



Community Climate Resilience Plan

Bardala- Tubas Governorate

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Community Climate Resilience/Adaptation Plan -General Summary

The plan aims to enhance control and resistance to the negative impacts of climate change and environmental degradation, and to improve Bardala Village community's capacity to adapt to and cope with these changes at the local, individual, and community levels. In order to prepare a comprehensive climate resilience plan for Bardala village, a clear and sequential methodology and criteria were followed, represented by the following steps:

Based on the basic climate resilience plans for the targeted communities, which were prepared in the first phase of the Environmental and Climate Justice Program, Bardala village was chosen to prepare the comprehensive climate resilience plan for a safe and resilient village in the face of climate change and environmental degradation, as Bardala is considered one of the most vulnerable and fragile areas.

- * Reviewing available literature and reports for the village, including: databases and reports from the Palestinian Central Bureau of Statistics, databases from the Applied Research Institute (ARIJ), development plans for the Northern Jordan Valley, and the Vulnerability Map created as part of the Environmental and Climate Justice Program, among other relevant documents. This step involved evaluating and analyzing the current situation, as well as defining an initial vision for resources and population, including prevailing trends in the village.

- * Holding meetings with the village council and key stakeholders to understand the current situation of the village, listen to their vision, and discuss their administrative plans in light of increasing environmental challenges and disasters caused by climate change.

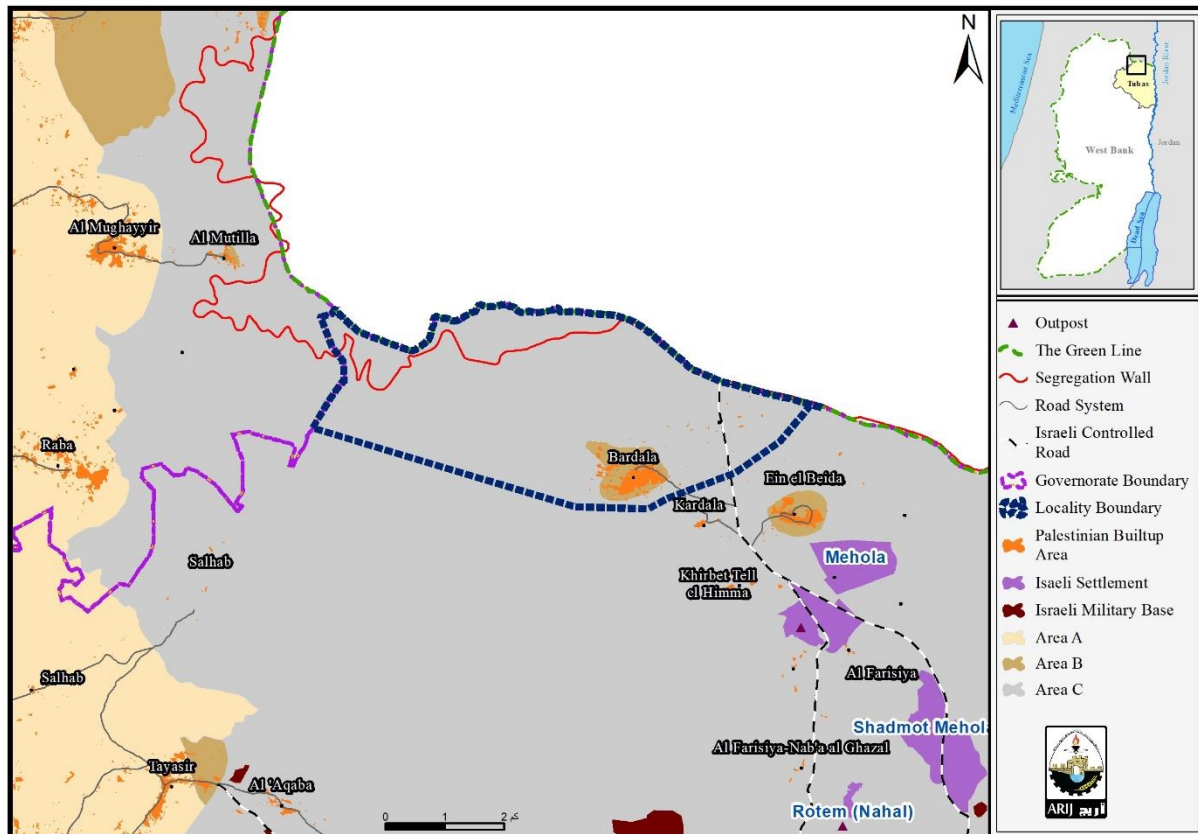
- * Conducting community awareness campaigns aimed at raising environmental awareness about the importance of the environment, the threats and risks posed by climate change, and methods for addressing them.

- * Conducting training sessions to enhance the capacity of citizens in the basic principles of community planning for climate resilience. The training covered the following key areas: community climate resilience, community assessment of resources and capabilities within the community, identifying risks and challenges in the community, and developing a response plan.

- * Organizing focus groups with stakeholders: A set of participatory tools and methods was used to prepare the resilience/adaptation plan. Participants worked on mapping the resources and capabilities within the community, identifying internal and external barriers and risks that the town may have faced, is currently facing, or might face in the future. These risks were classified into: risks related to the agriculture sector/livestock sector, infrastructure risks, and risks affecting women, children, and the elderly. Based on the results, an adaptation and mitigation of potential impacts plan was developed, along with strategies to enhance resilience in facing climate change at the town level.

Topography and Climate

Bardala is a Palestinian village located in Tubas Governorate, 13 kilometers northeast of Tubas city in the northern West Bank. It is bordered to the east and southeast by the villages of Ein al-Beida and Kardala, to the north by the 1967 borders and Beisan Plain, and to the west and southwest by the Jordan Valley Mountains (Map 1). The village covers an area of 18,329 dunums, making up roughly 4% of the total area of the Tubas Governorate.



Map 1: Location and Boundary of Bardala Village

Climate of Bardala village

The village is located on the eastern slope of the West Jordan Valley Mountains, adjacent to a fertile plain, and lies 71 meters below sea level. Bardala has a warm climate, with hot, dry summers and winters that receive minimal rainfall. The following charts display climatic data for the Jordan Valley, including Bardala, from 1997 to 2019.

