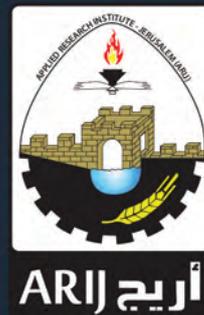


The Applied Research
Institute - Jerusalem
(ARIJ)



Towards a
Sustainable Palestine

ANNUAL REPORT

2017

www.arij.org

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Executive Summary

This report presents **ARIJ Activities and Achievements**
For the period of
1st January 2017 - 31st December 2017

The Applied Research Institute - Jerusalem (ARIJ) has continued to make significant progress and success in 2017 in fulfilling its mandate of promoting sustainable development in Palestine and the self-reliance of the Palestinian people through greater control over their natural resources. ARIJ has implemented a wide range of targeted projects and activities, as well as contributing strongly to productive partnerships with diverse organizations and stakeholders.

Projects and activities conducted in 2017 have focused on a wide range of fields including Sustainable Agriculture, Good Governance Practices and Management, Natural Resource Management, Urbanization Monitoring, as well as working towards the advancement of Information Technology and Geo-informatics.

In the field of **Agriculture**, the Sustainable Agriculture Program (SAP) managed to implement innovative and diversified agricultural interventions through which 2,284 vulnerable families benefited in 130 localities in the West Bank and Gaza Strip. Palestinian Governorates had benefited from these interventions through receiving direct support and inputs and/or receiving services. To achieve these activities 22,974 paid working days created, in addition to 15,193 created unpaid (in-kind) days conducted by benefited family members. Accordingly, the total value of achieved production by different implemented interventions during the year 2017 reached USD\$ 875,050. The program has continued its research work in identifying the valuable wild plants including the collection of seeds and demonstrating their domestication in home gardens.

In the area of **Good Governance**, ARIJ continued its efforts to ensure that political, social and economic priorities are based on broad consensus in the Palestinian society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development resources. To date, the Good Governance Program reached out to more than 500,000 beneficiaries; half of them are females. In addition, ARIJ Good Governance Program achieved fixed rate 75% of the development check which is an application for real-time citizen feedback on the transparency, participation and the effectiveness of development projects. It also enables community monitors to report on their success rate in implementing fixes to identified problems. For the seventh year in a row, ARIJ Good Governance Program worked on improving good governance practices among cooperatives and community based organization (CBOs) in Palestine through promoting the culture of good governance in cooperatives in 120 localities in the West Bank. In addition to improving the capacities of General Directorate of Cooperatives team members, and increase cooperation between the cooperative sector actors through Cooperative Sector Coordination Group (Owneh), the Good Governance Program conducted needs assessment on how to improve local authorities' services and increase collection of revenues. Moreover, the Good Governance Program had increased the capacity of the Palestinian Ministry of Local Government and Palestinian Ministry of Labor on participatory budgeting and citizen budget, as well as published the citizen budget for the Ministry of Local Government for the year 2017.

In the field of **Water and Environment Management**, the Water and Environment Research Department (WERD) implemented activities relating to wastewater treatment and reuse of treated wastewater in agriculture, as well as raising public awareness towards water conservation and wastewater treatment. This includes developing a solar-powered 1250m³/day capacity wastewater treatment plant in Wadi Al-Aroub, Sair, Hebron Governorate. Also, ARIJ team continued to provide information services to support local community organizations as well as national organizations by supplying data and reports related to the Water and Environment sector, for a variety of purposes.

At the **Geopolitical** level, ARIJ continued monitoring all related Israeli activities in the oPt. ARIJ team also continued to provide information services to related local officials and foreign representatives, in addition to CSOs including CBOs, grassroots and organizations by supplying statistical data, reports, maps and geographical records for a variety of purposes. The yields of the reporting period included 748 case studies, 365 daily reports, 12 monthly and 4 quarterly reports. The outcomes were induced by 194 visits to locations (fieldwork trips) in the West Bank and collecting 179 military orders (2017). The Geographical Information System & Remote Sensing had a notable and significant part synthesizing the collected data and in updating figures for fact sheets and maps for ARIJ related projects as well as providing services to the local community, Palestinian and foreign officials on the local, regional and international levels.

The **IT Program** is in charge of the development, designing, implementation, maintaining and operating of a wide variety of information systems related to ARIJ work. Moreover, the program is responsible for maintaining and publishing materials on all of ARIJs' websites and social media platforms such as Facebook, YouTube, and Twitter. The IT program also designs and digitally prints books, booklets and posters for ARIJ. Moreover, the program is in charge of photographing, video editing and publishing of short videos. Accordingly, ARIJ website have over 6,777,830 hits per year, POICA website around 8,469,981 hits and over 13,500 followers on ARIJ different social media platforms.

At the level of **Networking and Cooperation**, ARIJ built strong ties with many international, regional and Palestinian institutions and NGOs in order to enhance and establish joint cooperation in various fields. Also, ARIJ initiated partnerships and memberships with governmental and non-governmental organizations from Palestine and institutions from regional and international countries. Additionally, ARIJ is continuing disseminating its information locally and internationally at all levels of stakeholders through various publications such as scientific articles, special reports, booklets, leaflets, case studies, maps, infograps, posters, factsheets, articles; amongst others.

ARIJ's strength derives from the spirit of collaboration, goodwill and common cause that exists among ARIJ Staff, Administrative Committee, General Assembly, Donors and Partners. Last but not least, ARIJ programs' planned activities for year 2018 will include, but not limited to, continuing to seek for new research, developmental and pilot/innovative projects. As for the total estimated budget for year 2018 is \$2,256,360 (**See Chapter III**).

Chapter I: Organizational Structure and Management

1.1 General Assembly and Administrative Committee

ARIJ enjoys the service of 35 professionals and 2 honorary members (of which 29% are females) who constitute the **General Assembly of the institution**. Their specializations cover a range of fields. They provide ARIJ Administrative Committee with policy and strategic guidance. On July 1st, 2017 the General Assembly held a meeting where they discussed and approved ARIJ financial and technical reports of 2016 as well as discussed other related matters.

The **Administrative Committee** is committed to financial reliability and success, effective management, transparency, good governance and strategic planning for the future. Also, ARIJ Administrative Committee is responsible for implementing and following up on the strategies and policies set by the General Assembly.

General Assembly

 Dr. Abeer Istanbuli <i>(Entrepreneurship and Management)</i>	 Mr. Ahmad Rweidi <i>(Lawyer)</i>	 Mr. Anton Salman <i>(Lawyer)</i>	 Dr. Bishara Abu Ghannam <i>(Electrical Engineer)</i>	 Dr. Bisher Marzouqa <i>(Cardiac Surgeon)</i>	 Dr. Fadi Kattan <i>(Accounting & Business)</i>	 Dr. Ferdoos Alissa <i>(Mental Health, Psychotherapy)</i>	 Ms. Fida' Abed Allatif <i>(Urban Planner)</i>	
 Mrs. Ghada Hazboun <i>(Pharmacist)</i>	 Mr. Ghassan Andoni <i>(Physicist)</i>	 Dr. Ghassan Handal, <i>(Parasitology)</i>	 Mr. Hamed Al Qawasmeh <i>(Human Rights)</i>	 Dr. Hasan Dweik <i>(Chemist)</i>	 Mrs. Hind Khoury, <i>(Business Administration)</i>	 Mr. Husam Wahab <i>(Accountant)</i>	 Dr. Jamal Safi <i>(Toxicologist)</i>	
 Eng. Jerasious Kharroub <i>(Food Scientist)</i>	 Ms. Jihan Anastas <i>(Interior Architect)</i>	 Mr. Kamal Hassoneh <i>(Former Minister for National Economy)</i>	 Mrs. Minerva Qassis-Jaraysh <i>(Gender Law and Development)</i>	 Mr. Mohammed Khaled <i>(Rural and Forest Areas Development)</i>	 Dr. Mona Matar <i>(Information Technology)</i>	 Dr. Nabeel' Edelly <i>(Pharmacist)</i>	 Dr. Nasri Qumsieh <i>(Cardiologist)</i>	
 Dr. Neel Salman <i>(Member)</i>	 Dr. Norma Hazboun <i>(Social Scientist)</i>	 Mrs. Roubina Ghattas <i>(Conservation and Utilization of Plant Genetic Resources)</i>	 Mr. Ramzi Zanariri <i>(Executive Director of Near East Council of Churches)</i>	 Dr. Saleem Zoughbi <i>(Computer Scientist)</i>	 Mr. Salah Elan <i>(Business and Economy)</i>	 Dr. Simon El Araj <i>(Mechanical Engineer)</i>	 Dr. Spiro Tams <i>(Dermatologist)</i>	
 Mr. Suleiman Abu Dayyeh <i>(Social Science)</i>	 Dr. Walid Mustafa <i>(Geographer)</i>	 Dr. Ziad 'Abdeen <i>(Molecular Biologist)</i>	Honorary Members					
			 Archbishop Attalah Hana <i>(Bishopric of Orthodox Church of Jerusalem)</i>	 Bishop William Shomali <i>(Bishop of the Latin Patriarch of Jerusalem)</i>				

Administrative Committee

 Mrs. Hind Khoury, <i>(President)</i>	 Dr. Mona Matar <i>(Vice President)</i>	 Dr. Fadi Kattan <i>(Treasurer)</i>	 Dr. Nabeel' Edelly <i>(Secretary)</i>	 Dr. Nasri Qumsieh <i>(Member)</i>
 Dr. Ghassan Handal, <i>(Member)</i>	 Dr. Neel Salman <i>(Member)</i>	 Mr. Hamed Al Qawasmeh <i>(Member)</i>	 Mr. Suleiman Abu Dayyeh <i>(Member)</i>	

