



Kingdom of the Netherlands



Enabling Communities for Climate Change Adaptation Planning: Understanding Gender Roles



West Asia-North Africa Institute, June 2019



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1. Introduction

Jordan has been witnessing temperature and precipitation patterns that are different from those of the historical climate data. In Amman, the past fifty years showed increasing annual average temperatures and decreasing precipitation rates. The severity of climatic fluctuations in Jordan is expected to further grow over the upcoming decades which may undermine economic and social systems. Such alterations would have profound and extensive implications for the country's natural and human systems not only affecting water supplies and crops production but extending to all aspects of life.¹

Responding to international obligations and demonstrating a political will the government of Jordan ratified the UNFCCC in 1993. Developments induced by climate change, as stressed by several Jordanian studies, are likely to include decreasing naturally available water resources, declining rainfed agricultural productivity and deteriorating livelihoods of the many communities dependent on agriculture and natural resource availability.² Recognising these threats, the Jordanian cabinet issued a decision to form the National Committee on Climate Change in 2001 to oversee the implementation of UNFCCC, and in 2013 the Ministry of Environment issued the “National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020” following an extensive participatory process.³

Jordan also signed the Paris Agreement and in 2015 presented the “Intended Nationally Determined Contribution” report that represented a

¹ Economic and Social Council. “Climate Change in Jordan: A Comprehensive Summary for Decision Makers”, 2018.

² Economic and Social Council. “Climate Change in Jordan: Opportunities and Challenges – A Policy Paper”, 2018.

³ Ministry of Environment, supported by GEF and UNDP. “National Climate Change Policy of the Hashemite Kingdom of Jordan 2013-2020”.

roadmap to face climate change in the country and included a series of measures to reduce its greenhouse gas emissions by a bulk of 14% until 2030; along with several national interventions as reflected in the document “Jordan 2025: A National Vision and Strategy”.

Addressing global warming and climatic fluctuations, international and national efforts are focused on cooperative work through developing various strategies and mechanisms contributing to responding to this challenge on the basis of participation and commitment by all parties and on all levels.

With women being the most vulnerable to natural threats, their engagement in climate change adaptation initiatives is essential. It is also expected that women’s involvement in soil and water conservation, damming flood water and other non-agricultural activities would considerably enhance the efforts necessary to address climatic hazards.⁴

Against this backdrop, while developing a climate change adaptation plan in energy, waste, water and agriculture sectors, it had become increasingly important to understand how it impacts men and women differently. Thus, the adaptation mechanisms would be more effective when roles and responsibilities acknowledge the different needs and capacities of men and women in accessing and controlling resources, whether on household or community level. Therefore, the following climate change adaptation plans and mechanisms will be displaying an understanding of the gender-based roles and relationships which entailed wide participatory actions.

⁴ IUCN & UNDP. *Training Manual on Gender and Climate Change*, 2009.

2. Role of WANA in Climate Change Response

Through generous support from the Embassy of the Netherlands in Jordan, the West Asia and North Africa (WANA) Institute implemented the “Enabling Communities for Climate Change Adaptation Planning: Understanding Gender Roles” project during the period of September 2017 to June 2019. Three governorates (Irbid, Zarqa and Balqa) were selected for implementation; they were identified by earlier studies, conducted by WANA’s sustainable development pillar, as being among the most affected by climate change.

3. Project Objectives

- Empower local communities in the governorates of Irbid, Zarqa and Balqa to develop and upscale climate change adaptation plans mainstreaming the gender perspective.
- Provide local communities with a platform to exchange experiences as to develop adaptation plans through an integrated approach and share them with the relevant municipal council.

4. Methodology

Addressing the impact of climate change in these three governorates, WANA’s sustainable development team implemented the following activities to achieve the project objectives:

1. Stakeholders analysis and target group identification: a creative environmental contest was organised to select the target group of young men and women with interest in environmental issues from the governorates of Irbid, Zarqa and Balqa. Ninety applications were reviewed leading to the selection of 30 male and female youth

between the ages of 18 and 25 to become partners in the project under the title ‘Ambassadors for Climate Change’.

