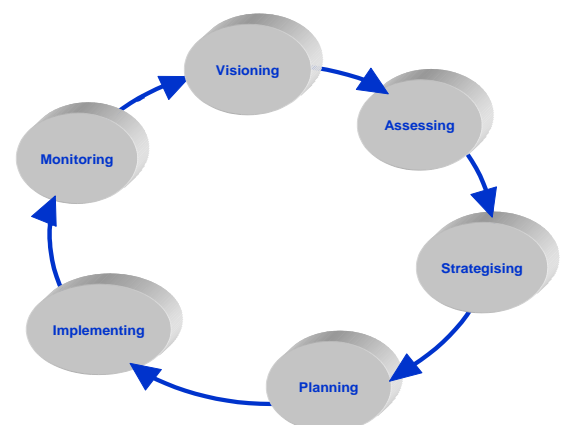
The project's methodology is based on the following two key bases: Stakeholders dialogues for concerted actions, and the project management cycle. The first base highlights the dialogues and activities. The stakeholders include the land users from the local community, and the services providers from the governmental institutions and non- governmental institutions that support the community. The decision making process should take place within the integrated management framework of the natural resources following a consensual approach and dialogue. Such approach would lead to mutual understanding of integrated management implementation. Once the stakeholders are capable of having effective communication, they would be able to find successful methods to face the challenges represented in the rangelands degradation and some lands' uses. It is now clear that the success of the dialogue and concerted activities among the stakeholders and facilitators due to the differences in the stakeholders' interests and levels of impact. Therefore, there is need good skills for the facilitators to build up sustainable and effective links among the stakeholders. Furthermore, there is need for enhancing and exchanging information management to build up the stakeholders' capacities in planning and implementing project so that the local community will be able to take the lead in sustainable land management of lands uses and be involved in the decision making process.

The second base is represented in utilizing the six- phase management cycle to organize and guide the Stakeholders dialogues for concerted actions, and therefore to take thoughtful decision that would lead to concrete outcomes. The phases of the cycle can be divided into three main groups as follows:

- The phases of forming the "vision", "assessment" and "strategies" to provide an appropriate environment for achieving the shared long-term vision and a strategy for improving the livelihood which calls for high facilitating skills.
- The phases of "planning" and "implementation" to set the priorities of the strategic interventions, and then developing and carrying out the implementation plans.
- The phase of "Reflecting" which is considered a sustainable phase.

## Strategic planning cycle for sustainable land management (SLM)

The scenarios should be prepared in a participatory process following sequenced steps that are systematically carried out with the partners. This process aims to identify the problems, form a vision, develop the strategies and identify and implement the activities / projects or initiatives. The following is a definition of some terms used in the methodology of scenario building:

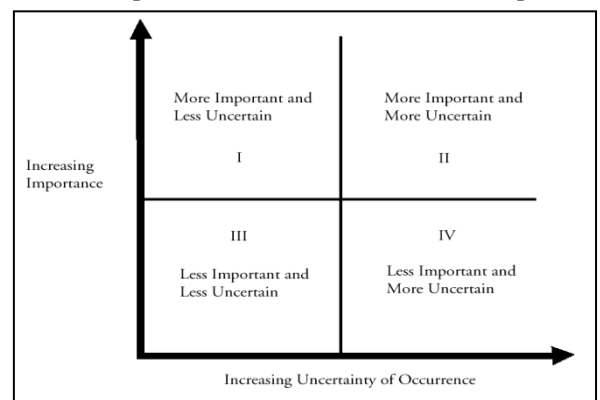


- **Vision:** The state of the natural resources that are to be accessed in the future. There should be agreed on the vision by all partners and stakeholders, before the development of the strategies.
- **Scenarios:** Description of possible future conditions based on the analysis of the current situation and trends. The scenarios are the basis for the development of strategies and plans that lead to achieve the vision.
- **Strategies:** A set of activities that will lead to the implementation of the vision based on different scenarios. These strategies must be fixed, updated according to the recent information and developed in the light of the government's strategies and public policies.
- **Plans:** A continuum of decisions on the use of resources, which are possible to achieve the vision. The plan includes a clear statement of the ways that will be used, the costs and responsibilities, a list of activities that will be implemented and the target groups.
- **Local (internal) factors:** These factors can be controlled and will affect the achievement of the vision.
- **Non-local (external) factors:** These factors cannot be controlled and will affect the achievement of the vision.