1.2 ARIJ Organizational Chart

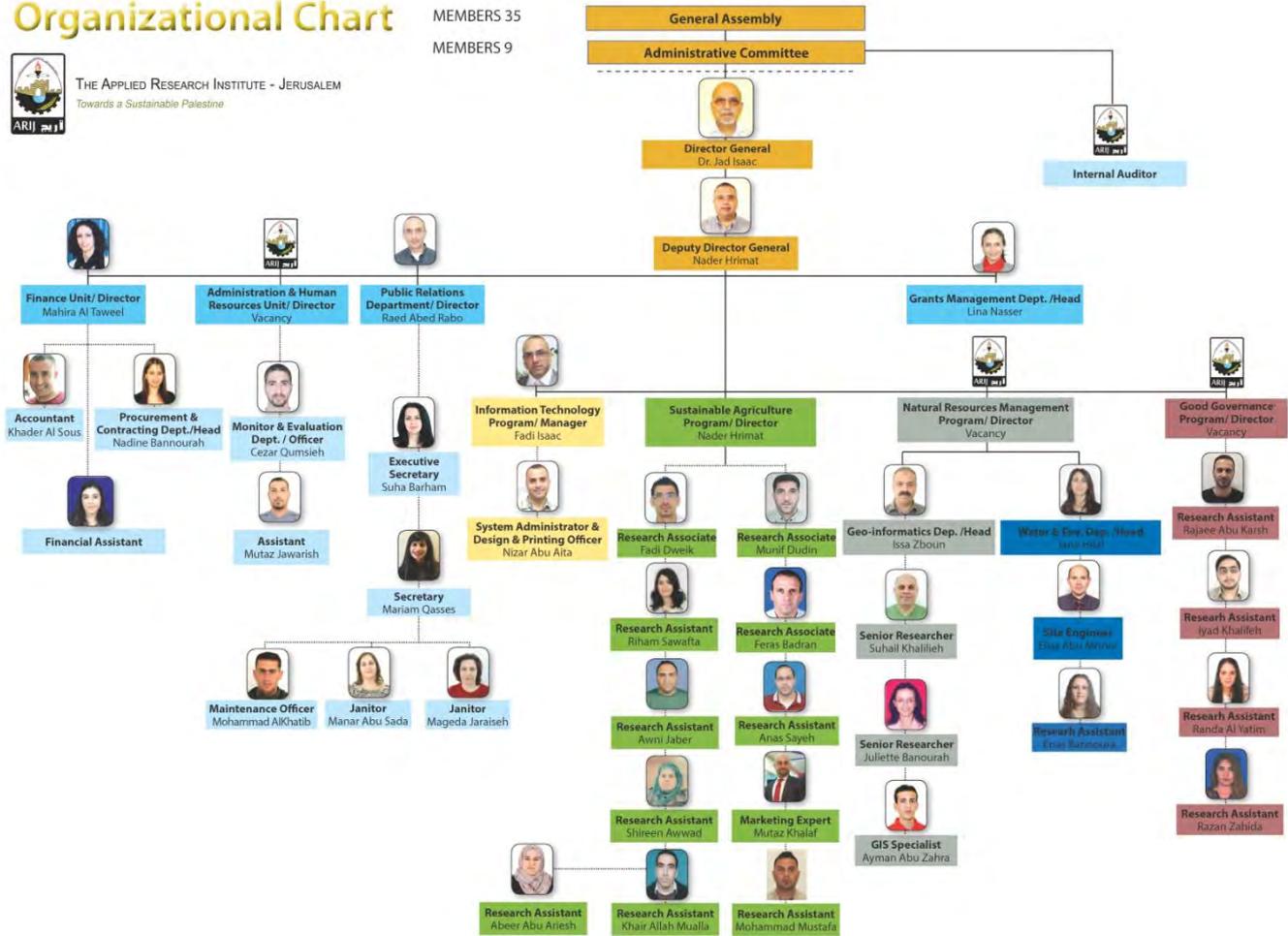
Organizational Chart

MEMBERS 35

MEMBERS 9



THE APPLIED RESEARCH INSTITUTE - JERUSALEM
Towards a Sustainable Palestine



ARIJ Staff Meeting

Chapter II: ARIJ Programs and Activities

2.1 Sustainable Agriculture Program

1- Activities and achievements in the year 2017:

Palestine's agricultural sector is one of the major economic sectors in Palestine and the only sector that can host the labor forces that have migrated from other sectors, especially during periods of political conflict. Despite the fact that the contribution of this sector to the GDP has decreased to 3.3 %, it hosts 8.7 % of the employed persons in Palestine and form 21% of export trade from Palestine.

Several challenges and restrictions are facing the agriculture sector development defined as socioeconomic, physical, natural, political, institutional, structural, increased unemployment rates that led to the instability and affecting the sustainability of this viable sector. These challenges are leading towards reducing the contribution of agriculture sector in the Palestinian National Economy and creating gaps in the Palestinian agro-food production system in Palestine. Also, this results in reducing the existing balances between the amounts of produced agro-food commodities and the growing demand that is resulting from the population growth.

Furthermore, the continuous increase in the unemployment and poverty rates, and food insecurity in Palestine are due to instability of the political and economic conditions. Additionally, the continuous imposed siege on Gaza Strip by Israeli Occupation Authorities and the continued occupation practices in the West Bank, including: land confiscation, uprooting trees, damaging the agricultural infrastructure, and controlling most of water resources and rangelands. These challenging conditions create a fundamental need to support the Palestinian farmers (especially small and mid-sized farmers) to keep planting their lands, producing their own food, improve their livelihood and continue their contribution in food security and Palestinian economy.

Accordingly, the Sustainable Agriculture Program (SAP) at ARIJ has continued its work to contribute in sustaining and improving the productivity and performance of the agricultural sector in Palestine by increasing the Palestinian farmers' access to better and improved production inputs, improved agro-practices and more production. Also, to engage the small farmers into integrated cooperative business hubs along the value chain that can empower them to achieve better income and improved the livelihood of their families. This year witnessed the implementation of diversified agro-interventions which contributed in improving the management of available and accessible natural resources, agro-production, and economic impact on farmer community and on the sector levels.

The compilation of applied research and the adoption of green and safe innovated agro-practices have resulted in ending with several successful, feasible and sustainable agro-developmental models. Proper agricultural research, reliable and up-to-date information helped in developing the right strategies, policies and in putting the priorities to manage and improve the agricultural sector.

Furthermore, an enabling environment is needed for increasing the access of the Palestinian farmers to the right know-how, suitable production calendar based on professional and improved marketing information system that can serve as planning tool for production and marketing system towards creating a sustainable agricultural system. The partnership and

integration of duties among the government, civil society, grassroots and the private sector in addition to optimize the uses of available resources rather than competition will lead to strong, effectual, and viable Palestinian agricultural sector.

As a result of political conflict and the continuous growth of the urban areas towards the agricultural lands; less area of the agricultural lands become available and accessible. Therefore, ARIJ started witnessing land fragmentation and the extending of urban agriculture with small area of agro-production units. Also, there are many marginalized communities and special community groups suffering from limited access to the technical and financial support. Therefore, ARIJ is working on applying special measures that can enhance gender equality, economic empowerment and social inclusion.

During the year 2017, The Sustainable Agriculture Program (SAP) managed to implement innovative and diversified agricultural interventions through which 1,700 vulnerable families and 20 women and mixed cooperatives distributed over 68 localities in the West Bank and Gaza Strip Governorates benefited. These activities were implemented through transparent and participatory approach including all related stakeholders including Ministry of Agriculture. The conducted interventions covered natural resources management, agriculture sector, cooperatives and food security which included the following main interventions:

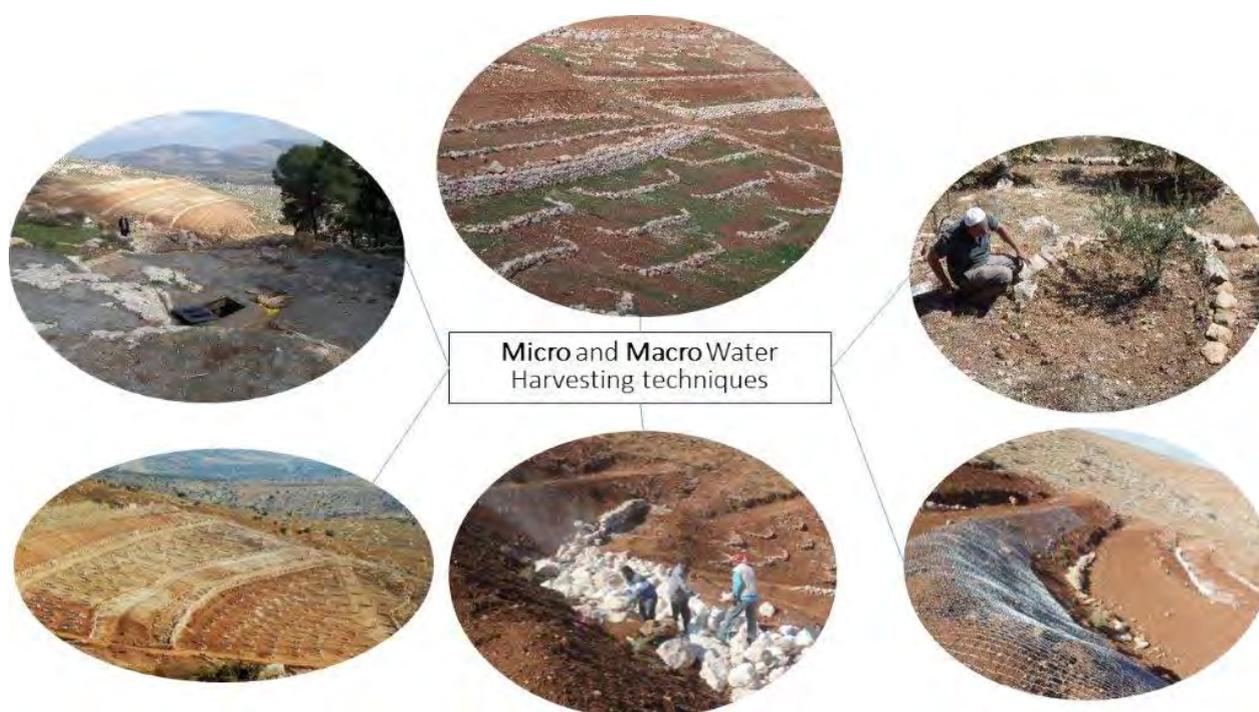
- 1. Improving field crops and forages cultivation:** 5510 dunums with the seeds of field crops and forages and 595 dunums with the seeds of forages were planted through SLCAL climate change project under field crops and rangeland programs in West Bank and Gaza Strip in the winter season 2016/2017 with field crops and forages to the benefit of 1110 farmers. The planted areas produced 982 tons of seeds, 645 tons of green forage, 491 tons of hay. The Palestinian local varieties and the adapted introduced varieties of wheat, barely; common vetch, alfalfa, sesame, lentils, chickpeas, black cumin and bitter vetch were planted to measure their adaptation to the climate change. The mixed seeds from barely and common vetch and bitter vetch were planted in the marginalized areas around the rangelands to protect these areas and stopping their degradation through fertilizing them and conducting controlled grazing system. Additionally, a licensed and degradable herbicide was sprayed to reduce the weeds grow in the field crops cultivated lands. Through the DCA-livestock project, 65 dunums of forage crops under rainfed and irrigated system cultivated to the benefit of 16 herding families and produced 77 tons of green forage.