Local environmental communities were visited with 25 of them selected as partners in the project. (September 2017 - May 2018)

2. Capacity building through intensive training in climate change and gender roles. (July-August 2018)

The content of the training included:

- Scientific definition of climate change.
 - Climate change mitigation and adaptation methods.
 - Social impact of climate change on gender.
 - Project proposal development and writing.
 - Role of social media in lobbying and advocacy.
3. Field trip to Azraq Wetland Reserve to observe the extent of the impact caused by climate change. (July 2018)
 4. Grassroots’ participatory planning and group work in developing local adaptation plans that mainstream gender perspectives. (February and May 2019 through two phases).

Phase One: Consultation Workshops for the Governorates of Irbid, Zarqa and Balqa:

The **objectives of the consultation workshop** for each governorate included:

- Enhancing an understanding of gender-based roles and their relationship to climate change.

- Identifying the level of vulnerability, resilience and self-support of men and women when facing negative climatic impacts.
- Surveying participants' knowledge and expertise relevant to climate change.
- Utilising governorate-specific climate change information.
- Prioritising environmental activities for each governorate.
- Identifying the situation in each governorate using SWOT analysis and taking into consideration challenges and opportunities for women.
- Identifying stakeholders and analysing their roles especially those concerned with gender issues.

Consultation Workshops

The consultation workshops were attended by the identified target groups in each governorate (separately) including local societies with interest in environmental issues and the 'Ambassadors for Climate Change'. Participants were divided into three working groups: the specialised technical group, the projects and work plans group and the gender group that addressed mainstreaming gender considerations into the programmes of adaptation to climate change implications. The following topics were addressed:

- Global warming implications for Jordan.
- Most detrimental problems of climate change and approaches to address them based on understanding gender-related roles and relationships in each governorate.
- Gender-sensitive climate change adaptation methods by sector including energy, transportation, water, waste and agriculture.
- Partners and stakeholders' analysis and the roles to be assumed by each.

- Identification of relationships between climate change and gender mainstreaming and how gender-based different responses to climate change reflect the different impact on men and women in each governorate.
- Methods of enhancing women's participation in decision making and its effect on community development.

Several aspects were discussed with gender considerations addressed to build the participants' capacity on mainstreaming gender perspectives in the adaptation plans and to ensure sustainability. These included:

- Understanding climate change by men and women.
- Ensuring the availability of information on combating the negative impacts of climate change on both men and women.
- Ensuring women's access to resources including information, skills and experience.
- Women's participation in negotiations to establish a system for climate change response.
- Accommodating the views of women vulnerable to climate change.
- Women's participation in decision making.

The following mechanisms were proposed for mainstreaming gender perspectives in climate change response in general:

- Establishing women social networks to achieve solidarity.
- Developing women's technical and technological capacities in environmental issues.
- Funding economic empowerment projects implemented by women.

Phase Two: Adaptation Planning Workshop for the Governorates of Irbid, Zarqa and Balqa

The objectives of the adaptation planning workshop were as follows:

- Presenting the outputs of the governorates' consultation workshops.
- Presenting a number of special experiences in response to the negative impact of climate change that are sensitive to gender considerations (lessons learned).
- Working in governorate-specific groups on reviewing and endorsing the situation identified through SWOT analysis.
- Working in governorate-specific groups on stakeholders' analysis for each governorate.
- Developing an adaptation plan for each governorate and introducing it to participants.

Adaptation Planning Workshop

A two-day workshop took place with the participation of the identified target groups climate change ambassadors and community-based organisations, from the three governorates to develop the adaption plans in a participatory manner.

The workshop started with a briefing on the outcomes of the consultation workshops and the importance of mainstreaming gender perspectives in climate change. Participants then broke into governorate-specific groups to reach a consensus on the most significant problems in each governorate and prioritised targets for each relevant sector (energy, agriculture, waste and water). The problems were analysed and several ideas and activities within the adaptation plans were discussed to respond to these problems on the governorate level.

Activities of the adaptation plans were divided into two levels: the grassroots level and the official and national level; these included awareness raising, capacity building, networking and communication, research and studies and advocacy campaigns.