## Scenario building methodology

The scenarios building process for Hashmiyha area was prepared through several workshops held in the area with the participation of the following partners from the government and private agencies: Zarqa Agriculture Directorate, the Agricultural Centre, the Municipality, the Province, and the Ministry of Agriculture, the Directorate of Rangelands, Social Development Office, the local community, the Royal Scientific Society, Badia Research and Studies Program (BRP), Arab Women Organization, IUNC- ROWA. The workshops followed a three – step methodology: Scenarios' Development, Scenarios Finalizing, Definitions of Strategic Intervention and Guiding Activities for the Initiatives.

The scenarios can be developed through implementing the following three steps: Developing a smart vision, identifying the factors affecting the achievement of the vision, and classifying factors according to their importance and uncertainty of occurrence. This classification is conducted using the following four-section matrix: More important and more uncertain, more important and less uncertain, less important and more uncertain, less important and less uncertain. Four scenarios, at utmost, are developed based on this matrix. The strategies and activities for each scenario are identified, taking into account other factors.



**Figure4: Factors categories**



### Scenarios building process

The vision, scenarios, strategies and implementation plans were developed during a workshop held in October 2011 and January and February 2012. The two phases included collection and analysis of information with the participation of partners from government agencies and Local Dry Lands Resources Management Committee.

### Problem Tree

The problem tree was prepared during a two- day workshop with the aim of identifying the real reasons of deterioration of the environmental degradation in Hashmiyha dry lands, as well as developing a shared vision and identifying the related data to be collected in the subsequent phase, prior to initiating the process of scenarios building.