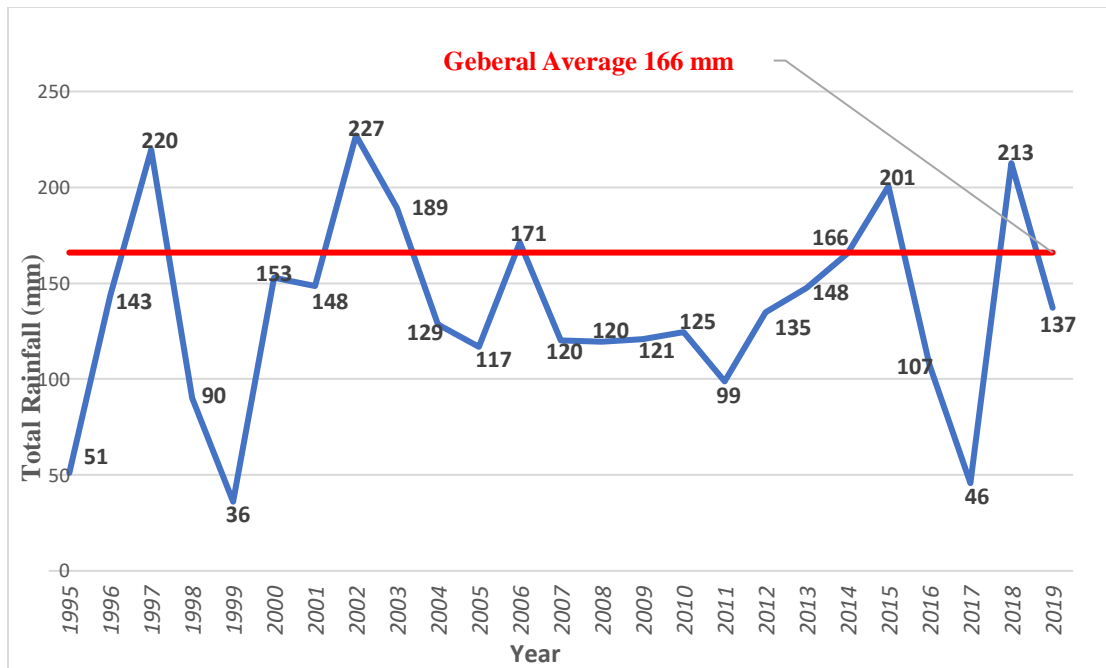


Figure 1 :Total Rainfall and Annual Averages (mm)

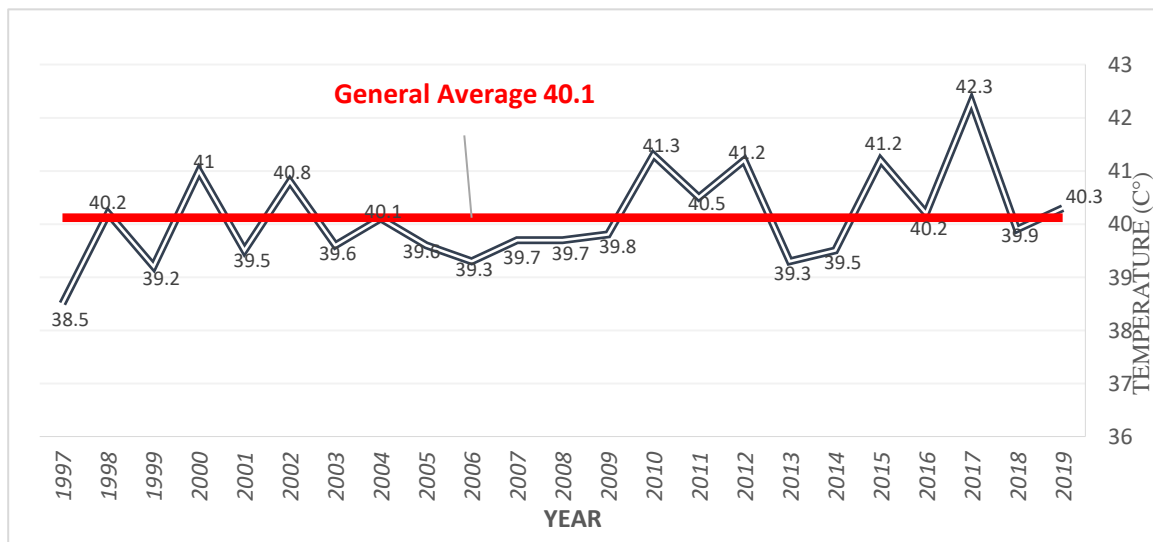


Figure 2 : Annual Maximum Temperatures and General Average in the Jordan Valley(2019-1997)

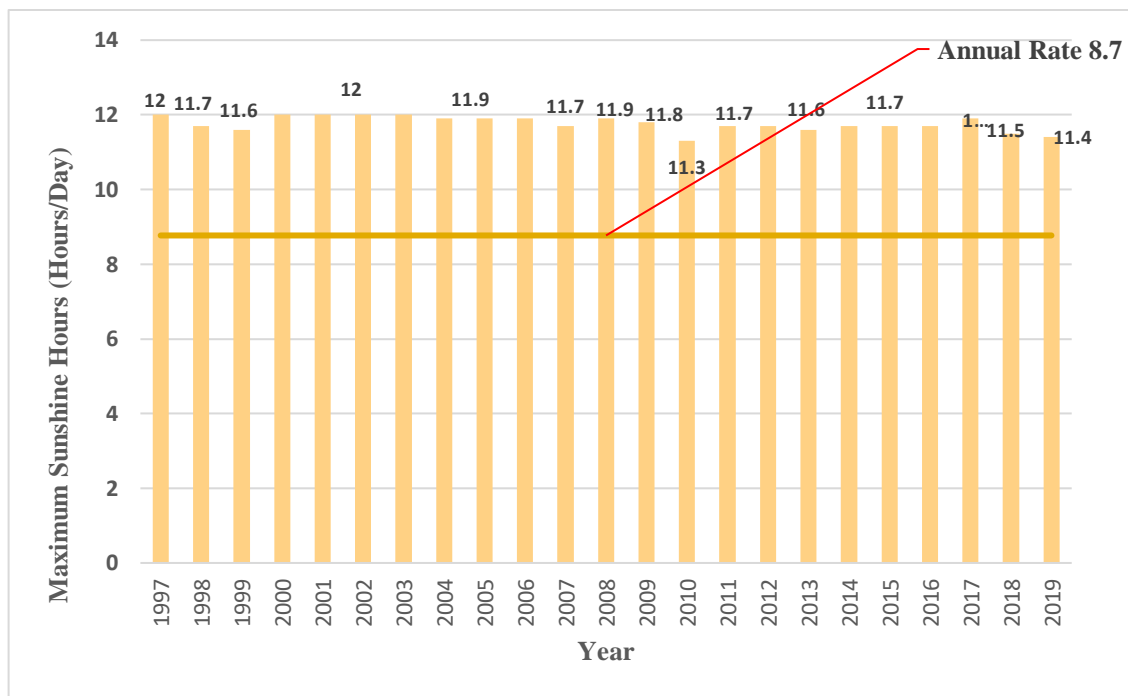


Figure 3: Maximum Sunshine Hours (Hours/Day) in the Jordan Valley(2019-1997)

Geopolitical Situation

Like other Palestinian communities, Bardala faces/is subjected to Israeli practices, land confiscations, and closures under the claim that its lands are designated as "closed military zones" or "state lands." This is part of Israel's strategy to annex as much Palestinian land as possible and redefine its borders and geography to serve its expansionist and Israelization plans, effectively annexing large areas of Palestinian land with minimal effort.