- 2. Improving vegetables cultivation under rainfed:** The cultivations of dryland vegetables (including squash & snake cucumber) in Bethlehem and Hebron Governorates was conducted through providing 66 farmers with organic fertilizers and mulch to plant 198 dunums. The farmers had produced 123 tons of fresh vegetables.

3. **Practicing new Irrigation techniques:** This year, ARIJ continued testing the introduction of balanced pressure drip irrigation system in West Bank and Gaza Strip. This year witnessed increasing in the number of benefited farmers and cultivated areas with additional 85 farming families through supporting them to introduce the balanced drip irrigation systems for cultivating additional 190 dunums of vegetable crops under open and protected irrigated agriculture. While the previously benefited farmers were provided with seedling and seeds of that demands less water and give better production. Thus, the total benefited farmers are 419 and the cultivated area by them reached 1110 dunums. The system has resulted in reducing water consumption by 16% and increased the production by 16% compared with the traditional drip irrigation system. This year automated water irrigation timing sensor assisted the farmers to schedule the irrigation time and period for several greenhouses and open field cultivations for the same farmer. This assisted in reducing the water overuse and helped the farmers to provide the growing crop with suitable amount of water that is for their growing stage.

4. **Land rehabilitation “Micro and Macro water harvesting techniques and implementation”:** ARIJ has continued supervising and monitoring the rehabilitated agricultural lands and planted 304 dunums of the lands. The level of improvement in planted crops and trees were calculated to measure the impact of the applied different water harvesting techniques including terracing, eyebrow and fertile pockets. Furthermore, several onsite visits were conducted to these sites for related organizations, universities students and farmers to see the applied techniques and learn from the obtained results.



5. **Rangelands improvement and biomass enhancement:** In this Program, ARIJ aimed to increase the grazing area for herders, and to restore the degraded rangelands based on social process focusing on development of local climate-change adaptation strategy in the West Bank. ARIJ managed to target additional 845 dunums of rangelands through practicing several improvement techniques to

benefit additional 169 livestock breeding families. Thus, the total area of the improved rangelands during the last years reach to 2198 dunums of rangelands in the West Bank and 20 dunums in Gaza Strip. This activity aimed at enriching the biomass of these rangelands and increasing their grazing capacity and rehabilitating the degraded rangeland areas. This activity focused on enriching the growing rangeland grasses, bushes and the trees to stop soil degradation and enhancing its fertility. It is worth mentioning that this area served up to 8000 heads of sheep and goats.

- 6. Improving small ruminants' management, production and profitability through innovating new marketing systems:** The second phase of the small ruminant improvement project in Bardala has started this year and will continue till the end of the year 2019. This phase is targeting additional 3 new localities in the northern Jordan valley (Ein el-Bida, Kardala and Kherbit Tel El-Himma) and is going to benefit 125 livestock rearing families. During the first phase of the project, the project managed to be a very successful and pioneer model for improving the livestock sector through applying innovative and feasible interventions on community level rather than on individual level; in total, this project is serving 6979 heads of sheep and goats. Furthermore, this project is aiming at improving the dairy production value chain including the farmers, cooperatives and marketing system with main focus on community based approach. Different improvements have been applied to improve the health, fertility, productivity of the targeted areas sheep and goats and the quality of produced dairy products (mainly milk and cheese) which become healthier and hygiene. The women in Bardala have direct economic role on family level and on the investment level as a group of women have established a vet pharmacy and shared investment. In the last two years each one (10 women and the livestock society of Bardala) managed to generate a net profit of 6,840 USD (570 USD/share). The youth are also involved in the project activities, as they are testing the introduction of new techniques to reduce the death rate for newborns of sheep and goats and using special feeding ration to feed and fattening the new born lambs to increase their weights at selling age to make more profits.
- 7. Enhancing cooperatives value chain (from farm to consumer):** Through the Polish Aid and in partnership with the PCPM, this year witnessed the development and the promotional of the created MAWASEM brand for the cooperatives agro food products in local and export markets. Also, the project aims at creating cooperatives hub to shortening the value chain through maximizing the cooperatives role and reducing the control of middlemen and merchants. The cooperatives managed to sell 16 different food commodities of MAWASEM through New Farm Company with a total value of 174,575 USD, of which 50.5% in the local market and 49.5% through the export market.
- 8. Installing Hydroponic and wicking beds systems:** This year, the Sustainable Agriculture program staff managed to install 139 units of hydroponic and wicking beds systems to the benefit of 139 needy families (834 family members) and for handicapped people on individual and organizational levels, in Beit Sahour, Beit Douqo, Surief, Beit Jala, Bethlehem, Beit Fajjar, Beit Ta`mar, Al-Khader, Aida Camp and Al-Azza Camp. These units managed to produce 13,110 kg of different vegetables during the year 2017. Additionally, the beneficiaries' capacities were built by ARIJ staff, especially in managing, planting and controlling the growth of the planted crops properly. 75 units were funded by the Polish Aid and implemented by ARIJ in partnership with the Polish Center for International Aid

“PCPM”; while 39 units were funded by the Methodist Church and 25 units were funded by MCC and implemented directly by ARIJ. (Table 1) presents the distribution of implemented wicking bed units by communities, donors and number of beneficiaries. (The value produced vegetables reached 17,630 USD for the total produced amount of 15,427 kg).

Table (1): *Distribution of implemented wicking bed system by community, number of beneficiaries and donors*

Intervention	# Targeted communities	Benefited Households	Dunums	Donor
Hydroponic and wicking bed systems	4	75	450	(Polish Aid & PCPM)
Wicking bed systems	3	39	156	Methodist Church
Wicking bed systems	3	25	100	Mennonite Committee Center (MCC)
Total	10	139	706 m²	

9. The Emergency, Preparedness and Response Program (EPRP): This program was started at ARIJ with the encouragement of the DCA/NCA office in Jerusalem through developing strategic plan and implementation manual through which the program can response to the urgent needs of individual families those have been impacted by natural damage or the damages through the occupation practices on land, water, environment and agriculture. Accordingly, the year 2017 was the starting year through which emergency community committees were established for some politically sensitive areas including Massafer Yatta in Hebron Governorate, 6 localities from Bethlehem Governorate and 3 localities in the northern part of the Jordan Valley. The process of registering and documenting the occurred damages has been started and it will be continued in the year 2018 in partnership with DCA/NCA. An action plan will be developed in partnership with DCA/NCA and the participation of related stakeholders on community and Governorate levels. Also, during the year 2018 it is planned to respond to some emergency cases, based on the available budget and in full cooperation with other related stakeholders.

This year, the agricultural program managed to adopt new technologies and innovative practices to improve the adaptation of agricultural production systems to climate change and to increase the agricultural production capacity qualitatively and quantitatively. These activities included: the introduction of balanced pressure drip irrigation system, tensiometer, water timers, practicing new water harvesting techniques, encouraging farmers to work in groups towards empowering their production activities and increasing their profits. Additionally, developing hydro-plant production systems (hydroponic, and wicking beds), introducing better agro-practices, producing organic olives and thyme, adopting procedures towards safer vegetables production system, and empowering the role of cooperatives through increasing their active presence along with the value chain to empower cooperative to cooperative coordination model. This year, ARIJ has continued its research activities in partnership with NARC, MoA and ICARDA for domesticating the wild plants of high economic and medicinal values under the activities of WLI regional project and its own resources. Through AMENCA III, ARIJ in partnership with Care International and ICARDA have continued the project activities which are mainly focusing on improving the dairy and vegetables value chains, the economic values and the linkages between farmers, coops and private sector toward more efficient and fair pricing system.

The year 2017 witnessed the completion of the climate change project activities. This project was implemented by ARIJ in partnership with Care International with the fund from BMZ, Germany. ARIJ had implemented all the project activities in West Bank and Gaza Strip in partnership with Earth and Human Center for Research and Studies. Also, ARIJ continued implementing projects funded by the DCA/NCA, Polish Aid, MCC, Methodist Church, and Australian Aid. Additionally, ARIJ has started implementing activities focusing on rangeland development through signing a contract with FAO and in full coordination with the General Directorate of Forests and Rangelands at the Ministry of Agriculture.

The total value of produced agro-commodities by ARIJ's agricultural program through the implemented interventions during the year 2017 reached USD\$ 875050, in addition to 525,120 USD cash paid for the Palestinian labor work to implement the program activities.

The total number of the created paid working days in the year 2017 reached 22,974 days and the unpaid (in-kind) working days reached 15,193 days.

Highlights on the obtained results based on the implemented activities by ARIJ during the year 2017:

- Field crops and forage production: 982 tons of seeds, 421 tons of hay, and 653 tons of green forages with a value of USD\$ 756,608. The planted lands with dryland vegetables produced 123 tons of squash & snake cucumber. The market value for the produced vegetables reached USD\$ 175,700.
- During 2017, the milk collection center in Bardala village managed to store and sold 4000 liter of milk and 2.5 tons of white cheese. This giving a value of USD\$ 20,000.
- The irrigated vegetables production which had resulted from the distributed balanced drip irrigation systems, seeds and seedlings to the farmers reached 3140 tons of vegetables with a marketing value of USD\$ 577943.
- The value of marketed cooperatives agro-food products reached to USD\$ 76,207.
- The total amount of vegetables produced by the hydroponic and wicking bed system reached 22059 kg with a market value of USD\$ 25,200.

The Sustainable Agriculture program team had conducted 342 coordination meetings, and had performed 5,630 field visits for the beneficiaries' activities (469 field day visits). This year, the Sustainable Agriculture program team had conducted and/or participated, either locally or internationally, in 65 conferences and workshops, 67 meetings and visits, and 8 presentations. This is addition to providing services to the local community related to its field of work.