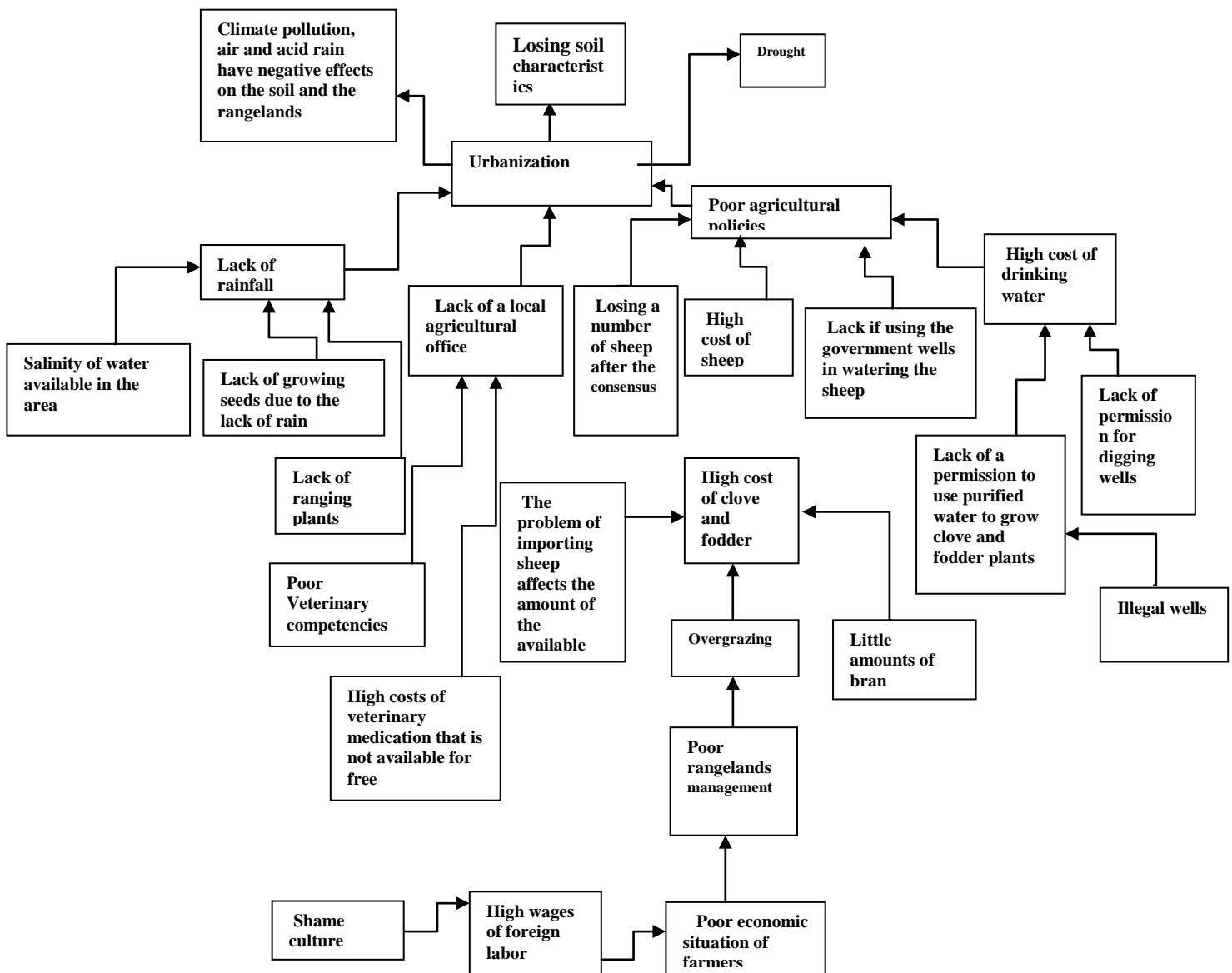


Figure 5: PRA Problem Tree

The Pastoral Resources in Hashmiyha has significant deterioration due to environmental pollution, poor pastoral exploitation and farming the pastoral lands. This has led to the losing sustainable production due to the decline of vegetation and the disappearance of valuable pastoral plants. Moreover this deterioration resulted in the disorder of pastoral environments, the deterioration of the pastoral livestock production and the impoverished pastoral communities. The pollution resulted from factories led to the deterioration of pastures in Hashmiyha, which in turn led to the lands desertification and degradation. In addition, the climate change and drought in areas had an important role in the deterioration of pastures. Until now, pastures are exposed to the pollution of factories and industrial facilities wastage, whether this wastage is liquid or sewage, as well as sewage water that affects the lands and their contents, and causes disease for the cattle. The dangers of pollution have increased recently and have become apparent in the area which calls for urgent action to prevent these dangers.

The rapid increase of population and number of factories encouraged the expansion at the expense of pasture lands that have scarce natural. This also accelerated desertification, and led to lack of production in the land that turned into semi-deserts. Overgrazing and degradation of the trees, that are used as firewood and for other purposes led to the end of rangelands and the deterioration of the vegetation covers. These effects are clear in Hashmiyha and accelerated degradation and low productivity and severe drought had bad impact on the social and economic life of the sheep breeder, especially those who do not have stable income as they mainly depend on the rain.

It is noted that the pastures deterioration concern livestock breeders due to the high cost of fodder and lack of insufficient allocations for subsidized fodder. The scarcity of rain in the rain-fed lands has also led to the low availability of fodder among various crops and herbs. This, in turn, led to the low amounts of the available fodder. Due to the poor material possibilities for livestock breeders to buy fodder and the inadequate allocation of subsidized fodder, livestock breeders are reluctance from grazing. Moreover, there is no association or health insurance for livestock breeders.