SWOT Analysis Results:

	Strengths	Weaknesses
Irbid	<ul style="list-style-type: none"> ▪ University graduate qualified youth specialised in environmental issues. ▪ Public and private universities in the governorate. ▪ Wide areas of green landscapes and agricultural lands. ▪ Highly fertile lands compared to other governorates. ▪ Seasons of good precipitation rates. ▪ Appropriate tree species. ▪ Active civil society institutions. ▪ Sufficient level of environmental awareness at the local council. 	<ul style="list-style-type: none"> ▪ Population growth (especially due to the Syrian crisis) and pressure on services leading to water stress, pressure on sanitation networks and waste accumulation that causes environmental pollution. ▪ Random licensing of building and shops at the expense of arable lands. ▪ Poor condition of water and sanitation networks. ▪ Poor entrepreneurship and voluntary work culture. ▪ Inefficient enforcement of penalties on entities or individuals causing damages to the environment. ▪ Poor commitment of the private sector to corporate social responsibility. ▪ Lack of environmental awareness in the community. ▪ Women's weak capacities and potentials to monitor

		climate change and its implications.
Zarqa	<ul style="list-style-type: none"> ▪ An association of environmental societies and civil society organisations active in environmental issues. ▪ Municipal council's political will to give environmental issues a priority. ▪ Climate change draft regulation of 2018. ▪ Enhanced role of decentralisation in environmental protection. ▪ Some partnerships with the private sector. ▪ Farm owners are aware of the importance of advocacy. ▪ Male and female specialised agricultural engineers and technicians. 	<ul style="list-style-type: none"> ▪ Local community's poor awareness of the importance of environmental conservation culture. ▪ Municipality staff's weak capacities in environmental issues. ▪ Insufficient financial allocations for environmental issues. ▪ Lack of legislative enforcement at times. ▪ Conflict of interest between those affected by and those responsible for causing environmental damages. ▪ Lack of the private sector's maturity towards social responsibility.
Balqa	<ul style="list-style-type: none"> ▪ Active environmental societies. ▪ Geographical and botanical diversity. ▪ Spread out of long-living trees. ▪ Universities that offer educational programmes in environment. 	<ul style="list-style-type: none"> ▪ Modest role of municipalities' development units in networking and cooperating with environmental societies. ▪ Difficult systematic access to information on the environmental situation in Jordan. ▪ Urban sprawl.

	<ul style="list-style-type: none"> ▪ Spread out of diverse and abundant vegetation cover. ▪ Environmental awareness among youth. ▪ Some facilitation presented from the agriculture and environment directorates to societies' work. ▪ Women's active participation in community work. ▪ Women's strong involvement within the agriculture sector. 	<ul style="list-style-type: none"> ▪ The cement factory and treatment plant in 'Wadi Shu'aib'. ▪ Poor awareness of the importance of natural and historical heritage. ▪ Women's modest participation in decision making positions on the governorate level. ▪ Poor awareness of the importance of environmental issues among female members of municipal and local councils. ▪ Long-living and fruitful trees heavily logged.
	Opportunities	Threats
Irbid	<ul style="list-style-type: none"> ▪ Available external grants and international funding. ▪ Continuous cooperation with universities in the governorate. ▪ Projects supporting environmental initiatives. ▪ A number of dams in the governorate. ▪ Abundant rainfall season. ▪ Municipal and local councils' support of society's activities. ▪ Active youth committees. 	<ul style="list-style-type: none"> ▪ Inability to ensure the sustainability of projects due to reliance on external funding. ▪ Failure of projects due to poor project management skills. ▪ Insufficient allocation for environmental issues in the country's general budget. ▪ Successive seasonal drought. ▪ Regional turmoil and its implications on Jordan. ▪ Implications of the Syrian crisis on Irbid Governorate.