Bardala spans approximately 18,329 dunums, of which 90% (about 16,845 dunums) is classified as "Area C" under the Oslo Agreement, placing it under full Israeli control. Only 10% of the land

in Bardala is classified as “Area B.” The situation extends beyond mere classification and control, as Israel has seized 5,914 dunums in Bardala (32.3% of the village’s total area), designating it as state land. Additionally, Israel has confiscated land for other purposes, including nearly 252 dunums for the construction of bypass road No. 90 and 232 dunums for the construction of the separation wall, which isolates 2,151 dunums behind it.

Community Resources in Bardala

Community Resources of Bardala village revolve around several key areas, which can be summarized as follows:

Population:

The population of Bardala village is 1,607 (Wash 2021), with 822 males and 785 females. There are 331 households in the village. Bardala’s population represents approximately 2.4% of the total population of Tubas Governorate, which is a rural area. **Table 1** illustrates the population distribution in Bardala by gender and age groups for 2021. Notably, a large proportion of the village’s population is under 18 years old, making up 47%, while those between 18 and 65 years account for 49.5%. The proportion of individuals aged 65 and over is relatively low, at just 3.6% of the total population.

AGE GROUP				SEX	COMMUNITY
TOTAL	+65	65-18	18-0		
822	26	405	391	Male	BARDALA
785	32	390	363	Female	
1607	58	795	754	Total	

Table 1: Population in Bardala Village by Gender and Age Group, 2021

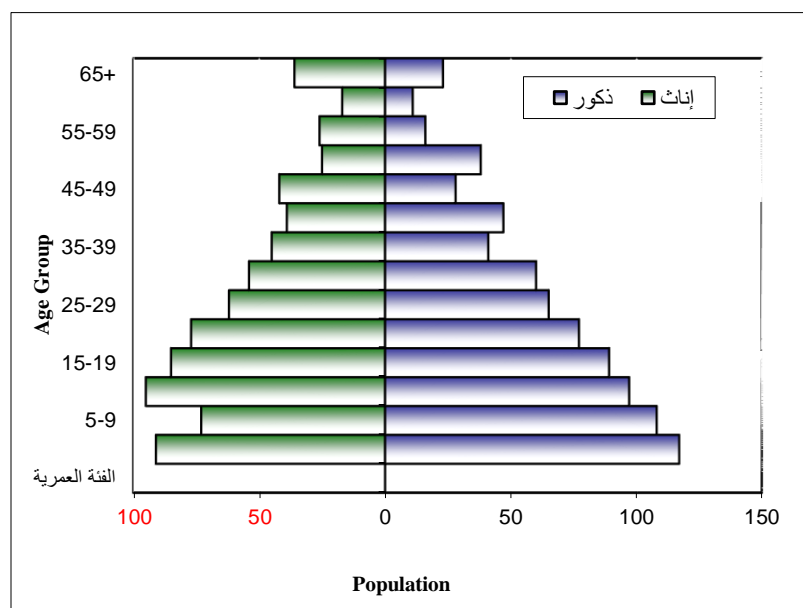


Figure 4: Population Age Pyramid of Bardala village, 2017

Education

According to the 2017 census, the educational attainment in Bardala village shows that approximately 16.7% of the population completed their primary education, 21.8% finished their intermediate education, and 12.6% completed their secondary education. **Table 2** presents the educational status in Bardala village, classified by gender and educational level/attainment. The village has three public schools: a mixed basic school with around 220 students (grades 1-4), a girls' secondary school with about 300 female students (grades 5-12), and a boys' secondary school with approximately 350 male students (grades 5-12). Additionally, there is Al-Yasser Model Kindergarten, affiliated with the Charitable Society for Villages of the Wall, which offers /primary early education to 60 children.

Educational Status									SEX	COMMUNITY BARDALA
Total	High Diploma	Bachelor	Associate Diploma	Secondary	Preparatory	Elementary	Can Read and Write	Illiterate		
592	1	32	10	84	202	152	98	13		
603	1	52	12	115	144	113	107	59		
1195	2	84	22	199	346	265	205	72	TOTAL	

Table 2: Educational Status in Bardala Village by Gender and Educational Attainment

Economic Activities and Workforce

Bardala is primarily an agricultural village, where residents settled in the area due to its rich agricultural resources.

- According to information from Bardala village council, the village's economy is heavily reliant on agriculture, with 90% of citizens engaged in agricultural activities, primarily in crop production and livestock.
- In addition to agriculture, Bardala residents earn income from construction, trade, and services, which make up 5%, 3%, and 2% of employment, respectively. Employment in the Israeli labor market and the industrial sector is minimal, at 1% and 0.5% respectively.
- The unemployment rate in Bardala stands at 0.4%, with the agricultural sector being the most impacted by Israeli policies.
- Bardala has eight commercial shops, including three main shops, along with other small shops, a restaurant, and a small ceramics workshop.
- Data from the 2017 General Population and Housing Census conducted by the Palestinian Central Bureau of Statistics (PCBS) showed that 34.5% of the population was economically

active (with 34.3% of them employed). Meanwhile, 28.9% of the population was economically inactive, including 8.7% students and 15% homemakers.

Relationship to Workforce									
Total	Having income/retirement/other	Disability/old age/illness	Dedication to household tasks	Dedication to study/training	Economically In Active	Unemployed	Worker	Economically Active	SEX
495	6	28	0	51	85	0	410	410	Male
508	1	47	237	87	372	2	134	136	Female
1003	7	75	237	138	457	2	544	546	Total

Table 3: Population of Bardala (Aged 10 and Above) by Gender and Labor Force Status, 2017

Institutions and Services Sector

There are several local institutions and associations in Bardala village that offer services to different community groups across various sectors. Among them is Bardala Village Council, established in 1996, which addresses village issues and provides essential services to the local population. Its responsibilities include infrastructure services, including water and electricity supplies, solid waste management, and social development services. The council consists of nine elected members; as of 2022 elections, it includes eight male members and one female member.

Additionally, Bardala has a few government services accessible through offices in the village such as an Interior Office, a Building and Housing Licensing Office, and a Post Office. Other services are accessed by Bardala residents through Tubas, the governorate's main city. Table 4 lists the active local institutions and associations in the village.