## Stakeholder Analysis

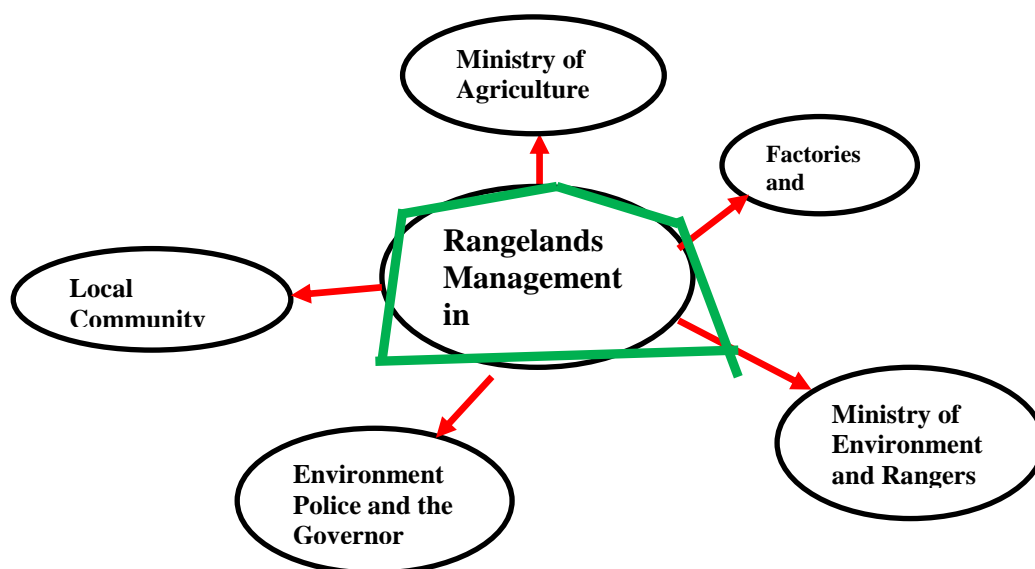
The stakeholders were analyzed during the workshop with the aim of identifying the related stakeholders involved in lands use problems and degradation in the area. These authorities are divided into two key types: key stakeholders that have direct contact with the problem are affected by and have impact on the problems. Secondary stakeholders that are less affected by and have less impact on the problem. The table below shows various stakeholders, approved by Hashmiyha Committee, and their role in Local Dry land Resource Management in Hashmiyha site.

**Table 1: Stakeholder Analysis: the active parties and their relation to pastoral lands management**

الرقم	Stakeholders	Primary or Secondary	Effect
1	Local Community (Livestock owners)	Primary	Consumer and overgrazing
2	Supervision, monitoring and developing policies and legislations	Primary	Ministry of Agriculture
3	Monitoring the factories' behaviors in the surrounding environments and issuing policies in this regard	Primary	Ministry of Environment, RANGERS
4	Enforcing legislations on land use violations against rangelands	Primary	Administrative governor, Environment Police
5	<ul style="list-style-type: none"> <li>- Poisonous gases and dust.</li> <li>- Pollution due to getting rid of solid wastage following incorrect methods</li> </ul>	Primary	A group of factories and plants ( Oil Refinery, Thermal Energy Plant, AlSamra Plant, Quarries, Poultry farms)
6	Awareness	Primary	Universities
7	Legislations	Primary	Parliament Representatives
8	Solving conflicts	Primary	Tribe leaders

The management of ground pastoral in Hashmiyha is affected by many parties such as the factories' management that is focused on money benefits, the governmental institutions that are managed by the laws and regulations in general, owners of livestock and the local community who have specific personal interest and affected by the decisions and activities of other parties.

The impact of both key factors affecting rangeland management in the area was analyzed in participation of the community members and the concerned government departments. The analysis showed that there are five factors influencing rangelands in the village. Their roles are varied as the Ministry of Agriculture had a clear impact on the management of rangelands in Jordan through determining the land uses and determining penalties for the land use violations.



*Figure 6: The relation between Stakeholder and its impact on the rangeland management*

Despite the essential role played by the Ministry of Agriculture, this role has the following characteristics:

- Lack of an agricultural policy that determine the land uses according to their productivity.
- Lack of guidance provided for the livestock owners in the field of animal production in terms of improving the strain to get the same production with a lower number of sheep to lessen the pressure on rangelands.
- Lack of an authority to protect and organize rangelands uses and provide the necessary resources.
- Weakness activation of the agriculture laws, regarding rangelands in particular and the proper application of land exploitation, the issuance and implementation of penalties for the land use violations , scarcity of professional technicians in the rangelands development and combating desertification.
- Lack of guidance on rangelands to contact the livestock owners and aware them on the importance of natural pastures and their participation in the development of these lands.
- Lack of interest in fodder cultivation in the rain-fed and irrigated lands to lessen pressure on natural rangelands.