SLCAL Closing Ceremony in Gaza Strip



New Sheep Born in Bardallah



Cheese and Milk Collection Center in Bardallah



The Packaged Cheese for Marketing



Wicking Bed Production System



Fresh Mawasem Produced Lettuce



Water Harvesting Pool In Gaza

Table (2): The distribution of achieved activities by ARIJ under the Sustainable Agriculture Program in year 2017

Intervention	# Benefited Communities	# Benefited Households	Dunums	Sheep & Goats Heads	Inputs, Equipment & Tools
Field crops and forage seeds cultivation (SLCAL :BMZ, CARE International, ARIJ, EHCERS & MoA)	15	1030	5510		Distributing seeds of different crops and varieties & fertilizers: Ammonium Sulfate, Super Phosphate and NPK.
Mixed forage seeds cultivation for grazing (SLCAL)	4	80	595		Seeds of barley, common vetch and bitter vetch.
Rain-fed vegetables cultivation (SLCAL)	4	66	198		Distribution of organic fertilizer (compost) and transparent plastic mulch.
Balanced pressure drip irrigation system to improve water management (SLCAL)	74	419	1110		Drip irrigation networks, water meters, irrigation sensors, vegetables seeds, seedlings & other tools.
Rainwater harvesting and water storage pools (130 CM/pool) for irrigating greenhouses in Gaza Strip (SLCAL)	4	22	88		The lining plastic sheet, irrigation system, protection fence, labor cost.
Rangeland improvement and biomass enhancement (SLCAL)	8	169	845	8000	Seeds and rangeland bushes and trees seedlings, and specialized fertilizers, labor cost.
Hydroponic and wicking bed systems (ARIJ, Polish Aid & PCPM, Methodist, & MCC)	11	139	706m ²		Provision of production system and planting material, fertilizer & labor cost
Vegetable Packaging Units (Polish Aid & PCPM)	5	75			Tools and equipment used to pack the vegetables, labor cost.
Aerated composters (MCC)	3	25			Tools used to produce solid and liquid compost.
Improving the production and certification systems for MAWASEM coops and New Farm Company including the member farmers	10	10 coops & 100 farmers	145		Training farmers and coops on crop management, food processing and food standards. Rehabilitating the premises of the targeted coops.

Intervention	# Benefited Communities	# Benefited Households	Dunums	Sheep & Goats Heads	Inputs, Equipment & Tools
Livestock improvement in the Northern Jordan Valley (DCA &ARIJ)	4	125		6979	Medicines and Vaccines, tools to establish demonstrations: incubator for the newborns against the low temperatures and Lambs fattening system
Distribution of improved feed mix for increasing milk production (DCA)	3	25		1300	Mixed feed for milk production (Concentrated feed)
Distribution of forage seeds for cultivation (DCA)	4	16	60 RF & 5 irrig.	891	Seeds, irrigation networks, fertilizers, herbicides and pesticides, labor cost
Increasing the storage capacity of milk collection center in Bardala village (DCA)	1	1 cooperative			Milk pasteurizer (300 liter), electrical pump to transfer the milk, electrical generator, and stainless steel jars
Improving management/accounting system at Bardala pharmacy (DCA)	1	1 coop, 10 women			Bar coding and Accounting system
Promoting the sales of dairy products through linking milk collection center with processing & consumer cooperatives (DCA)	2	2 coops			Tools and equipment used in milk products processing and marketing
Mono-fertilizers demonstration (Soqouna: Australian Aid, DFAT, CARE international, ARIJ and ICARDA)	8	16	16		Mono-fertilizers, screen mesh, pesticides and protection spraying clothes and farmer records
Safer products demonstration (Soqouna)	10	10	10		Mono-fertilizers, screen mesh, pesticides and protection spraying clothes, traps and farmer records
Balanced pressure drip irrigation system to improve water management (Soqouna)	5	8	8		Drip irrigation, water meters, valves, and connection tools and farmer records
Total	130	2,284	8,249	14,979	

3- Cooperation with the Palestinian Authority, NGOs and Institutions:

ARIJ has continued its good relations with the related Governmental and Civil society bodies. Following are the conducted and coordinated joint activities:

- The program is representing ARIJ in the Food Security Working Group (FSS) in Palestine.
- The program is representing ARIJ in the Climate Change National Committee (CCNC)
- ARIJ is representing the Palestinian NGOs Network in the Agriculture Sector Working Group (ASWG) and in the Food Sector Advisory Committee.
- The established steering committee between ARIJ and MoA has continued following up and supporting the implementation of climate change project (SLCAL) and its achievements in West Bank and Gaza Strip.
- Good relations were established with the CBOs (cooperatives and women clubs) to improve their economic model, empower their management systems, improve their production system qualitatively and quantitatively, and linking them to marketing system, as an efficient part of the value chain.
- ARIJ continued its cooperation with National Agriculture Research Center (NARC) through conducting joint research activities and share experiences regarding field crops and forages, especially through the climate change project, in addition to the domestication of the valuable wild plants.
- ARIJ continued its partnership with Earth and Human Center for Research and Studies through implementing the climate change activities in Gaza Strip.
- ARIJ continued its coordination with the other main agricultural NGOs, such as PARC, UAWC, LRC, ESDC, the Palestinian Agricultural Union, MAAN and PNGO network to follow up the changes and updates in the agricultural sector and to empower the role of civil society in this vital sector.
- ARIJ continued its cooperation with Biet Qad station for researches in sheep breeds improvement area through artificial insemination technique, especially in the small ruminant improvement project for Bardala village
- ARIJ continued its research activities with Al-Aroub Agriculture station conducting demonstrations on field crops and scheduling irrigation for vegetable crops under greenhouses.
- ARIJ continued its cooperation with the rangelands nurseries of the Ministry of Agriculture in Hebron and Tubas Governorates, to improve the capacity of these nurseries in producing more rangeland seedlings to be cultivated within the climate change SLCAL and FAO projects.
- ARIJ has continued its cooperation with the national Universities, especially, An Najah University and Al-Khadouri University as well as Hebron University to contribute in building the capacities of their students, especially the students of Faculties of Agriculture. Also, ARIJ has continued its cooperation with the Al-Khadouri University to continue conducting joint research in the field of ground water modeling and the improvement of urban agriculture in Palestine.
- ARIJ continued its coordination with the Environment Quality Authority - Palestine to work in developing a concept note to be submitted to the climate fund. This work was done in cooperation with with other Palestinian organizations.

4- Cooperation with Regional and International Institutions, Bodies and NGOs:

1. The Canadian Food Grain Bank (CFGB) and Mennonite Committee Center (MCC):

ARIJ managed to get an additional fund which started since April, 2017 and will be continued till the end of the year 2019. This project focused on urban agriculture using wicking bed plant production technology.

2. Palestinian-Dutch Academic Cooperation Program in Water:

ARIJ managed to get an additional fund from the Palestinian-Dutch Academic Cooperation Program on Water (PADUCO) consortium and it will start by January, 2018. This small research project has been awarded and it will be implemented in partnership with Al-Khadouri University.

3. The Australian Agency for International Development (AusAID):

ARIJ in partnership with CARE International and ICARDA have continued its work on Souqona project through implementing AMENCA III program.

4. United Methodist Church ("Global Ministries"):

ARIJ have started a new project for one year targeting poor families and some of the households in the Palestinian refugee camps in Bethlehem. The project is focusing on supporting the marginalized families to produce vegetables through using the wicking beds plating technology.

5. Oxfam Great Britain (OXFAM GB):

ARIJ had completed its signed agreement with Oxfam GB through which two electronic balances and electronic Marketing Information System was developed for the whole sales markets of Nablus and Qalkyia. It is planned to be extended for other whole sales markets in the West Bank.

6. Federal Ministry for Economic Cooperation and Development (BMZ) Germany and CARE International:

This year is the last year of the climate change project activities. This project covers West bank and Gaza Strip. ARIJ is implementing the project activities in the West Bank by itself while the project activities in Gaza Strip are being implemented by Earth & Human Center for Research & Studies "EHCRS". This project focuses on improving agro-adaptation practices by learning and scaling up on technical and planning levels.

7. Polish Aid & Polish Center for International Aid "PCPM":

This is the second year of the project entitled "Adopting green hydroponic production to increase food security, income generating and competitiveness of agricultural cooperative sector in Palestine". The project focused on supporting the vulnerable families through providing them with the hydroponic and wicking beds cropping systems, including the women coops and specialized associations in taking care of the handicapped persons. They managed to produce vegetables for their own consumption and to market the excess products in their communities. Additionally, the project has continued improving and promoting MAWASEM products and its producers.

8. Polish Aid & Polish Center for International Aid "PCPM":

Another project funded by the Polish Aid started this year titled "Certification and improving professionalism of producer-consumer cooperatives' group, Palestine". This project aims at supporting the New Farm Company and the cooperatives that are producing MAWASEM products to improve their production environment and to get food processing and system management certificates. This project will continue till the end of the year 2019.

9. International Center for Agriculture Research in Dry Areas (ICARDA):

Through ICARDA, ARIJ is a partner organization of the Water Livelihood Initiative (WLI), which includes applied research and piloting activities in the field of rainfed agriculture, irrigated agriculture and rangeland management. This year is the last year of this project.

10. Dan Church Aid (DCA):

The Second phase of the livestock project started this year and will end by the year 2019. It aims at improving livestock sector and its marketing channels. The project is funded by the DCA and targeting 3 new localities at the Northern Jordan Valley in addition to Bardala.

11. Caritas Switzerland:

ARIJ has signed a funding agreement to conduct food security project in 3 Bedouins communities, 3 refugee camps and for the poorest Palestinian families in the West Bank. This project will start by January 2018 and it will be completed by the end of year 2019.

2.2 Information Technology Program

ARIJ Information Technology Program aims to contribute to the development of information technology in Palestine, through effective dissemination of information and knowledge. In its work, the program improved ARIJ capabilities in computing technologies and applications. In addition to providing technical assistance to ARIJ different departments, the IT program develops and programs web-based information systems and creates efficient logical databases for the different projects for the institute. These programs support research staff in interpreting and presenting data analysis and evaluation findings. ARIJ also keeps up with the latest remote sensing and geographical information system applications.

ARIJ IT Program has been also responsible for creating and managing of Geospatial databases and Meta data that are used to develop web-based mapping applications.

Furthermore, the IT program has extended its work to include video editing and publishing all of ARIJ work. The program is responsible for recording, editing and finally publishing the videos on social media accounts such as YouTube channel (<http://www.youtube.com/arijvideos>), Facebook (<http://www.facebook.com/arij.org>) and Twitter (https://twitter.com/ARIJ_Institute).

1- Achievements & activities during 2017

Application Development:

The Palestinian Market Information System:

The IT program in cooperation with the Biodiversity Department has been in charge of implementing the first market information system in two wholesale central markets (Nablus and Qalqiliya) part of the *“Improving the Palestinian Agro-products marketing for the Benefit of Local Market Chains”* project funded by Oxfam GB. Hence, the IT program was in charge of analyzing and designing the intended IS, bidding process for both equipment and external software development supplier, coming up with the needs requirements for the system in cooperation with the beneficiaries, biodiversity department and the software development company. Finally, testing and debugging the system prior to installing it in the two markets.

Assessing the impacts of Israeli movement restrictions on the mobility of people and goods in the West Bank (2017-2018):

The IT program in cooperation with the Natural Resource Management Program is in charge of the development of a transportation analysis system in order to map and measure the impact of Israeli restrictions on the mobility of goods and people in the West Bank and subsequently assess the marginal costs of such restrictions on employment, wages, days worked, the costs of moving goods and people, and the quality of transported goods.