Zarqa	<ul style="list-style-type: none"> ▪ Financial and technical support from several donors. ▪ Development and continuous revision of legislation. ▪ Strong national alliances. ▪ Cooperation with the Ministry of Environment and Ministry of Water and Irrigation. ▪ National environmental strategies and plans. 	<ul style="list-style-type: none"> ▪ Insufficient allocation for environmental issues in the Kingdom's general budget. ▪ Growing climate alterations and their hazards on humans and the environment. ▪ Climate change still not included within the national priorities.
Balqa	<ul style="list-style-type: none"> ▪ Interest of donor organisations. ▪ Qualified youth specialised in climate change, its impact and means of response. ▪ Governmental interest in gender perspectives and environmental issues manifested in ratification of climate change and environment conventions. ▪ Creation of the National Committee on Climate Change. 	<ul style="list-style-type: none"> ▪ Weak enforcement of environmental conservation legislation. ▪ Ministry of Environment's limited access to financial and technical support of governorates. ▪ Growing urban sprawl. ▪ Poor conditions of public transportation which makes people resort to buying private cars, encouraged by the availability of bank credit. ▪ Poor coordination among different sectors such as agriculture, water, energy, etc.

Stakeholders Analysis:

Stakeholders	Roles and Responsibilities
Governmental Stakeholders	
Ministry of Environment – the environment directorate in the governorate	Activate and develop legislation
Ministry of Health – the health directorate in the governorate	Activate and develop legislation
Ministry of Education – the education directorate in the governorate	Cooperate in awareness raising
Ministry of Interior – the governorate council and local council	Enforce regulations and control violations
Royal Department for Environmental Protection (Environmental Police)	Enforce regulations and control violations
Ministry of Municipal Affairs – the municipal council	Provide technical and logistical support; provide services
Ministry of Agriculture - the agriculture directorate in the governorate	Present technical and logistical support
The Parliament	Review legislation
Non-Governmental Stakeholders	
Environmental societies	Conduct projects and spread awareness
Farm owners' societies	Negotiate with them regarding waste and safe treatment methods
Women societies	Participate in decision making and awareness raising

Jordan Petroleum Refinery Company	Provide necessary support and funding
Thermal power station	Provide necessary support and funding and identify waste treatment methods
Treatment stations	Develop waste treatment mechanisms
Private Sector	
Factories and companies	Provide necessary support and funding
Cattle and chicken farms	Negotiate with them regarding waste and safe treatment methods
Research centres and universities	Cooperate in research and studies
Real estate traders	Minimise environment detrimental practices and abide by relevant legislation
Firewood and coal traders	Minimise environment detrimental practices and abide by legislation
Local Community	
Housewives	Raise awareness and build capacities and skills
Youth	Raise awareness and build capacities and skills
Farmers	Raise awareness and build capacities and skills
Environmental societies	Raise awareness and build capacities and skills

5. Adaptation Plans

Balqa Governorate

Agriculture Sector

The most pressing problems and issues in Balqa Governorate are:

1. Declining crops production especially olive.
2. Rangelands logging to sell wood as fuel.
3. Mountain landslides due to rainwater floods and soil erosion.
4. Poor awareness of women's role in environmental issues and climate change.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Encourage using non-hybrid seeds.
- Encourage farmers to cultivate crops tolerant to high temperatures.
- Raise awareness of the importance of using water-efficient irrigation techniques.
- Ensure the availability of information on combating the negative impact of climate change on men and women.
- Encourage societies to conduct public sanitation campaigns in cooperation with the Ministry of Health.

Capacity Building

- Design an application that includes an agricultural calendar, important environmental information, plant diseases, home gardens, medicinal plants and seeds.
- Train farmers on recycling farming waste into organic fertilisers.
- Construct retaining walls and earth barriers to mitigate mountain landslides and flood flows resulting from climate change.
- Offer seedlings and trees to farmers for subsidised prices.
- Establish a network for climate change initiatives to share knowledge, policies, successful women projects and various climate change issues.
- Provide the necessary means to develop women's knowledge and experience to access different resources like the technology.
- Accommodate vulnerable women's views (especially rural women) on the impact of climate change.