### Shared Vision:

After the steps for identifying the problem tree and the various parties, an initial vision has been developed and then this vision was selected to be smart after collecting information. The vision was as follows:

***"By 2015, appropriate rangelands will be founded for livestock owners and cooperation will be promoted to achieve human development in our area."***

## Factors affecting the attainment of the vision

The following factors that directly affect the attainment of the vision were identified with participation of all stakeholders, including members of the community:

- 1 - **Poor cooperative work:** If there is no cooperation, agreement, matched ideas or teamwork, the vision will not be achieved.
- 2 - **Agricultural policies:** Poor application of agricultural policies reflected negatively on the development of pastures in the area, where there are industrialization, urbanization and wastage of factories.
- 3 - **Lack of water sources (rain):** Drought and lack of rain, as well as the climate change, led to soil salinity, erosion and loss of the vegetation cover.
- 4 - **Lack of funding:** This is due to the lack of awareness, training, lack of studies for projects, and so there were no productive development projects in the area.
- 5 - **Urbanization:** This had an impact on agricultural land because of the high population density.
- 6 - **Environmental and industrial pollution:** This led to the death of trees and natural plants and caused many diseases. It also led to the death of livestock or selling those livestock to pay for their treatment due to the lack of specialized veterinary clinics in the area. This also affected the farmers who became reluctant to cultivation as a result of pollution resulted from the dust of quarries and the smoke coming out of the factories and the refinery, which negatively impacted the groundwater and surface water.
- 7 - **High prices of fodder:** This led to the decrease in the number of sheep as they were sold to buy fodder for other sheep and the large herds owners who monopolized the prices of fodder. Moreover, the owners of supply who do not own sheep sell the rations to the free market to earn profits at the expense of small farmers.
- 8 - **Lack of awareness:** Urbanization, industrialization, lack of teamwork led to the improper exploitation of lands and recurrent plowing as well as over-exploitation of natural resources.
- 9 - **Poor Marketing:** This is due to the weakness at some laws that determine land uses, as well as land tenure and property fragmentation.
- 10 - **Poor economic situation:** Many of the local people and livestock owners moved to work in factories and companies due to the poor material conditions that everybody suffers from. Moreover, the livestock breeders are reluctant of livestock breeding due to the high cost of fodder that they cannot afford. There is no safety, health insurance, or association for the livestock owners to ensure their rights and improve their economic conditions.
- 11 - **Overgrazing:** The elimination of natural plants and lack of knowledge on these natural plants at the local people led to desertification in the area as a whole and the end of medical and original plants that were prevalent in the area.



## Factors Categorization

The partners and stakeholder found that the most important and less uncertain factors are as follows:

- Land uses.
- Teamwork.