Bid Management Information System:

The IT program has developed a bid management application for the procurement department in which all bid process can and will be done through the system. The IS includes vendor management, projects, project budgets lines, deadlines and other parts of the bidding processes.

Risk Management IS:

ARIJ has gone through in the year 2015, 2016 and 2017 the risk management assessment which the IT program was part of it from the beginning and a member of the risk committee. The IT program has worked with the consultants that headed the risk analysis and developed the Risk Management IS in which all risks indicators, sub indicators, weights and documentations are saved and analyzed using the IS.

ARIJ e-office suite version 2:

The IT Program has in 2005 developed an E-office system for ARIJ that is currently used by all employees at ARIJ. The current system is very old and requires many updates as new internal manuals have been published therefore, the work to develop the new version of the system to take in consideration all the changes that have been implemented on ARIJ HR, Financial, Project and Administration manuals has started this year, and it is expected to finalize next year.

GIS & Geospatial Databases**Mapping of Educational Centers in East Jerusalem – UNDP:**

The IT Program in coordination with the GIS department has worked with the UNDP to survey schools in East Jerusalem and designed a geospatial database for the schools which will be used in the next phase of the project that will include the developing of a web-based system for the data collection and viewing for all data related to the Educational Centers.

GeoSDI integration:

Integrating and customization of GeoSDI technology at ARIJ. GeoSDI is a pure open source web GIS framework for information dissemination and sharing of geographical information. GeoSDI is currently being used at ARIJ in multiple information systems and sites.

BEYOND Project:

The IT program in cooperation with the GIS & RS unit is in charge of implementing the BEYOND project and goals to promote the use of EGNSS outside the EU in neighboring countries and stimulating investment in EGNSS. Complete work on BEYOND project which includes the publication of the EGNOS catalogue document for Palestine, in which it highlights the current use of Global Positioning Systems in Palestine and the recommendation for the future of these applications such as the Land Registry System, Road networks and maintenance and others which the State of Palestine needs to adopt.

Social Media & Movie Production:

The IT Program is responsible for producing documentaries for ARIJ work and mainly movies in regards to the Israeli colonization activities in the West Bank. All movies produced are uploaded on ARIJ YouTube channel for people to view. Currently, ARIJ has more than 280 movies that are uploaded on our YouTube channel. The program is also in charge of filming, interviewing, and photo shootings for workshops that are accomplished by ARIJ. The program is also in charge of managing ARIJ social media accounts (i.e. Facebook, YouTube, and Twitter) there has been growing numbers of people following ARIJ news for the past few years. Moreover, the IT program was in charge of advocacy plans for the institute, the process includes video creation, posting on the social media platforms and banners and flyers designing.

Digital Printing & Design:

The IT program has equipped a small print shop that includes a small digital printer, paper folding machine, binding machine, electrical paper cutter and a small paper laminating machine. The print shop is responsible for printing small numbers of ARIJ publications. The program has printed hundreds of publications for ARIJ including books, brochures, posters and booklets.

Website design & development:

The Palestinian Observatory of Israeli Colonization Activities (POICA) new website that includes a variety of new functions and look.

- ARIJ Site (Google Page Rank is 6)
- ARIJ village profile project site
- Other projects websites

System Administration & Security

The IT program main focus is to provide technical support and assistance to the different departments at ARIJ through developing applications, installing software's, maintaining hardware, and maintaining and updating the local area network. ARIJ has around 11 physical servers, 20 virtual instances and over 100 computers to maintain.

2- Cooperation & Communication

1. Attending the EGNOS Service Provision Workshop in Warsaw Poland representing Palestine as part of BEYOND project. IT program had the chance to inquire the knowledge on the use of EGNOS in the multi applications used in the EU.
2. Alquds University and ARIJ has agreed to partner together in order to introduce a bachelor's degree in the field of geoinformatics part of the university dual studies program. The IT program has been in charge of the communication between the two organizations and the designing of program. On the other hand, ARIJ has agreed to host university students that are willing to implement their graduation projects on systems that ARIJ is currently using. Accordingly, the first project which was agreed with the students and their supervisor is to enhance the aquaponics system at ARIJ and to integrate a number of sensors (light, temperature, PH) and connect these systems wirelessly with a mobile app that sends notifications to the owner of the system.
3. The IT program with the GIS Department at ARIJ has been contacted by the Palestinian Land Authority in order to provide them with the technical assistance in GIS and geoinformatics which lead to signing of partnership between the two organizations.

2.3 Good Governance Program

1- Activities and achievements in the year 2017:

In 2017, ARIJ Good Governance Program continued its endeavors to ensure that political, social and economic priorities are based on broad consensus in the Palestinian society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development resources. ARIJ Good Governance Program promoted values of integrity, principles of transparency and systems of accountability in the various Palestinian sectors.

Realizing the importance of participatory, transparent and accountable, efficient and equitable approaches to development, ARIJ Good Governance Program worked to increase the accountability of local and national authorities; develop the participatory capacities of local and national authorities to become more responsive to community needs, and ensure fairness and equity in distributing available resources.

The Good Governance Program continues improving Good Governance Practices among Palestinian Cooperatives and Community Based Organization (CBOs) in 2017 by responding to the challenging governance environment that faces cooperatives. The total number of members of level one coops increased by 27%, from 1020 to 1304 members. For 2017, there was a 2% increase in the number of members in 8 cooperatives, of which 558 are females and 106 are males. There is also a 34% increase of the members who perceive their cooperatives' image to be good, and 92% of the members are satisfied with the cooperatives.



Photo 1: Exchange Visits Between Cooperatives

In addition, the Good Governance Program worked on addressing the issue of weak youth engagement in local governance and development, with the ultimate goal of involving youth in the establishment of fair and sustainable local services. Jointly with ARIJ Good Governance Program, selected school students and youth councils in Bethlehem Governorate became closely involved in sustainability issues in their communities, such as local services and policies, in order to become leaders on issues of sustainable development. School students and youth councils learned how to monitor infrastructure projects and achieved a fix rate of 75% for projects in their areas. Beyond the 1497 youth in the 5 targeted schools, the initiative also benefited 428 youth and 15 teachers who attended the last two days of the closing exhibition from 8 schools different than the targeted

localities. Moreover, infrastructure development to all 5 localities was included, which meant that also the population of the localities are benefiting, around 63,685 indirect beneficiaries.



Photo 2: Students from Bethlehem High School Watching a Theatre Play about Social Accountability

2017 was the second year of the strategic partnership between ARIJ Good Governance Program and Oxfam International to work on “**Finance for Development**” Program.

The aim of this work is to increase the responsiveness of Palestinian national and local budgets to the needs of poor and marginalized citizens including women, while supporting autonomy and transparency in revenue generation. Moreover, ARIJ Good Governance Program will ensure that citizens and civil society organizations have the knowledge, skills and capacities to contribute to shape a just, effective, predictable and effective revenue system in Palestine, and budget stakeholders are more responsive in allocating public resources in a fair way to support marginalized citizens, in particular women and girls, providing access to basic services (education, health, welfare) and are more transparent and accountable.



Photo 3: Students in Elementary School Learning About Proper Usage of Water

In 2017, under “**Finance for Development**” program, ARIJ Good Governance Program worked on a national campaign, “**Money for Medicine**”, which was created in cooperation with MIFTAH and AMAN.

The campaign aimed to collect signatures from Palestinian citizens to ensure that the Palestinian Ministry of Finance (MoF) will increase medicine allocations in the Ministry of Health’s (MoH) budget. In this campaign, ARIJ focused on budget literacy and called for more pro-poor budget allocations. Radio and T.V. spots highlighted the newly crafted policy approaches. The primary objective of the campaign was to convey the citizens’ voices to the MoF to increase budget allocation for MoH (approximately \$60 mil). This required both public awareness raising and public engagement tactics. The aim was to collect 100 thousand signatures from the public who suffer the most from lack of medications in governmental hospitals and clinics.

Increased budget allocation will ensure that medical clinics are properly stocked in Palestine with essential medication and medical supplies, which will ultimately lead to more citizens gaining access to more and better medications, and have their voice heard in a more democratic society. Secondary objectives of the campaign were to facilitate policy dialogue between PNA and civil society, engage young Palestinians in the campaign and create a base for setting up a mechanism to hold MoH accountable for budget spending. ARIJ, AMAN, and MIFTAH all trained volunteers to spread out in their areas and collect signatures.



Photo 4: Volunteers Collecting Signatures for the Petition

As for the main achievements of the work of the Good Governance Program, they were as follows:

- Promoted the culture of good governance among 8 targeted cooperatives: Ouja Cooperative for Rural Development, Farmers of Medicinal Plants and Organic Products Cooperative in Jericho, Kufur Ra’ee Agricultural Cooperative, Anabta Cooperative for Food Production, Beit Furik Cooperative for Food Production, Battir Agricultural Cooperative, Rural Women's Cooperative for Credit and Saving in Bethlehem and Der Ghsoun Cooperative for Credit and Saving.
- Developed good governance enhancement plans for the 8 cooperatives.
- Increased awareness of the targeted cooperatives on the importance of the role of internal oversight committees.
- Exchange knowledge between cooperatives.
- Advocate and lobby for the new cooperatives’ law in Palestine, which was endorsed on November 16th, 2017.
- 156 youth in 5 schools in Bethlehem Governorate were trained on their rights and good governance at the local level. The schools are: Al Awda High School for Girls (Bethlehem), Beit

Jala High School for Girls, Al Khader High School for Boys, Battir High School for Boys, and Wadi Fukin Mixed School.

- A common policy of closed doors changed in all 5 localities, Bethlehem City, Beit Jala, Al-Khader, Battir, and Wadi Fukin. The closed doors policy means the practice of doing things secretly and not letting the public know about them; after an official letter from ARIJ was sent, they agreed to meet with the students.
- 5 policies changed in the targeted localities to improve democracy and involve citizens: Bethlehem Municipality agreed to establish a committee to review Terms of Reference of the projects to make sure it reflect its results; Municipality of Beit Jala agreed to activate the monitoring department to oversee projects' development; Wadi Fukin Council founded a committee to estimate the cost for projects before implementation to ensure sufficient funding; Al-Khader Municipality established a joint committee with 3 different councils to ensure completion of the projects; Battir Municipality established a new policy to not to go for lowest prices, rather choose their contractor after an evaluation that is 65% technical and 35% financial.
- 10 infrastructure projects monitored in the targeted localities and fed into Development Check.
- A 75% fix rate in infrastructure projects; which is the rate of how many problems were fixed divided by how many problems occurred.
- Education Director in Bethlehem announced that this should be the beginning and not the end of the project, and it should be an approach in all schools.
- 6 local campaigns were created and conducted by 6 targeted municipalities in the West Bank (Halhul, Tarqumiya, Bani Na'im, Huwwara, Qabatiya and Silat adh Dhahr) to raise awareness of water-related issues and raise revenue collection in the localities.
- In cooperation with Ministry of Local Government, the Ministry's citizen budget for the year 2017 was created and published.