Monitoring, Evaluation and Reporting

- Develop a mechanism to evaluate the negative impact of climate change by a specialised investigation team and in cooperation with environmental engineering university students and other fields.
- Conduct gender analysis studies to identify gender roles, relationships and practices pertaining to the environmental problems caused by climate change.
- Advocate for mainstreaming climate change issues at municipal development plants.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Approach national or international donors to fund women economic empowerment projects especially through launching agricultural projects.
- Invest public revenues from the carbon national tax in environmental production projects for women.

Environment and Waste Sector

The most pressing problems and issues in Balqa are:

1. Air pollution resulting from the cement factory and treatment plant.
2. Farming waste accumulation in the Jordan Valley area.
3. Environmental pollution resulting from landfills.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Conduct awareness sessions on the hazards of environmental pollution for school and university students in the governorate.
- Establish an ‘environment café’ for women to promote environmental culture and understanding of gender role and its ability to mitigate environmental problems.
- Guide inhabitants on how to use recycled water in irrigation.

Capacity Building

- Disseminate knowledge among men and women on how to recycle farming waste into organic fertilisers or fodder.
- Use paper or plastic waste in home-based simple technical projects such as the origami art (art of paper folding into creative forms).

Networking and Communication

- Communicate and network with public or private institutions concerned with waste recycling to implement a joint project of solid waste sorting and recycling.
- Coordinate with the Department of Statistics to conduct socio-environmental surveys.

Research and Studies

- Build a gender-sensitive environmental database for each sector managed by a team, qualified in data collection and analysis.
- Prepare and disseminate health impact assessments of pollution, generated from the cement factory and treatment plant.

Monitoring, Evaluation and Reporting

- Monitor and evaluate dumping in landfills against international conditions and standards.
- Impose a carbon tax on factories to create a sense of social responsibility and seek a decisive solution for harmful emissions.
- Recycle industrial effluents from the cement factory and return to the ovens for reuse.
- Issue periodic reports to highlight the harmful impact of the waste generated from factories and treatment plants and share the findings with relevant institutions and international organisations.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Launch lobbying and advocacy campaigns to address environmental issues generated from the cement factory and treatment plant.
- Approach the Ministry of Agriculture to set forestation programmes around the areas threatened with pollution with support from entities producing the pollutants.
- Urge the local and municipal councils to make available septic tankers for subsidised prices.
- Advocate for mainstreaming climate change hazards in environmental policies.

Energy and Transportation Sector

The most pressing problems and issues in Balqa are:

1. Increasing pyrogenic emissions from fuel combustion to generate electricity in Jordan Valley areas.
2. Limited evidence-based studies specialised in energy, transportation and environment sectors.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Hold discussion sessions involving environment and energy specialists, local community members of different age groups and decision-makers.

Capacity Building

- Develop Arabic educational resources and guidelines on environmental issues and renewable energy to use them in environmental societies' projects.
- Build the capacity of civil society organisations on advocacy and establishing alliances.
- Build the capacity of environmental activists to draft periodic reporting on climate-related international conventions.

Research and Studies

- Conduct studies to identify methods of using the Jordan Valley dams in generating electricity.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Launch lobbying and advocacy campaigns to address environmental issues generated from the cement factory and treatment plant and organise protests.

Water Sector

The most pressing problems and issues in Balqa are:

1. Occurrence of landslides in mountainous areas threatening inhabitants and crops.
2. Weak control of effluents and their impact on groundwater.
3. Effluents from the cement factory and treatment plant.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Sending heavy rain warnings to inhabitants, especially those living at mountain slopes.
- Post videos on social media about pollution in relevant areas.
- Encourage inhabitants to build retaining walls for protection against soil erosion.
- Raise inhabitants' awareness about the hazards of disposing fluid waste (such as paints, pesticides and detergents) in water bodies or drainage systems; it would seep through soil to groundwater aquifers.

Capacity Building

- Provide inhabitants with practical solutions on how to construct safe cesspits.
- Demand recycling effluents from the cement factory to return to the ovens for reuse with support from experts.
- Form teams of inspectors and volunteers to detect pollution sources and identify solutions.

Research and Studies

- Conduct a study on the impact of pollution on men and women and the different means of response and mitigation for each.