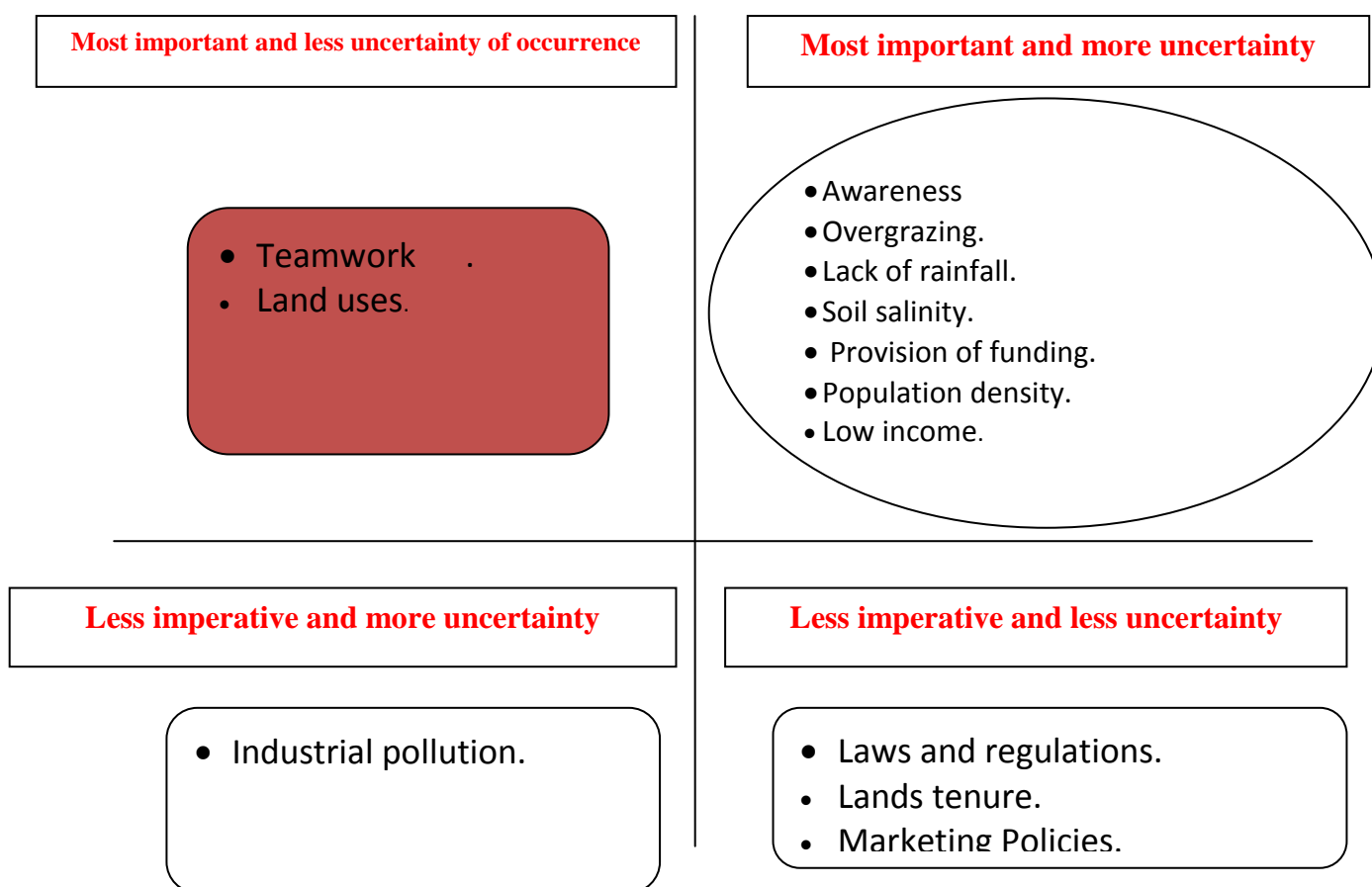


Figure 7: Factors categorization upon the matrix of important and uncertainty

The other factors which would play a vital role in affecting the situation in the area in the next phase can be summed up as follows and called a background story:

The Local Dry land Resource management committee will be formed in Hashmiyha to work towards combating desertification in their lands, revive natural plants and improve the economic and social situation of the area. The committee conducted several meetings to get access to the largest number of members of the local community and associations through conducting training and awareness workshops. This committee will be able to coordinate with all official and private departments to obtain funds, get access to the decision-makers in cooperation with the community leaders and to solve problems, such as scarcity of water, pollution. These problems will be presented to the decision-makers to reach realistic solutions