2- Cooperation with the Palestinian Authority, NGOs and Institutions OR Cooperation with Regional and International Institutions, Bodies and NGOs:

ARIJ Good Governance Program maintained its strong cooperation ties with several local and international bodies, including: Palestinian Anti-Corruption Commission (PACC); The Coordination Group of the Supporters of the Cooperative Sector "Owneh Group"; National Team to Support the Transparency of the Public Budget, Coalition for Accountability and Integrity (AMAN); Initiative for the Promotion of Global Dialogue and Democracy (MIFTAH); Ministry of Local Government; Palestinian Water Authority (PWA), Palestinian Association of Certified Public Accountants (PACPA), Housing Cooperatives in Palestine (PUHC), Integrity Action, Ministry of Labor, General Directorate of Cooperation (GDC), Ministry of Health, Oxfam, We Effect, European Union (EU), BTC / Enable, Joint Service Council for Planning and Development (JSCPD-East Bethlehem), 6 local authorities in the West Bank: Halhul, Tarqumiya, Bani Na'im, Huwwara, Qabatiya and Silat adh Dhahr.

This year, the Good Governance Program team had conducted and/or participated, either locally or internationally, in 75 conferences and workshops, 46 meetings and visits, and 10 presentations. Additionally, the program had published 13 articles in different local newspapers such as Al-Quds daily newspaper and Al-Ayyam daily newspaper. This in addition to publishing the articles on various websites; Sada news, Wattan TV, Maan, Palestinian Ministry of Labor and Integrity Action as well as the program had provided many services to the local community in relation to the program field of work.

2.4 Natural Resource Management Program

1- Activities and achievements in the year 2017:

1.1 Improving access to water and sanitation services

1.1.1 Wastewater treatment

Water and Environment Research Department (WERD) actions focus on adopting, developing, and contextualizing namely; **1)** small wastewater treatment technologies are suitable for localities without a sewerage collection system (network) or localities where it is not feasible to connect the households to a sewerage network due to complex terrain relief or low housing density to medium scale wastewater treatment technologies, and **2)** The medium scale plants are suitable for localities with an existing sewerage network or localities where it is feasible to connect the households to sewerage collection system.

WERD continued developing and promoting wastewater treatment in Palestine using activated sludge wastewater treatment processes. Through actions supported by grants from the Spanish Agency for International Cooperation and Development (AECID), The European Commission and We Effect, ARIJ increased the wastewater treatment capacity in Palestine in 2017 from 12.8 MCM/year to 13.32 MCM/year. The direct impacts of these actions were: **(1)** the protection of landscapes and 41.5 hectares of agricultural land from pollution with untreated wastewater; **(2)** the reclamation of 10 hectares of agricultural land previously heavily polluted by waste products; and **(3)** the protection of 222 households and the students of an elementary school in Sair from exposure to waterborne diseases. In the year 2017, the projects interventions were implemented carefully and included the following:

1. Reduce the investment, maintenance and operational costs of Wastewater Treatment Plants at both Household level and medium scale plants.

Of the main constraints causing slow progress in wastewater treatment in Palestine are the high investment, operation and maintenance (O&M) costs of wastewater treatment and reuse. To reduce the investment and operational costs, research and development actions concentrated on: (i) using, to the extent possible, locally produced materials in the construction of the household level wastewater treatment plants; (ii) realizing the cost advantage that arises with increased treatment unit capacity (i.e. economies of scale); and (iii) reducing the operational costs by coupling the treatment unit to a PV system and using innovative, cost-saving technologies for sludge dewatering.

In this context, the WERD implemented several research studies, to evaluate the most feasible sludge treatment and sludge composting alternatives for Wadi Al Arroub Wastewater treatment plant (**Photo 5**), since the adoption of a low cost sludge handling approach can contribute in the sustainability of such wastewater treatment infrastructures. The Comparative Financial Analysis and Projection study of the 1) Sludge Dewatering Technologies included; Centrifuge, Screw Press, Artificial Media Drying Beds, and Geotubes (**Figure 1**), and 2) While the composting technologies included both Beltsville and Rudgers composting methods.



Photo 5: Wadi Al Arrub wastewater treatment plant with 13,000 P.E. capacity (medium scale plant)

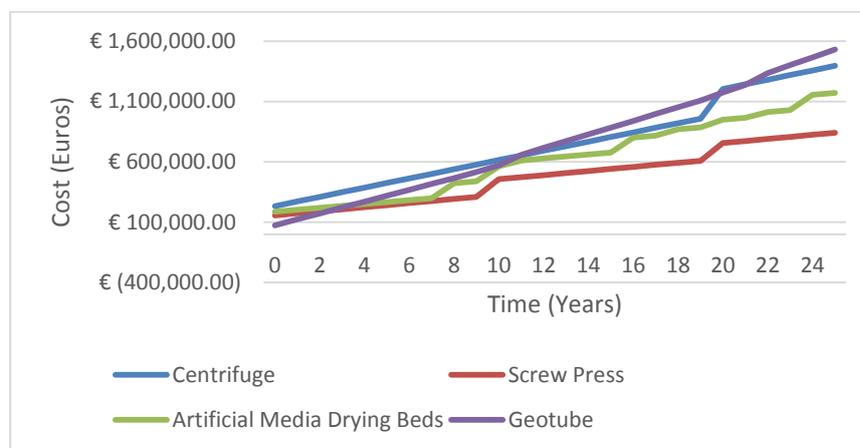


Figure 1: Dewatering Technologies Cost Comparison Over 25 Years (Wadi Al Arrub WWTP)

2. Monitoring the quality of treated wastewater

The Ministry of Agriculture (MoA) and the Palestine Standards Institution (PSI) pose strict standards on the reuse of treated wastewater in Agriculture. The reuse of treated wastewater is imperative because: (1) of the current and projected future water scarcity in Palestine; and (2) to realize all revenue streams from the treatment process in order to minimize or even eliminate if possible the O&M costs of wastewater treatment. These strict Palestinian standards impose both technical and financial challenges since treatment processes that achieve high water quality standards often require higher investment in both operation and maintenance costs. The challenge was to reduce the investment and operational costs while improving the quality of the treated wastewater. This was achieved by introducing low-cost technological advances such as air-bubble diffusion membranes, high efficiency air pumps, utilizing appropriate corrosion free materials, and optimizing operational parameters of the wastewater treatment systems.

3. Wastewater reuse demonstration experiments

One wastewater reuse demonstration experimentation site was established in Wadi Al Arrub - Sair, experimental site (**Photos 6 and 7**) to: (1) test suitable plant varieties for irrigation with treated wastewater; (2) determine plant water requirements; (3) evaluate the impacts on soil characteristics of irrigation with treated wastewater; and (4) to study the impacts of irrigation with treated wastewater on crop quality and productivity. Four crops were planted. These were alfalfa, almond trees (3 varieties), pomegranates (2 varieties); and grape vines.



Alfalfa: April 2017



Alfalfa: July 2017



April 2017: Almond trees and pomegranates



June 2017: Almond trees and pomegranates



September 2017 Almond trees and pomegranates

Photos: 6 & 7: Experimental Agricultural Lands in Wadi Al Arrub - Sair / Hebron Governorate

4. Waste water treatment plant at household level (Photo 8):

In cooperation with the Good Governance Department, WERD 1) Served 32 households with wastewater treatment and reuse systems in Hizma, Anata, Jaba', Al Ram and Kfr Akab. The funding for this action is from the European Commission under the Non State Actors and Local Authorities in Development Actions in the Occupied Palestinian Territory Program not only protected the environment from direct pollution but also, contributed in increasing those families fruits production, without increasing their water consumption bill through replacing domestic water used in irrigation with the treated effluent, and 2) implemented a wastewater treatment and reuse systems that is currently serving, Hebron University Employees Housing with the with 65 P.E. capacity, this activity was done through We Effect project entitled "Improving Good Governance Practices among Palestinian Cooperatives and Community Based Organization"/ WWTP component - Hebron.



Photo 8: Household level wastewater treatment plants with 9 Population Equivalent (p.e.) treatment capacity

1.2 Awareness and knowledge transfer

1.2.1 Municipal water conservation and optimal use

WERD, with funding from the Agence française de développement ("AFD"), has continued its activities through conducting an intensive and integrated awareness campaign on improved water resource conservations, the optimal use of domestic water, and social responsibility towards the sustainability of the water resources. The intensive mass media, social media, and educational campaign targeted all social strata in Bethlehem Governorate but with special focus on school children and youth, women associations, and large consumers. The targeted areas were Bethlehem, Beit Jala, Beit Sahour, Al-Walaja, Ad-Doha, Al-Khader, Aida Camp, Dheisheh Camp, and Al Azza Camp.



Photo 9: The awareness campaign on water conservation and best utilization

The awareness material included, but not limited to:

- The project web banners were published on nine websites hyperlinked to project landing page on PWA electronic website.
- Five SMS messages were sent to over 90,000 subscribers to "Ma'an Now" .
- Six newspaper ads were published in Al-Quds newspaper.

- Three Billboard advertisements (size of 9 X 4 meters) were designed and displayed in Bethlehem area.
- Four TV spots and four radio spots were broadcasted on Ma'an TV and local Radio stations for the duration of the campaign.
- Twelve TV episodes were recorded and broadcasted on Ma'an TV.
- An animated video was broadcasted on Ma'an TV.
- All audio-visual material, in addition, to being broadcasted on TV were also posted on social media (YouTube, Facebook) and on ARIJ and Ma'an Websites.
- One water leaflet (5,000 copies) with water conservation messages, one household water audit form (5,000 copies) were distributed to general public, university students, and to the large consumers (leaflets and audit form).
- One children drawing booklet (5,000 copies), and one children educational booklet (5,000 copies) were distributed to 57 schools in the targeted area.
- Ten introductory meetings with a total attendance of 110 and seven town hall meetings with a total attendance of 160 were conducted in the study area.
- A letter with water conservation and optimal water use messages were presented by the students of 57 schools during the Morning Speech and the speech was live broadcast on Baladna Radio. Through coordination and working with Department of Education Supervisors, the teachers (50 in total) and the students (21 in totals) were trained to become ambassadors and trainers in the relevant subjects. The activities in 24 schools were as follows:
 - Drawing competitions, poem competition, theatrical plays, and other forms of artistic expressions related to water and hygiene.
 - Recorded TV episode and TV spot where students stressed the importance of their roles in proper water behaviors.
 - Students with the help of their parents and teachers filled the household water audit form thus communicating to their parents' important messages on stopping water leakages, improper water use behaviors, and water conservation messages.
 - Schools Final event attended by 100 students celebrating their achievements.
- Launch day event where messages about the objectives, importance, and expected results of the campaign were presented by the project team and the Minister of Palestinian Water Authority (PWA).
- Water day with 24 hours programming on Ma'an TV was dedicated to the awareness campaign.