Monitoring, Evaluation and Reporting

- Follow up on the responsiveness of the authorities through conducting field visits, holding and documenting continuous meetings and releasing the outcomes of these meetings.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Advocate for involving activists in environmental issues at all stages of preparing periodic reports on environmental protection, in accordance with international conventions.

Irbid Governorate

Agriculture Sector

The most pressing problems and issues in Irbid Governorate are:

1. Threats to biodiversity including agricultural lands degradation, urban sprawl, over-grazing, logging, poaching and fires.
2. Women's modest participation in environmental committees and entities.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Organise community initiatives to conserve rangeland trees and encourage inhabitants and local institutions to forest lands not suitable for crop cultivation.
- Raise women's awareness of their role in climate change mitigation.
- Send text messages to mobile phones of local community men and women with information on the importance of trees to people and nature, methods of conserving the fertility of agricultural land and advice on home gardening.
- Raise awareness on the importance of protected areas in attracting national and international tourism.

Capacity Building

- Train housewives in producing compost from domestic waste and use them as natural fertilisers.
- Enroll female farmers in training programmes on optimal use of cultivated lands and home gardening.
- Train environmental activists in monitoring and evaluation techniques and in preparing climate change response plans.

Networking and Communication

- Network with research centres, universities and nature conservation organisations to cooperate in launching joint programmes and to identify solutions for mitigating hazards threatening cultivated lands, birds, rangelands and several wild animal species.

Research and Studies

- Develop the capacities of environmental societies' staff for conducting socio-environmental research and surveys.

Monitoring, Evaluation and Reporting

- Issue a guide to cover the environmental training needs in Irbid Governorate.
- Form community committees to monitor any violations of cultivated land; logging, causing fires, unorganised grazing and poaching. Also, link these committees to relevant authorities and penalise violators.
- Set up a hotline for citizens to report environmental violations.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Launch advocacy campaigns to call for protecting migratory bird species against threat and extinction.
- Demand for enforcing hunting regulations through forming lobbies that address relevant authorities.
- Conduct a feasibility study in cooperation with public institutions or international organisations to establish a seed bank that conserve indigenous seed species and hybrid species.

Waste Sector

The most pressing problems and issues in Irbid Governorate are:

1. Garbage piling up in residential neighborhoods.
2. Extensive spread of plastic bags in markets and agricultural areas.
3. Lack of ‘clean environment’ culture.

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Send emails to inhabitants about environmental conservation culture and the harm that may result from wrong behaviors like littering.
- Publish on social media experiences and lessons learned from observing solid waste segregation, directed especially to housewives.
- Urge to minimise the use of plastic bags due to their environmental negative impacts.

Capacity Building

- Conduct courses in solid waste recycling and producing paper bags to replace plastic bags.
- Use modern technologies of waste segregation at their origins (houses, shops) and make this an income source for housewives and unemployed persons.

Research and Studies

- Conduct studies on solid waste management including gender perspective and identify roles of men and women in solid waste segregation and recycling.

Monitoring, Evaluation and Reporting

- Hold consultation meetings with the municipal council, with participation of women empowerment units in the municipality and the governorate council, to discuss addressing the issue of waste pile up and decide on sanctions for violations.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Launch community-based campaigns promoting environmental conservation and hindering littering in public places in cooperation with relevant authorities.

Energy and Transportation Sector

The most pressing problem in Irbid Governorate is the increasing use of conventional energy sources for industrial purposes (waste sector, manufacturing sector).

Grassroots Level Activities

The activities that can be implemented on the grassroots level fall under the following categories:

Awareness Raising

- Disseminate knowledge on the benefits of using energy-saving light bulbs.
- Publish awareness messages on the importance of rationalising electricity consumption.

Capacity Building

- Build the capacities of environmental civil society organisations to conduct research and to prepare evidence-based policy briefs.

Research and Studies

- Draft policy briefs to be presented to decision-makers highlighting the importance of alternative (sustainable) energy sources and the negative impact of conventional energy sources (electricity and oil).
- Identify the most significant funding sources for environmental protection.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Hold consultation meetings with the Ministry of Environment and Ministry of Municipal Affairs to discuss ways to encourage citizens to use sustainable energy sources, such as installing photovoltaic solar panels.
- Demand through a position paper that relevant authorities facilitate investment in sustainable energy sources, support local factories to

establish their own sustainable energy systems and minimise electricity use.