through the amendment of some laws concerning land tenure in the area as well as benefiting from all related laws and regulations, such as benefiting from Khirbet Alsamra wastewater treatment plant and using it land cultivation, fodder cultivation, rangelands development to feed sheep and reduce the fodder cost for sheep breeders, and establishing minor income-generating activities, especially through activation the role of women to improve the economic level. This will be positively reflected on the environmental situation such as soil salinity and reducing and monitoring the overgrazing practices in the appropriate times in the area. This will promote the commercial market activity and achieve this vision, especially after the Local Dry land Resource Management established a rangeland area as a model of *Hima* by 2015 in the forestry land of the Ministry of Agriculture. This will be a success story that many members of the local community would apply in their lands, and so; there will be more than one success story in 2015. This would enhance teamwork which will positively reflect on livestock breeders and would improve the economic situation for the local community through the provision of training courses and ideas for agricultural income-generating projects, such as aromatic plants as well as beekeeping. The good relations help provide agricultural information for the local community and thereby raise farmers' awareness of agricultural issues.

On the other hand, it is expected to increase the community's capacity to communicate with donors and thus increase the chances of implementation of productive income-generating projects to serve the area and improve economic conditions of the local community members. Regarding the revival of natural vegetation in our area, it is expected that the organized awareness programs with various stakeholders and technicians modify their behavior in razing, encourage the cultivation of plants, and enhance their marketing, and so; this would positively reflected on the environmental conditions in the area.

Other factors can be worked on in line with other factors of higher importance and less possibility to achieve the required vision.

This background should be connected to the scenarios to select the one that matches the area's conditions. Therefore, the strategies will discuss the mentioned factors.

## Scenarios Finalizing

### Scenarios possibilities:

**The first scenario: Promoting teamwork among the community members with effective strategies for land uses.** This scenario is difficult to obtain on the short term.

This scenario is considered the best to realize the vision, where enhanced cooperation of the community members would improve the grazing methods, increase the lands productivity, revive natural vegetation, and reduce the pollution problems resulted from factories and quarries in the area. There is interest in the needs and rights of various community groups in benefiting from the dry and natural sources as a result of a clear strategy on land uses in

Hashemite. This would lead to improving the economic situation for the livestock owners and sustaining the organized pastoral activities in the area.

**The second scenario: Promoting teamwork among the community members with lack of effective strategies for land uses:** This scenario is considered in the second priority and it's the second in terms of preference to access the vision.

Cooperative teamwork plays an important role in improving land uses and in the revival of natural vegetation in the area. However, lack of effective strategies for land uses in the area is an obstacle to realize the vision and to revive the vegetation cover and increased livestock. The large number of factory wastage, plowing and urbanization led to the reluctance to animal breeding and ownership.

**The Third scenario: Weak teamwork among the community members with effective strategies for land uses.** This scenario is at the same level of the second scenario in terms of the ability to achieve the vision.

Weak cooperation and teamwork lead to the poor efficiency of the provided service in water, agriculture, environment and sustainable land uses which, in turn, reduce the development and improvement in these areas. Effective strategies develop land uses for the local people in the area, in addition to the possibility of applying modern technology and the implementation of associated projects through enhanced productivity and protection of the lands and following systematic herding by all groups of the society.

**The Fourth scenario: Weak teamwork among the community members with the lack of effective strategies for land use.** This scenario is the worst in realizing the vision.

Weak teamwork of the local people of Hashmiyha is reflected on cooperation and coordination with the concerned authorities for possible improvement of the current situation regarding the sustainable uses of lands, and dealing with the factories and quarries owners, and the farmers on the stream's banks to reduce the problem of pollution, in addition to reducing of the possibility of implementing projects related to vision and to improve the economic conditions for the local community and particularly for the owners of livestock.

The discussion with the Project's Committee representing Hashmiyha highlighting that fourth scenario, "**Weak teamwork among the community members with the lack of effective strategies for land uses**" is the closest to the current situation in the area. Therefore, the strategic Interventions and activities will be developed to move from this scenario to the best scenario (No. 1), which aims to achieve "Promoting teamwork among the community members with effective strategies for land uses".