The impacts and outreach of the awareness campaign project is summarized in **table 3**.

The Identified Indicators	Indicator Value %
Estimation of the number of people reached by project stratified by gender	~83,000 watched audiovisual material on Ma'an TV ~77,000 visited websites with project material 35,000 SMS messages
Number of schools visited	57 schools received project material and participated in project activities
Number of teachers trained	50 teachers
Number of children and youth trained as trainers	21 students provided training on water conservation and best utilization
Estimation of the number of women participated in the campaign	65 women
Number of schools adopting or willing to adopt recommended environmental friendly education materials and actions	57 schools
Estimated number of people visiting social media	850,000 reached
Estimated number of people watching awareness campaign outside the study area	1,750,000
Estimated number of people participating in the campaign, including youth	6000
Estimated number of students participating in the school competitions	At least 400 students competing internally within schools. 100 students competing in the competitions between schools
Estimated number of people following the Facebook pages	1,535,502 people visiting Ma'an Homepage 300 thousand people following the campaign on Ma'an webpage
Estimated number of people watching you-tube videos about the project	2500 (Ma'an)
Estimated number of people reading the news related to the campaign at Ma'an website	73000
Estimated number of university students participating in the campaign	500 Students
Number of large consumers (including hotels, hospitals, government units, industries), adopting water saving devices	50
Behavioral changes indicators	Indicator Value %
Percentage of houses adopting water saving devices	86%

1. Percent of households paying water bills:	61%
2. Percentage of people willing to act against illegal connections:	32%
3. Willingness to change consumption behavior to conserve water:	88%
4. Percent of households willing to adopt using water saving devices:	91.0%
5. Percent of people that avert using water house to clean their cars	10.2%
6. Percentage of people responding to home water leakage.	85.5%
Awareness changes indicators	Indicator Value %
People awareness related to water supply problems	
1. Inequality in distribution	85.3
2. Network Physical losses	77.6
3. Illegal connection	79.1
4. Improper water use	87.1
5. Not paying water bills	53.9
6. WSSA monitoring	69.8
7. Water tariff	51.5
8. Control of Israel on water resources	95.5
Reasons behind improper use and wastage of water resources:	
1. Neglect	23%
2. Ignorance	28.5%
3. Lack of social responsibility	48.5%

This year, the Water and Environment Research Department team had conducted and/or participated, in 6 conferences and workshops and 11 meetings and visits. This is addition to providing services to the local community related to its field of work.

1.2.3 Israeli unilateral actions and updates of geopolitical status

Since 1995, ARIJ has continuously monitored Israeli unilateral actions in Palestine and evaluated the social, economic, and environmental impacts of these actions as well as the geopolitical repercussions of such actions on the two state solutions to the Israeli-Palestinian conflict. The sequence of continuous projects since 1995 have contributed significantly to national and international understanding of the nature of the conflict, its root causes, and of how the Israeli unilateral actions undermines the viability of a future Palestinian State as well as people's aspirations for a peaceful and just solution to the conflict. In recent years, the visibilities of the project and the national and international demand for its results have increased exponentially.



Photo 10: ARIJ Director General, Briefing the European Union on the Geopolitical Situation in Palestine

These and other results were made available to national and international governmental and non-governmental organizations, the Palestinian Negotiations Affairs Department (NAD), the European Council, EU representatives, academics, journalists, and to the general public via: (a) Ten meetings with European Union Consul Generals and Representatives; (b) regular meetings with the Palestinian negotiations affairs department; (c) publishing 748 case studies of Israeli activities on project website (POICA) and in widely circulating newspapers; (d) in producing and publishing on social media short documentaries on YOUTUBE and messages on Facebook and Twitter of Israeli violations and their impacts on the Palestinian communities; and (e) collaborating with academics in producing peer-reviewed literature and books on the aspects impeding the progress of the peace process.

The work to create the proper and the right atmosphere leading to sustainable resolution of the conflict through positive engagement with key stakeholders (the Palestinian Presidential Office, The Palestinian Prime Minister Office National Coordination Office, The Palestinian Commission Against the Wall and Settlements, the EU Delegates, the Palestinian Negotiations Affairs Department (NAD), Arab members in the Israeli Knesset has always been the endeavor of many of the involved groups in this conflict. Also, ARIJ participates in monthly meetings with the NAD in preparation to submit a petition on behalf of the Palestinian people to the International Criminal Court.

The realization of such goal remain an active purpose for the key stakeholders as they continue to advocate the values of peace and look into solutions to obstacles currently impeding progress in the peace-process. The highlight to which pursued end was at the participation of the “Brussels Declaration” at the First European Conference on Israeli Settlements of November 6, 2017; which

was attended by more than 150 representatives from 24 European countries; of whom law-makers, jurists, journalists and political activists.

The international organizations, academics, national authorities and think tanks frequent citation of the project's data to contest the overall impact of the conflict on the Palestinians and the Israelis alike; only adds to the project's credibility. e.g. of project results and disseminated information used by stakeholders and beneficiaries in various publications:

- Economic Monitoring Report to the Ad Hoc Liaison Committee. World Bank, September 2017
<http://documents.worldbank.org/curated/en/515891504884716866/pdf/119657-WP-PUBLIC-on-Monday-1-PM-sept-11-AHLC-report-September-8.pdf>
- Israel's Exploitation of Palestinian Tourism and International Complicity: Tourism as a tool to normalize the occupation. Negotiations Affairs Department, December 2017
<https://www.nad.ps/sites/default/files/tourism-as-a-tool-to-normalize-the-occupation.pdf>
- Humanitarian Needs Overview: Occupied Palestinian Territory. Relief Web, November 2017
https://reliefweb.int/sites/reliefweb.int/files/resources/hno_20_12_2017_final.pdf
- THE AGRICULTURAL SECTOR IN GAZA STRIP: Obstacles to Development. Palestinian Trade Center, 2017
<https://www.paltrade.org/upload/multimedia/admin/2017/09/59af8fe3e487b.pdf>
- The Siege: Ten Years On. Maan Development Center , 2017
<http://www.maan-ctr.org/files/server/Publications/Agenda/2017.pdf>
- THE ECONOMIC COST OF THE ISRAELI OCCUPATION REPORT
<http://www.arij.org/publications/special-reports/234-special-reports-2016/766-the-economic-cost-of-the-israeli-occupation-report.html>
- The labor market impact of mobility restrictions: Evidence from the West Bank
<https://www.sciencedirect.com/science/article/abs/pii/S0927537117303305>

The reports that stood out during this reporting period and were distinctively referenced were:

The report on ***"The Economic Cost of the Israeli Occupation"***, which unfolded the Israeli occupation imposed restrictions on the key sectors (trade, industrial, recreational, natural resources, etc.) of the Palestinian economy. It calculates the direct costs of these restrictions and the forgone revenue due to lost development opportunities through the use of economic models. More specifically, the report measures the direct and forgone revenue losses from: (1) the gas marine reserve and fish industry due to restricted control over territorial water near the Gaza Strip; (2) the cost of confiscated land in the West Bank; (3) the forgone revenue from irrigated agriculture due to access restrictions to Palestinian water resources; (4) the cost of Israeli assault on Palestinian infrastructure, including the implications of the Israeli assault on Gaza Strip in 2014 and house demolitions in the West Bank; (5) cost of electricity purchased from Israel; and (6) the cost of restrictions on movement of goods and people within the West Bank. The report further extends the analysis to include the impacts on Palestinian industries of mining and quarrying, tourism, banking, telecommunications, as well as the costs of fiscal revenue leakage from the Palestinian authority to Israel due to trade agreements and the current clearance system. We found that the total economic cost of the Israeli occupation in Palestine to be around 9.46 billion US dollars, representing almost 74.27% of Palestinian nominal GDP1 of 2014.

The other report that stood out is ***"The labor market impact of mobility restrictions: Evidence from the West Bank"***, which examines and looks at data related to Israeli occupation closure system, which

include the placement of physical barriers, the restrictions on movement and how it effects the labor market, the check-points and overall impact on employment, wages and access.

The information harvested, processed and synthesized before it is disseminated in its final context: presentation, case study, reports, interviews, news article, e-mail list, etc.; eventually making it available to national and international governmental and non-governmental organizations, the Palestinian Negotiations Affairs Department (NAD), the European Council, EU representatives, academics, journalists, and to the general public.



Photo 11: ARIJ briefing students from the Eastern Mennonite University (EMU) on the geopolitical situation in Palestine

The dissemination of information is carried out through the published daily report (365), the project's website, monthly (12) and quarterly (4) reports, case studies (748), delivering 34 presentations, published 37 articles in different local newspapers such as Al-Quds daily newspaper and Al-Ayyam daily newspaper, this in addition to publishing in news agency websites; Elwatan News, Palinfo (the Palestinian Information Center), SAFA Press Agency, Majal Press. Additionally, the program had distributed 1000 geopolitical posters, conducting 171 radio and 157 TV interviews, as well as the team had conducted and/or participated, either locally or internationally, in 7 conferences and workshops. Also, the GIS department staff participated and attended in more than 25 meetings and 10 workshops, and conducted many TV and radio interviews.



Photo 12: ARIJ Director General, briefing Al Najah University on the Israeli-Palestinian Conflict during the conference

Also, the project titled '**Improving the Capacities of Local Authorities to develop and implement Sustainable Energy Efficiency Practices and Renewable Demonstration Actions Tubas - Palestine**' (funded by the EU under 'Supporting the Southern Neighbourhood Partnership cities in the implementation of Sustainable Urban Demonstration Energy Projects' - SUDEP Programme and co-financed by the project partners (ARIJ, GEREDIS, and Tubas Municipality)) completed by end of June 2017; through which 103 Kw of photovoltaic systems established on the main public buildings of Tubas Municipality to get rid of the electricity bills and increasing the efficiency of electricity consumption as well as the awareness of all Tubas people toward the importance of utilizing the solar energy and utilizing the available electricity resources effectively. Also, the project focused on the involvement of different related stakeholders in the renewable energy sector to enhance their cooperation and maximize the benefit of the available financial and technical resources. The Ministry of local Government was the main focal point for SUDEP project in Palestine, thus the project focused on building the capacities of the local authorities in this field. Different mean of media and communications were utilized to disseminate the project awareness material and to present the project activities. To be sure that the produced capacity building and awareness material, special reports, developed studies and online digital monitoring for the electricity production by the installed solar systems to reach all people, a special website was developed: <http://tubasenergy.com/>.