Institutions and Services Sector			
No.	Organization	Type	The Organization and services it provides
	Charitable Society for Villages of the Wall/ Women Society	Charitable	Established in 2007 with the aim of empowering women economically and financially by providing support and offering projects, such as small nutrition-related projects
	Northern Jordan Valley Cooperative and Agricultural Association	Cooperative	Providing services to farmers
	Bardala Association for Livestock Development	Cooperative	Established in 2008 to promote livestock development and support farmers' resilience by providing livestock-related services and projects, as well as training courses related to food industries.
	Bardala Women Center		
	Bardala Veterinary Pharmacy		It was established in 2016 to provide services to the livestock sector in the region. It is the first licensed veterinary pharmacy in the Northern Jordan Valley. The pharmacy is managed by the Bardala Association for Livestock Development

Table 4: Local Institutions and Associations Operating in Bardala Village

Also in the village, there are:

- Bardala Mosque
- Al-Khidr Shrine, a unique tourist site and the oldest building in the village
- Many historical tombs
- Al Bardawil Palace

Land Use/Land Cover, Agriculture/Livestock Sector:

Bardala village covers approximately 18,329 dunums. According to the Ministry of Agriculture's 2021 statistics (2021 Agricultural Census for Tubas and Northern Valleys Governorate), around 9,648 dunums are cultivated or arable, with 1,347 dunums designated as open grazing lands and 294 dunums as residential areas. Farmers in Bardala primarily rely on rain-fed agriculture, growing fruit trees and a variety of vegetables such as cucumbers, zucchini, peas, beans, thyme, and local cauliflower, as well as field crops. According to "Bardala - Northern Valleys" report prepared by Oxfam, the Agricultural Relief, and the German Cooperation in 2021/2022, Bardala produces approximately 48,000 tons of vegetables and 200 tons of field crops annually.

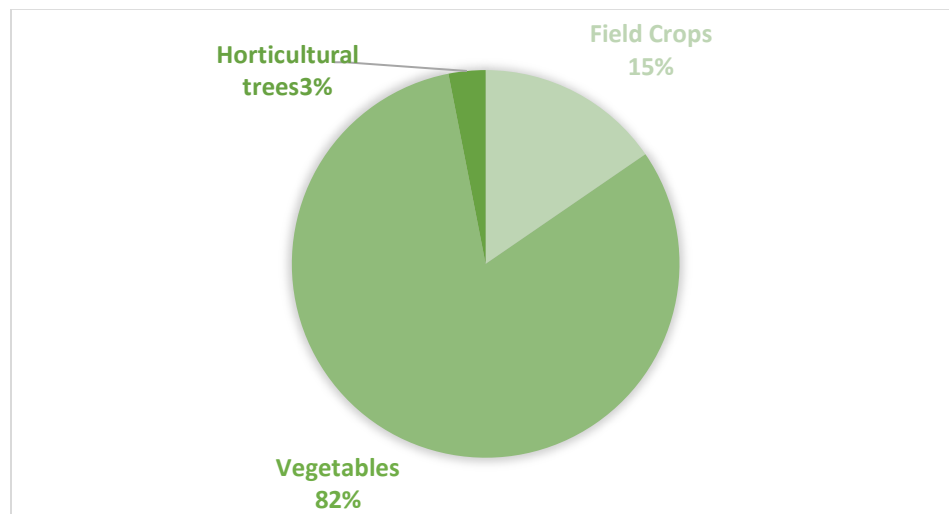


Figure 5: Percentage of Land Area Cultivated with Field Crops, Vegetables, and Horticultural Trees in Bardala in 2020/2021

On the other hand, Bardala is considered one of the villages rich in livestock, with 30% of its population relying on animal husbandry. According to the Ministry of Agriculture's 2021 statistics (2021 Agricultural Census for Tubas and Northern Valleys Governorate), there are 5,408 sheep, 628 goats, 132 cows, 12,100 broiler chickens, and 314 beehives.

Infrastructure

Bardala village lacks adequate infrastructure to meet the needs of its population, which can be summarized as follows:

- **Water**

The Israeli water company, Mekorot, is the main water supplier for Bardala village. The village has been connected to the Israeli water network since 1975. The village also has a water reservoir with a capacity of 40 cubic meters. According to Bardala Village Council, the village is supplied with drinking water through wells controlled by Mekorot, which includes three wells (two primary wells and one water reserve). The village is supplied with around 20 cubic meters of water per hour, but this supply is irregular and insufficient, with water being provided intermittently for only a few hours or cut off for days or even weeks. As a result, the village suffers from water shortage due to the Israeli occupation's control over its water sources and the restricted amounts of water supplied to the population, which do not meet their daily domestic needs, let alone their agricultural or livestock requirements. On the other hand, the Palestinian Water Authority constructed a 500-cubic-meter water reservoir and a new water network during 2021-2022. However, this project has not been completed and is still under construction.

- **Sewage System**

Bardala village lacks a sewage network. Household wastewater is disposed of in septic pits. It is important to note that wastewater collected in these pits is emptied by cesspool trucks and then disposed of in open areas, agricultural lands, or nearby valleys, with no regard to environmental impact. This practice is considered one major contributor of groundwater contamination in Bardala. Furthermore, wastewater is not treated either at the source or at disposal sites, posing significant risk to the environment and public health (Water and Environment Research Department – ARIJ, 2022). According to the 2021 survey by the Water, Sanitation, and Hygiene Group, approximately 50 families do not have their own sanitation facilities.

- **Solid Waste**

The Joint Services Council for Solid Waste in Tubas is the official body responsible for collecting solid waste generated by the population of Bardala. Currently, this responsibility involves waste collection and disposal. Due to the high cost of waste management, a monthly fee of 60 agoras per day has been imposed on those who benefit from the waste collection and transportation service. This fee is incorporated into the pre-paid electricity card system to alleviate the financial burden on citizens and improve revenue collection. The majority of residents benefit from the solid waste collection service.

However, the service, which operates twice a week, is insufficient, resulting in waste accumulation and the spread of insects, posing health risks. In terms of waste production, the average daily waste generated per person in Bardala is 7.0 kg. Consequently, the total daily solid waste produced by the village's residents is approximately 6.0 tons, which amounts to about 220 tons annually.

- **Energy, Communications, Transportation****

The electricity network in Bardala has been operational since 1996, with approximately 99% of the village's homes connected to the grid. The electricity is distributed by the village council, which purchases it from the Israeli electricity company. However, the village is not connected to a telecommunications network, and citizens rely on mobile phones for their communication needs.