## Strategic interventions, activities and initiatives

- ✓ **First Strategic Intervention: Institutional capacity building of the associations specialized in the management of rangeland and livestock.**

### Activities / initiatives:

- Activating the role of the project management committee that consists of the local community and stakeholders.
- Identifying and discussing the training requirements of the Project's Management Committee.
- Identifying and discussing the training requirements of the administrative bodies of the concerned associations.
- Preparing and implementing the training plan of the Committee.
- Providing management, financial and technical training to the administrative body of the association (writing projects' proposals, project management, communication skills, marketing skills, monitoring and evaluation, lobbying programs, conflict resolution, highlighting success stories).
- Capacity building in the field of constructive dialogue with the decision-makers to enforce laws in order to ensure the local community rights.
- Looking for funding organizations to ensure the projects sustainability.
- Improving the infrastructure of the target associations (providing a training hall in the association and providing modern training techniques).

- ✓ **Second Strategic Intervention: Raising awareness among the community members, especially women.**

### Activities / initiatives:

- Identifying the area's needs through conducting home visits.
- Identifying and determining the target groups of the programs (fodder farmers, women and livestock owners).
- Developing awareness and guidance programs on sustainable management of rangeland environment in Hashemiah.
- Developing awareness brochures and implementing awareness campaigns through focus groups and home visits.
- Coordinating and implementing the programs related to awareness.
- Cooperating with the stakeholders that contribute to the implementation of awareness programs, especially the Ministry of Agriculture.

- ✓ **Third Strategic Intervention: Coordination with the relevant authorities and donors.**

**Activities / initiatives:**

- Activating the committee's role and defining its functions, duties and roles.
- Conducting frequent meetings of the Committee members.
- The need for contact between the project management committee with the relevant authorities.
- Informing the relevant authorities of the problems and operational plans of the projects proposed by the Commission.
- Preparing project proposals and informing the donor of the problems in the area and providing the necessary funds.

- ✓ **Fourth Strategic Intervention: Raising and improving the economic level of the local community.**

**Activities / initiatives:**

- Conducting studies to assess the community's economic situation to reach the poorest areas.
- Communicating with the donors to obtain grants and funding for income-generating projects.
- Conducting training courses for the community members on traditional industries and crafts and the revival of natural plants in home gardens.
- Implementing productive small and medium projects that serve the community members.

- ✓ **Fifth Strategic Intervention: Raising the efficiency of the use of wastewater.**

**Activities / initiatives:**

- Conducting water audit programs in the houses, mosques, schools and other various institutions.
- Developing training plans for the local community on methods to rationalize water consumption.
- Using modern technologies in irrigating fodder crops using wastewater.
- Implementing projects related to the re-using gray water, water harvesting and drip irrigation.
- Conducting projects in the home gardens and using the gray water for irrigation.
- Recycling industrial wastes and taking advantage of treated water.



- Promoting the use of agricultural varieties that commensurate with the amount of available water.

✓ **Sixth Strategic Intervention: Raising the efficiency of land uses.**

**Activities / initiatives:**

- Raising citizens' awareness on desertification issues.
- Implementing projects to raise the efficiency of land uses at the local level by reviving the ideas of *Hima*.
- Encouraging the cultivation of indigenous plants environmentally beneficial trees in the area.
- Encouraging the tribes in the tribal lands to protect their land and modify their grazing methods.
- Depending on the community's capacity to develop a land management model to ensure continuous production and revive natural vegetation such as renting some owned land.
- Exchanging visits and transferring expertise from community to another.
- Planting trees and creating a model on rangelands and nature protection.
- Recycling agricultural wastage and produce compost.
- Implementing projects through the revolving loans to make fossils, buy sheep, etc.....
- Recycling paper and plastic to reduce their impact on animals.

✓ **Seventh Strategic Intervention: Improving the environmental situation.**

**Activities / initiatives:**

- Promoting the use of processed compost instead of processed fertilizers in agriculture.
- Raising the management efficiency of plastic, organic and agricultural solid wastage.
- Coordinating with the Directorate of Environment and the province's municipalities to implement environmental awareness programs for the local community and reduce pollution in the area.
- Activating the incentives system in the environment preservation.
- Establishing environmental parks in the area.
- Adopting a broad program for the area's forestation to benefit unconventional water to reduce pollution.
- Encouraging voluntary work in the area.