- Coordinate with relevant trade associations to ensure that industries abide by regulations requiring use of insulation materials in residential and public buildings as well as to make cost estimations and the means of attracting funding.

Water Sector

The most pressing problems and issues in Irbid Governorate are:

1. Excessive consumption of domestic and agricultural water supplies.
2. Poor treatment of sanitation water.
3. Flash floods after heavy rainfall.
4. Lower groundwater levels.

Grassroots Level Activities

The activities that can be implemented at the grassroots level fall under the following categories:

Awareness Raising

- Raise the awareness of housewives on the importance of rationalising water consumption.
- Promote the use of water-saving devices.

Capacity Building

- Build capacity of school students and visitors to places of worship on water harvesting techniques.
- Encourage inhabitants to exploit rainfall and develop their skills in using rain to replenish groundwater aquifers.

- Form water conservation teams with a minimum of 30% women participation for identifying technical needs, designing work programmes and implementation.
- Promote the idea of exploiting sustainable energy to harvest water from air through operating water condensers, to make up for water scarcity.

Research and Studies

- Conduct environmental impact assessments and detect damages resulting from poor treatment of sanitation water and identify solutions.

Monitoring, Evaluation and Reporting

- Provide teams of interested men and women with qualifications to prepare reports and response plans that address flash floods and any contingent climatic event.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Form lobbies that approach decision-makers to address violations of water resources regulations such as tampering water meters and unlicensed digging of artesian wells.
- Present project proposals for developing sustainable energy operation systems of water pumping stations.
- Review water legislation and enforce sanctions on those committing violations against groundwater such as digging illegal wells.

Zarqa Governorate

Agriculture Sector

The most pressing problems and issues in Zarqa Governorate are:

1. Declining agricultural productivity due to lower and fluctuating precipitation rates.
2. Declining green spaces due to temperature increase and urbanisation sprawl.
3. Undermined national-level food security and reliance on imported food.

Grassroots Level Activities

The activities that can be implemented at the grassroots level fall under the following categories:

Awareness Raising

- Conduct awareness workshops for male and female community members on crops with adaptation capacity as well as methods for their cultivation and maintenance.
- Launch awareness campaigns on the importance of agroforestry and plant forest seedlings with participation of school and university students. Encourage forestation in different areas of the governorate.
- Promote planting, consuming and consuming local produce.

Capacity Building

- Train local community members, especially women on home farming and rainfed farming.

- Pay special attention to the role and needs of rural women. Involve them in developing projects and enable them to take part in decision making regarding identified goals, adaptation mechanisms, implementation, monitoring and evaluation.

Research and Studies

- Conduct studies on the causes and impact of climate change in the agriculture sector and the role of women therein.
- Prepare detailed maps of plant diseases and make them available to farmers.
- Involve university students majoring in environmental studies in sustainable development solutions, through their graduation projects.

Monitoring, Evaluation and Reporting

- Prepare a programme for monitoring, follow up and evaluation of different agricultural environments (urban sprawl, crops types, climate fluctuations, etc...) based on an e-application to ensure smooth communication and information exchange between community members and the relevant agencies.
- Create an e-platform to receive complaints, queries, announcements or any issue of interest to the agricultural sector.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Conduct advocacy campaigns to approach relevant authorities for strict enforcement of regulations addressing violations of agricultural and range lands.
- Form legal committees to revise regulations of agricultural and range lands protection and identify the gaps leading to violations, and submit them to relevant authorities.
- Formulate draft regulations on farms protection to provide coverage against weather fluctuations in cooperation with legal consultants, governmental departments and insurance companies.

Waste Sector

The most pressing problems and issues in Zarqa Governorate are:

1. Garbage piling up and random disposal in public places, roadsides, valleys and waterways and the resultant gas emissions and air pollution.
2. Garbage of factories and animal farms piling up in residential areas as well as the resultant gas emissions and air pollution.