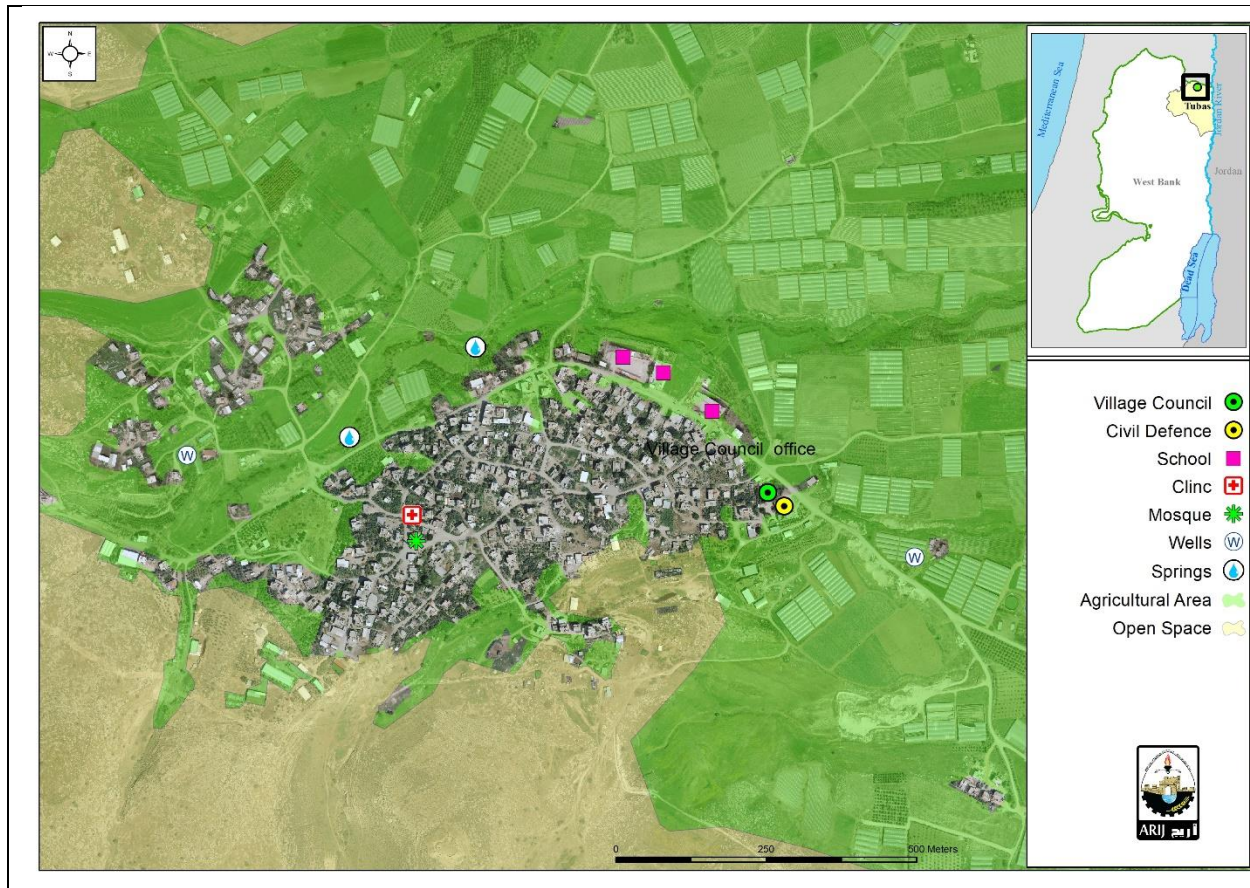
As for transportation services, Bardala has around 11 km of internal roads: 2 km are paved and in good condition, 4 km are paved but in poor condition, and 5 km are unpaved. The village has only two taxis as its only means of transportation. Major challenges to movement in Bardala include checkpoints and barriers established by Israeli occupation forces, as well as the limited availability of vehicles and transportation services, compounded by the poor status of the roads.

- **The Health Sector**

As for healthcare facilities, the village has a health clinic supervised by the Palestinian Ministry of Health, providing health services for two days a week to the citizens of Bardala. There is also a civil defense center located next to the village council, equipped with a civil defense vehicle and a fire truck to meet citizens' needs. However, the village's citizens face challenges due to the lack of an ambulance car and shortage of certain medical supplies and medications.

Community Map

The community map (Map No. 2) was developed through the participation of the local community in Bardala village to analyze local conditions and assess the availability of infrastructure services for the different social groups. It also aimed to explore/identify a wide range of skills, strengths, and capacities that can be harnessed to enhance the community's resilience in adapting to climate change.



Map 2: Community Resources in Bardala

The Major Environmental Challenges and Issues Facing the Region's Residents

Like other towns and villages in Tubas Governorate, Bardala village faces several environmental issues due to environmental degradation and climate change. These challenges must be addressed, and solutions need to be found. The following Figure, (Figure 4) outlines the challenges faced by Bardala village.

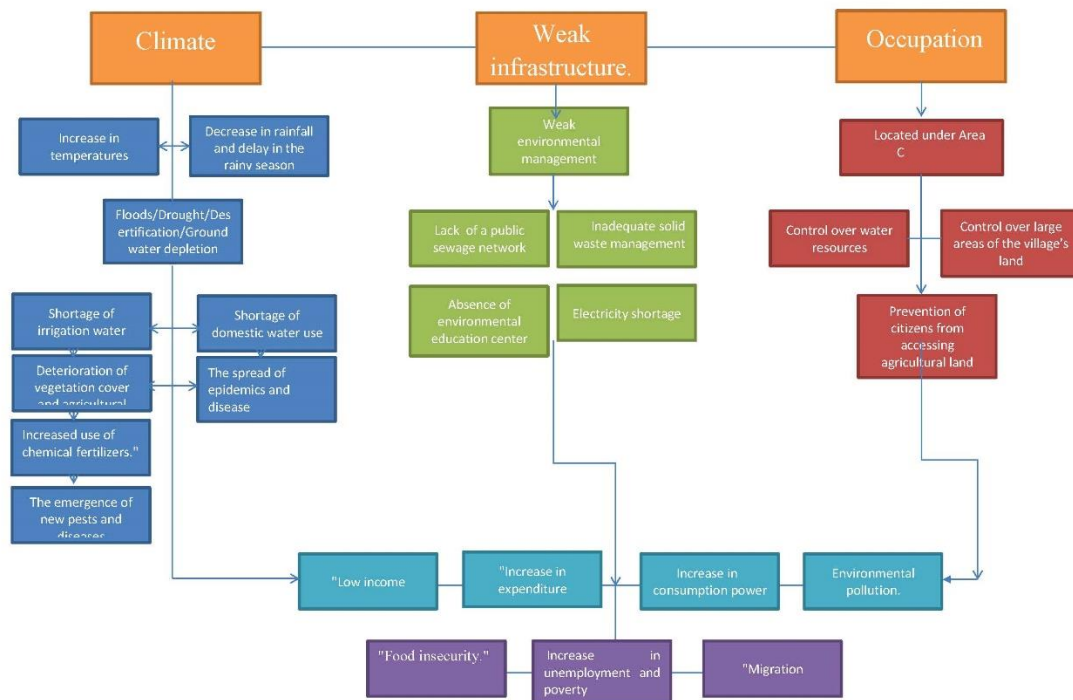


Figure 6: Tree of Challenges in Bardala Village

These challenges can be summarized as follows:

Underutilization of arable land in the area for several reasons:

(1) Israeli Occupation Practices:

- The Israeli occupation controls large areas of the village's land for security purposes. The Israeli occupation forces conduct regular military training on the village's agricultural land, in addition to leaving behind war remnants such as mines, which deteriorate the land's agricultural quality and destroy infrastructure. This was notably evident in 2020 when the Israeli occupation army destroyed a 200-meter water line during one of its military exercises in the area. It is important to indicate that this water line supplies irrigation water to approximately 135 dunums of agricultural land in the village.
- The Israeli occupation's control over water resources and the village's land: As the village is located in what is classified as "Area C," residents are restricted from accessing agricultural land. For example, the Israeli occupation continues to harass the villagers at a high rate in an effort to gain full control over Al Qa'oun Plain by demolishing several agricultural roads, a large water collection well, and destroying irrigation networks in the area. Moreover, the Israeli occupation does not grant the necessary permits for Palestinians in the northern Jordan Valley to dig water wells. As a result, the village residents are forced to purchase water tankers daily from the Israeli Mekorot company at a cost of 50 shekels

per tanker, while each farmer needs at least one tanker per day to meet their needs. Consequently, citizens, particularly farmers, face difficult conditions and bear economic burdens due to the occupation's practices.

(2) High summer temperatures, which are considered as a major environmental obstacles impacting/affecting agriculture.

(3) Scarcity of water for household use, particularly in the summer, due to the interruption of water supply from Tubas Water Council and the Israeli occupation's control over water sources.

(4) A shortage of irrigation water and reliance on rainwater, resulting in fluctuations in agricultural production.

(5) The lack of a public sewage network, leading to the use of cesspits for wastewater disposal. Some citizens discharge wastewater into public streets or open fields due to their inability to afford cover the high costs of transporting it, leading to unsanitary conditions and the spread of diseases within the village. Additionally, the use of cesspits poses a risk of contaminating groundwater and water collected in household wells (rainwater collection wells), as this water mixes with the collected wastewater, making it unsafe for drinking. These cesspits are constructed without lining, allowing wastewater to seep into the soil layers, thus avoiding the need for tanker truck services to empty the cesspits periodically. Furthermore, untreated wastewater collected from cesspits (by the tanker trucks) is disposed of in open areas disregarding the environmental and health risks associated with this practice.

(6) Electricity Shortage: The village of Bardala suffers from insufficient electricity supply, as the Israeli electricity company is the primary provider in the Jordan Valley. The village only receives 56.25% of its current electricity needs, which fails to meet the village's full demand. Given Bardala's hot climate (high temperatures in summer months), the demand for electricity increases significantly, especially during the summer months, when citizens use electrical appliances to cool homes and schools. This results in power outages due to the excessive load on the electrical grid.

(7) Inefficient Solid Waste Management: This is reflected in the lack of waste collection services in the village, leading to the accumulation of solid waste in containers and along the streets. These practices negatively affect the environment and the health of the village's citizens due to the emission of foul odors and the spread of insects and rodents. Moreover, the burning of waste near citizen's homes releases harmful smoke and affects citizens' health. The issue extends beyond household waste to include agricultural and animal waste, particularly plastic waste resulting from farming, as Bardala is one key agricultural area in the West Bank. These waste materials accumulate in agricultural fields and streets without proper treatment or recycling, resulting in environmental and health damages.

(8) Lack of Environmental Education Centers: The village lacks centers dedicated to environmental issues or any related activities that could focus on youth and women to raise environmental awareness or encourage their participation in environmental and community work.

(9) Shortage of Health Facilities and Services: The village does not have a permanent clinic that provides 24-hour services, nor a pharmacy for dispensing medications, an ambulance car, or a maternity clinic. Additionally, Bardala citizens face difficulties accessing health services outside the village due to the Israeli closures and checkpoints imposed in the area.

Climate Resilience Plan for Bardala Village:

The plan aims to enhance the community's ability to manage and mitigate the negative impact of climate change and environmental challenges, as well as to improve the community's ability to adapt and cope with these changes at the local, individual, and community levels. Bardala and its citizens are highly vulnerable to climate-related changes, particularly the rising temperatures and ongoing drought, which are among the the village's most significant challenges. Other concerns include irregular rainfall, water scarcity, flooding, and frost. Analysis of the results related to identifying the challenges and risks faced by various sectors in the village, it became clear that the agricultural sector is the most threatened, intersecting with other sectors such as economic and social conditions, with the Israeli occupation being a major factor. Therefore, the agricultural sector requires intervention to strengthen the resilience of farmers on their land. The following table illustrates the climate-related risks and the community-driven adaptation plan:

Necessary Interventions	Available Resources	Affected Citizens	How?	Risks	Threat
<p>Work on reforesting the village and planting climate-resistant trees to help reduce high temperatures, particularly during the summer. Protect lands through land reclamation programs and planting them with fruit trees. Improve access to agricultural production tools by providing marginalized and vulnerable groups who lack food security with rainwater collection wells, home gardens, hydroponic systems, drip irrigation systems, and wastewater treatment units. Use non-traditional irrigation methods, such as reusing treated water.</p> <p>Implement programs and training for farmers to raise awareness about agricultural pests caused by climate change</p> <p>Organize visits to exchange agricultural expertise.</p> <p>Maximize the use of agricultural and livestock waste by recycling it to produce biogas. Utilize organic waste as compost .</p> <p>Recycle waste, particularly plastic waste, by contracting with factories for reuse. These initiatives will contribute to Bardala's economic and environmental development, protect the area by utilizing available natural resources, reduce accumulated waste, and promote its reuse .</p> <p>Cultivate diverse crops and introduce drought-resistant improved varieties .</p> <p>Apply climate-smart agricultural techniques .</p> <p>Increase the participation of women and youth in environmental/agricultural projects and decision-making processes .</p> <p>Improve animal productivity and choose livestock breeds based on their resilience to climate change .</p> <p>Integrate local skills and traditional knowledge, as these are applicable on a local scale and include insights into managing and adapting to environmental fluctuations and trends .</p> <p>Implement projects to harness solar energy as an alternative energy source, whether for</p>	<p>There are several active institutions and associations with experience in agriculture and livestock</p> <p>Farmers who are landowners with experience and the ability to work</p> <p>The presence of active women's institutions</p> <p>Civil defense</p>	<p>Farmers</p> <p>Livestock breeders</p> <p>Residents</p> <p>Women</p> <p>Children</p> <p>Elderly people</p> <p>Individuals with special needs.</p> <p>(High temperatures have a greater impact on women, elderly, and others, as their body temperatures are typically lower than those of other age groups, making them more prone to dehydration and heat stress. Furthermore, their immune systems are weaker, increasing their susceptibility to illness)</p>	<p>The deterioration of agricultural lands, changes in the economic viability of crops, and increased costs, which led to financial losses for farmers and a decrease in their income through:</p> <p>Crop damage leading to higher prices and lower yields .</p> <p>Early ripening of crops in a short time, reducing their market value .</p> <p>Decreased ability of crops to withstand high temperatures .</p> <p>Increase in the number of agricultural pests and harmful insects .</p> <p>Higher water demands/requirements for agricultural crops .</p> <p>Shortage of irrigation water, forcing farmers to purchase water tankers from the Israeli Mekorot company as Farmers require at least one tanker daily to meet their needs, with an estimated cost of around 50 shekels per tanker.</p> <p>Reduction of agricultural land areas.</p> <p>Reliance on cultivating crops that depend on annual rainfall (rainfed agriculture) and traditional farming methods.</p> <p>Increased use of chemical pesticides.</p> <p>Farmer Ibrahim Sawafteh, head of Bardala Association for Livestock Development, stated that "agriculture in the village of Bardala has suffered a significant decline estimated at around 30%. This is due to rising temperatures, water shortages, and the lack of economic viability for Palestinian farmers. Annual losses for farmers are estimated to exceed 150,000 shekels.</p> <p>Losses in livestock, along with economic setbacks for livestock farmers, include:</p> <p>Increased water requirements for livestock</p> <p>Livestock deaths due to extreme heat .</p> <p>Negative impacts on animal health and their production of milk and meat</p> <p>Shrinking grazing areas, leading to increased reliance on fodder for livestock</p> <p>Higher rates of diseases among livestock .</p> <p>Increased water needs for domestic use (drinking and sanitation) .</p> <p>Higher disease rates among citizens, particularly children and women .</p> <p>Environmental pollution .</p> <p>Social problems stemming from economic and psychological pressures .</p> <p>Difficulty for residents to remain resilient to changing natural systems, preventing people from living normal lives .</p> <p>Increased demand for energy for cooling and operating water pumps .</p> <p>Frequent power outages occur due to Electric grid overload, especially on hot summer season, when electricity demand will peak as air conditioning is always on in homes and schools to maintain comfortable temperature.</p> <p>This increased demand during high-heat season creates grid overload</p>	<p>Rising Temperatures in Summer</p> <p>Over the past decade, citizens have observed a rise in temperatures, with heat lasting for several consecutive days. The frequency of heat waves during the summer has noticeably increased, with temperatures consistently surpassing average levels for extended periods. As a result, desertification and drought rates have risen during the summer months. Diagram 2.</p>	Changing climate patterns

households, associations, or government centers .				causing critical infrastructure failures like power outages; thus disrupting citizens ability to live normal lives. According to data from the village council, there is a deficit in meeting the village’s electricity needs, with only 56.25% of its current requirements being supplied by the Israeli Electricity Company, the main provider in the Jordan Valley region		
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Construct rainwater drainage channels. Build retaining walls. Promote water harvesting during the winter season to enhance drought resilience by increasing water collection and rainwater storage at both household and field levels (e.g., creating collection ponds, agricultural reservoirs, and rainwater harvesting wells) to reduce pressure on traditional water sources. Integrate local skills and traditional knowledge, as these practices are locally applicable and provide insights into managing and adapting to environmental fluctuations and trends.	Farmers who are landowners with experience and the ability to work The presence of active women's institutions Civil defense	High	Farmers All Society Segments Women Children Elderly people Individuals with special needs	Since Bardala relies on groundwater as its primary water source, it is directly affected by rainfall levels. Additionally, the village depends on rain-fed agriculture and lacks infrastructure for rainwater drainage. Consequently, these changes lead to: Crop damage due to heavy rainfall and its irregular distribution throughout the rainy season. Destruction of crops and hindrance of their growth due to frost. Flooding of agricultural lands, resulting in crop damage and the inability to utilize these lands during winter. The risk of flash floods, which submerge citizens' homes, particularly in low-lying areas of the village. Flooding of livestock shelters, leading to the drowning and death of animals. Financial and economic losses. Soil erosion. The inability of citizens to carry out their normal daily activities.	Graph 1 Bardala experiences low annual rainfall, averaging 166 mm, and recent years have seen irregular rainfall patterns (Rain often falls heavily over short periods, unevenly distributed throughout the rainy season, and is sometimes delayed). This has led to repeated flooding in the village during winter, as water accumulates in high areas and flows into agricultural lands. Additionally, frost frequently forms due to significant drops in nighttime temperatures .	Infrastructure
Utilizing household, agricultural, and animal waste through recycling to produce compost and/or biogas, and using the remaining material as organic fertilizer. Recycling plastic, cardboard, and glass at individual level or by contracting with factories for reuse. Establishing an environmentally friendly system for the collection and transportation of household solid waste. Implementing environmentally friendly techniques to reduce solid waste at the source, thereby decreasing the amount of waste requiring final disposal. This includes separating organic household waste and processing it at source for reuse as compost through home composting units. Distributing small waste containers. Organizing public awareness campaigns to maintain a clean environment, improve citizens' behavior, and promote sustainable consumption and production patterns.	<div> <div></div> Municipal Council </div> <div> <div></div> The presence of active institutions and associations in the environmental field </div>	Mild	All Society segments particularly: Women Children	Accumulation of solid waste in streets and agricultural lands . Accumulation of agricultural waste . Emission of foul odors and the spread of insects and rodents . Increased incidence of diseases among citizens . Air pollution caused by the burning of waste near homes .	Inefficient Solid Waste Management Bardala lacks proper services for collecting household, agricultural, and livestock waste, particularly plastic waste from agricultural activities. Bardala is considered one of the most important agricultural areas in the West Bank, however, waste accumulates in agricultural lands and streets without any treatment or recycling	
Development of the sanitation sector infrastructure to ensure all citizens have access to improved and sustainable sanitation services. This requires covering unserved housing units with public water network and connecting all housing units to the sewage network. Implementing environmentally friendly wastewater management methods through decentralized systems, which involve collecting, treating, and reusing wastewater on-site using small wastewater treatment plants.	Municipal Council	High	All Society Segments Farmers	Use of cesspits. Groundwater pollution due to the use of cesspits, as they are built without lining, allowing wastewater to seep into the soil layers and avoiding the use of Septic Sewage Vacuum Trucks to empty the cesspits. Discharging wastewater into public streets and agricultural lands due to the inability to cover the high costs of Septic Sewage Vacuum Truck services. Spread of health hazards, epidemics, and an increase in disease rates. Destruction and pollution of agricultural lands due to wastewater flooding. Increase in the number of pests and harmful insects.	The absence of a public sewage network.	