Grassroots Level Activities

The activities that can be implemented at the grassroots level fall under the following categories:

Awareness Raising

- Promote the culture of domestic waste segregation and recycling through awareness workshops and ideas to reuse solid waste (paper, plastic) creatively.
- Build awareness on the need to consider food remains as an energy source rather than mere waste. Design a food remains recycling

programme by which these remains are sent to workshops to turn into organic fertilisers.

- Encourage owners of factories and animal farms to dispose waste in areas qualified for that and coordinate with the municipality to offer incentives or rewards for that purpose.

Capacity Building

- Train women to turn food waste through aerobic fermentation to organic fertilisers.

Research and Studies

- Network with universities, research centres and researchers to conduct environmental impact assessment studies and pollution mitigation methods.
- Involve women in developing solid waste disposal and treatment solutions through creative solutions.
- Adopt wireless pressure disposal of waste, based on renewable energy.

Monitoring, Evaluation and Reporting

- Build the capacity of youth committees to join community police in detecting violations.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Conduct advocacy campaigns addressing pollution originating from factories and farms to urge decision-makers to curb the practices leading to such pollution.
- Draft a regulation, in agreement with local environmental societies, addressing random waste disposal through conducting awareness workshops, monitoring and evaluation and providing specific places for disposal.
- Form legal committees to develop binding instructions for environmental protection and develop penal code violation fines.
- Develop ideas for waste recycling, such as a recycling bank, in cooperation with the municipality and supported by local or international donors.

Energy and Transportation Sector

The most pressing problems and issues in Zarqa Governorate are:

1. Air pollution caused by emissions from vehicles.
2. Pollution caused by conventional energy sources used in the industrial sector.

Grassroots Level Activities

The activities that can be implemented at the grassroots level fall under the following categories:

Awareness Raising

- Conduct workshops to tackle gas emissions from vehicles.
- Launch community campaigns, in cooperation with the traffic department, to promote the importance of periodic maintenance of vehicle engines.

- Promote rationalised electricity consumption and solar energy use.
- Raise the awareness of families on the energy-saving alternatives.

Networking and Communication

- Coordinate with the municipality to provide a special landfill for hybrid and electric car batteries.
- Cooperate with the municipality and local factories to use locally made energy-saving light bulbs.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Urge relevant authorities, through lobbying and advocacy campaigns, to make available energy-saving vehicles.
- Develop public transportation vehicles benefitting from the experiences of other countries.
- Enhance the role of environmental alliances in influencing decision-makers.

Water Sector

The most pressing problems and issues in Zarqa Governorate are:

1. Excessive exploitation of water resources for domestic and agricultural purposes causing depletion.
2. Poor sanitation management networks.
3. Unorganised exploitation of artesian wells.
4. Women's modest participation in climate change management.

Grassroots Level Activities

The activities that can be implemented at the grassroots level fall under the following categories:

Awareness Raising

- Conduct awareness workshops for housewives on water use rationalisation techniques.
- Activate women's role in the water sector by raising their awareness of water harvesting benefits.
- Raise the awareness of farmers on water-saving techniques and technologies such as drip irrigation to ensure their buy-in thereof.
- Inform female members, at municipal and local councils, of the significance of the role of woman in climate change management.
- Enhance women's participation in committees addressing environmental issues and activate their role in decision making.

Capacity Building

- Build the capacity of housewives for treating and recycling wastewater and greywater.
- Identify uses of recycled wastewater in irrigation, based on research and training.
- Train male and female members of municipal councils in adaptation strategies to lessen the negative impact of climate change.

Research and Studies

- Conduct impact assessments on sudden climate incidents and develop relevant contingency plans supported by specialists.

- Design a catastrophe and flood response system in cooperation with local societies, governorate council and Ministry of Environment.

Official and National Level Activities

The activities that can be implemented on the national level and with decision-makers include:

Lobbying and Advocacy Activities

- Advance the idea of building small earth dams around water catchments like *Al-Sabkha* bed.
- Identify alternatives of groundwater such as treated wastewater and greywater.
- Enhance the role of the environmental police to control digging illegal wells and tampering water meters.



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