<p>Establish environmental education centers that adopt the principles of sustainable development and present green ideas focused on environmental issues, aiming to provide solutions to the environmental problems in Bardala.</p> <p>Raise environmental awareness and promote environmental responsibility and active participation, especially among youth.</p> <p>Organize community awareness campaigns to improve citizens' behavior and change their consumption and production patterns.</p> <p>Develop a spirit of volunteerism by forming environmental volunteer committees.</p> <p>Foster volunteerism by forming specialized volunteer committees.</p> <p>Conduct advocacy and lobbying campaigns.</p>	<p>The presence of active young men and women.</p>	Mild	<p>Women, Youth Children</p>	<p>-Lack of environmental activities .</p> <p>Lack of engagement in environmental and community work, particularly among youth.</p>	<p>The absence of environmental education centers.</p>	
	<p>community Protection Committee</p> <p>Resilience of citizens</p>	High	<p>All society segments, particularly: Women Children</p>	<p>The decline in agricultural land quality and the destruction of infrastructure, exemplified by the Israeli occupation army's demolition of a 200-meter-long water pipeline during military training in the area in 2020. This pipeline provided irrigation water to around 135 dunums of agricultural land.- Palestinians are denied access to agricultural lands as the Israeli occupation persists in its harassment, seeking full control over the Qa'oun Valley. This includes demolishing agricultural roads, a large water collection well, and irrigation networks in the area.</p> <p>Palestinians in the northern Jordan Valley are denied permits to drill water wells, forcing villagers to buy water tankers daily from the Israeli Mekorot company at a cost of 50 shekels per tanker. Each farmer requires at least one tanker daily to meet their needs, creating challenging conditions and imposing heavy economic burdens, particularly on farmers.</p>	<p>The Israeli occupation's control over large areas of the villages's land and water resources.</p> <p>- The Israeli occupying forces conduct regular military trainings on the village's agricultural lands, leaving behind military waste such as mines and other remnants in these areas.</p>	<p>Israeli Occupation Practices</p>

Annexes

Annex 1: List of Attendance



برنامج العدالة البيئية والمناخية في فلسطين (ECJP)
 "بناء قدرات الجمعيات والمؤسسات القاعدية"

المكان: الجمعية الخيرية لقرى خط الجدار - بردلا/ طوباس

التاريخ: 2022/3/1

الساعة: 11:30

#	الاسم	الهاتف	التوقيع	ملاحظات
1	نور الدين حواش	0524301738	نور الدين	
2	ليسانا حواش	0524965547	ليسانا	
3	دعاء عارف الحجاز	0530523248	دعاء	
4	سماء حارث سعاد حواش	0998628954	سماء	
5	كفاية خليل زبيح		كفاية	
6	عائشة حواش		عائشة	



#	الاسم	الهاتف	التوقيع	ملاحظات
7	انعام عبد المحمد هجيل		انعام	
8	جمانة خالد صومعنة	0535265830	جمانة	
9	اعترصا صومعنة	0525284989	اعترصا	
10	سارة الحمدي	0597422307	Saral	
11	مسام عبدالله	0523814135	مسام	
12	هشام شحاتة صوافف	053107757		
13	جميل محمد الرشيد	053107757	جميل	
14	كمسين خالد طاس	0568531855	كمسين	
15	الناهد رباب من عزيد ابراهيم	0598-306-678	الناهد	
16	ذوفاة خليل صبيح	0599778028	ذوفاة	
17	مستع محمد حنين	0569734304	مستع	
18				



برنامج العدالة البيئية والمناخية في فلسطين (ECJP)

"بناء قدرات الجمعيات والمؤسسات القاعدية"

المكان: الجمعية التعاونية لإنماء الثروة الحيوانية - بردلا/ طوباس

التاريخ: 2022/3/1

الساعة: 12:45

#	الاسم	الهاتف	التوقيع	ملاحظات
1	أحمد ربيع مسلق	١٥٢٥٢.٥٤٧٠	مفوض مسلق	
2	نادي عبد صالح هراش	٥٩٢٢٥٥٢١٦	عبد صالح هراش	
3	عنان معروف سيمان هراش	٥٥٢٨٢٦٩٥١٩	عنان هراش	
4	أحمد محمد عبد	٥٩٩٨٨٣٥٥٣٧	أحمد محمد عبد	
5	أحمد محمد عبد	٥٩٩٨٨٨٦٣٥٣	أحمد محمد عبد	

**WE
EFFECT**



#	الاسم	الهاتف	التوقيع	ملاحظات
6	سند محمد خليل	0569734304		
7	زفصام خليل صيكر	099778028		
8	ابراهيم رياض عزيد امير	0598-906-678		
9	كوسب غاب عفا	0568531855		
10				
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*توضيح مهم للمشاركين: عن طريق تحديد المربع بإشارة A والتوقيع، يصبح المستند المعتمد لإبحاث التطبيقية - القدس (الريج) باستخدام الصور الفوتوغرافية التي يتم التقاطها خلال هذا اللقاء من أجل أهداف مهنية خاصة بتوثيق النشاط



برنامج العدالة البيئية والمناخية
في فلسطين



WE
EFFECT

				✓			
□	مخيم	49	✓	✓	جمعية انما د التربة الحبيبة	مخيم من حقان راي	11.
□	مخيم	40	✓	✓	جمعية انما د التربة الحبيبة	مخيم من حقان راي	12.
□	مخيم	18	✓	✓	جمعية انما د التربة الحبيبة	مخيم من حقان راي	13.
□	مخيم	34	✓	✓	جمعية انما د التربة الحبيبة	مخيم من حقان راي	14.
□	مخيم				ARIJ	مخيم من حقان راي	15.
□	مخيم				ARIJ	مخيم من حقان راي	16.
□							17.
□							18.
□							19.
□							20.

*توضيح مهم للمشاركين: عن طريق تحديد المربع بإشارة ✓ والتوقيع، يسمح المشارك لمعهد الابحاث التطبيقية - القدس (أريج) باستخدام الصور الفوتوغرافية التي يتم التقاطها خلال هذا اللقاء من أجل أهداف مهنية خاصة بتوثيق النشاط

Annex 2: Photos