It is worth mentioning that the green impact for the installed solar systems equivalent to reduce CO2 release of 97.2 tons per year which equal to the amount of fixed CO2 by 3,470 mature forest trees. One of the projects main achievements was the training of 12 schools included 241 teachers (122 females) and 1966 students (874 female students). Furthermore, the project managed to assist three other Municipalities in the West Bank in developing a technical proposal to replicate the Proposed Energy Action for their main buildings. These municipalities were Tarqumiya, Beit Sahour, and Ar Ram. Several means of disseminations were used including TV spots, televised sessions, leaflets, factsheets, articles and press releases. The key element for sustainability focused on establishing renewable energy working group, the created web based innovative platform, and the formulated technical committee to follow up and monitor the performance of the established photovoltaic system which is formed from the project main partners.

ARIJ had continued the work on the project titled "**Bethlehem Mobility Study, Phase One - Data Collection**" funded by the Municipality of Paris. The main objective of the project was to provide a comprehensive analysis of the level of accessibility of the study area (Bethlehem Urban Area). ARIJ had performed an extensive work on data collection for roads, intersections, engineering works, pedestrian network, car parks, public transport and taxis, traffic counts and surveys, household surveys and origin/destination matrices. A final report for the data collection of the Mobility Study for the Governorate of Bethlehem was developed. It was the first stage of an Urban Transport Project that it was aiming to deliver a "Transport and Mobility Master Plan for the Governorate of Bethlehem".

1.3 Capacity development

The NRM is committed to develop national capacities (individuals, grassroots initiatives, cooperatives, and state-based organizations) in the fields of wastewater treatment and reuse, climate change adaptation, geographic sciences, sustainable consumption and production (SCP), and land and water management.

Developing the capacities of the ARIJ staff is also imperative to continue ARIJ's rich tradition of technological and process innovation. The staff participated in several regional and international training workshops covering the subjects of precision agriculture, operational control and management of wastewater treatment processes, opportunities and challenges of treated wastewater reuse in Agriculture, sustainable consumption and production (SCP), and peace-building.

2. Cooperation with the Palestinian Authority, NGOs and Institutions OR Cooperation with Regional and International Institutions, Bodies and NGOs:

The program has strong working relationship with state-, and non-state-based institutions especially Land and Water Settlement Authority, Palestinian Central Bureau of Statistics (PCBS), Ministry of Local Government, Area C National Coordination Office "ACCO", Municipality of Bethlehem, Municipality of Beit Sahour, Municipality of Sair, PWA, WSSA, MoA, EQA, Ma'an network. We also cooperate with several regional and international organizations including but not limited to UN-Habitat, OCHA, SCP/RAC, DTD, CENTA, UNCTAD, and UNRWA.

Moreover, under the International Union for the Conservation of Nature (IUCN) membership, the program has continued its actions as the regional focal point. The program participated in two meetings in the Palestine IUCN national committee. During the meetings, the priority activities at the national level was discussed with the IUCN secretariat, commissions and working groups. Furthermore, the program had participated in developing the Palestine IUCN national committee (PNC) action plan (2017-2020).

Also, this year the program has signed a memorandum of understanding (MoU) with the Land and Water Settlement Authority and the Palestinian Central Bureau of Statistics, to exchange and sharing the data and information, experiences and capacity building.

Photo 13: ARIJ signing a memorandum of understanding with the Land and Water Settlement Authority



ARIJ Donors and Partners for the Year 2017

Donors:

European Commission
Mennonite Central Committee (MCC)
Canadian Food Grains Bank (CFGB)
Spanish Agency for International Cooperation (AECID)
Swiss Agency for Development and Cooperation (SDC)
We Effect
DanChurchAid & NorwegianChurchAid (DCA/NCA)
Federal Ministry for Economic Cooperation and Development (BMZ) Germany
CARE International
Polish Center for International Aid (PCPM)
Polish Aid
Australian Agency for International Development (AusAID)
TIRI (Integrity Action)
Food and Agriculture Organization of the United Nations (FAO)
Oxfam International
Siemenpuu Foundation
Agence Francaise de Developpment (AFD)
CNEWA - Pontifical Mission for Palestine
Arab Fund for Economic and Social Development
Global Ministries of the United Methodist Church
Caritas Switzerland (CACH)
Enabel - Belgian Development Agency
The Netherlands Initiative for Educational Research (NRO)
Municipality of Jericho

Partners:

Land Research Center (LRC)
International Center for Agriculture Research in Dry Areas (ICARDA)
Palestine Technical University (Kadoori)
Joint Services Council for Planning and Development /Eastern Rural - Bethlehem
Tubas Municipality
GEREDIS Society
The Coalition for Accountability and Integrity - AMAN
The Palestinian Initiative for Promotion of Global Dialogue and Democracy- "MIFTAH"
Ma'an Network

Publications of the Year 2017

ARIJ is continuing disseminating its information locally and internationally at all levels of stakeholders through various publications such as scientific articles, special reports, booklets, leaflets, case studies, infograps, posters, articles; amongst others. The following is a list of the published, prepared, printed works during 2017:

3.1 Books (co-authors)

1. Zboun I. and Hilal J., (2017): co-authors: Europe's Mediterranean Neighborhood: An Integrated Geography, (<https://www.e-elgar.com/shop/europe-s-mediterranean-neighbourhood>).

3.2 Scientific Articles

1. Dweik, F. (2017) 'Climate Change impact on Crop Water Requirements (CWR) through climatic gridded observations in the Jordan Valley'. 1st International Conference on Climate Change; May 8 - May 9; Ramallah; 2017.
2. Dweik, F., Rahil, M., Salamah, M.S. (2017) 'Evaluation and assessment of water budget in the eastern aquifer basin of the West Bank, Palestine', International Journal of Global Environmental Issues, Vol. 16, Nos. 1/2/3.

3.3 Special Reports

1. Settlements' Monitoring Unit (2017). Israeli Settlers' Population is going for a million. The Applied Research Institute - Jerusalem. Palestine.
2. Settlements' Monitoring Unit (2017). Opportunities and Challenges of Palestinian Development actions in Area C. The Applied Research Institute - Jerusalem. Palestine.
3. Settlements' Monitoring Unit (2017). الوضع الديمغرافي في مخيم حافظة تل قدس The Applied Research Institute - Jerusalem. Palestine.

3.4 Magazine Articles

1. Nader Hrimat, July 2017. Utilizing Solar Energy Technology in Palestine. This Week in Palestine. Issue 231.

3.5 Conference Papers

1. Badran, F. (2017) 'The Soil Degradation and Food Security in Palestine; International Conference on Food Security in Palestine; December 12; Al-Khadouri University. Ramallah, Palestine; 2017.
2. Dweik, F. (2017) 'Climate Change impact on Crop Water Requirements (CWR) through climatic gridded observations in the Jordan Valley'. 1st International Conference on Climate Change; May 8 - May 9; Ramallah; 2017.

3.6 Booklets

1. Presents the main results obtained from the four years of 'Strengthening Livelihood through Community Adaptation & Learning'- SLCAL project, Dec. 2017 (Arabic and English Version).
2. Presents the main crops cultivated in the hydroponics and wicking beds, and optimum conditions for cropping and taking care for each crop, Dec. 2017. (Arabic Version).

3. Water and Environment Research Department (2017). Children drawing booklet. The Applied Research Institute-Jerusalem (ARIJ). Palestine (Arabic and English Version).

3.7 Infographs

1. 50 Years of Occupation. The Applied Research Institute - Jerusalem.Palestine. (<http://www.arij.org/latest-news/868-50-years-of-occupations-info-graphics.html>).

3.8 Social Media

1. Good Governance Program (2017). Success Stories of Women in Cooperatives, ARIJ/We Effect, Palestine.
2. Sustainable Agriculture Program (2017). 15 videos, ARIJ Project (Strengthening Livelihood through Community Adaptation & Learning (SLCAL), Palestine.
3. Sustainable Agriculture Program (2017). One Facebook Group, ARIJ Project (Strengthening Livelihood through Community Adaptation & Learning (SLCAL), Palestine.
4. Sustainable Agriculture Program (2017). 200 Calendars, ARIJ Project (Strengthening Livelihood through Community Adaptation & Learning (SLCAL), Palestine.
5. Saher Alkhouri (2017). ARIJ's Message on the Occasion of World Day to Combat Desertification 2017, ARIJ Website and Facebook. Applied Research Institute - Jerusalem (ARIJ). Palestine.

3.9 Leaflets

1. Good Governance Program (2017). Social Accountability from the Perspective of Integrity Clubs, ARIJ/Integrity Action, Palestine.
2. Good Governance Program (2017). Citizen Budget for the year 2016, ARIJ/Ministry of Local Government, Palestine.
3. Good Governance Program (2017). Citizen Budget for the year 2017, ARIJ/Ministry of Local Government, Palestine.
4. Good Governance Program (2017). Infographic about the supporting of Local Authorities, ARIJ/Ministry of Local Government, Palestine.
5. برنامجال حكامراشيد (7102). المرأة لاي اي قبيلين التحدي ولاطموح، مشروع الن موضوع بلال حكامراشيد يفي لاجمعيات القوية والفيظمات الامم في فلسطين، مع هذا البحوث التطبيقية للقوس (أريج) 7102.
6. Sustainable Agriculture Program (2017). General description about hydroponic & wicking beds techniques and the advantages of using these techniques. The Applied Research Institute-Jerusalem (ARIJ). Palestine. (Arabic version).
7. Sustainable Agriculture Program (2017). Long shelf life MAWASEM products. The Applied Research Institute-Jerusalem (ARIJ). Palestine. (Arabic & English version).
8. Sustainable Agriculture Program (2017). Presenting the results obtained from each program of SLCAL project including: general leaflet, irrigation leaflet, water harvesting leaflet, olives leaflet, range land leaflet, and field crops leaflet. The Applied Research Institute-Jerusalem (ARIJ). Palestine. (Arabic version).

9. Water and Environment Research Department (2017). Water leaflet with water conservation messages. The Applied Research Institute-Jerusalem (ARIJ). Palestine.
10. Water and Environment Research Department (2017). Water leaflet with water conservation messages for Hotels. The Applied Research Institute-Jerusalem (ARIJ). Palestine
11. Water and Environment Research Department (2017). Household water audit form. The Applied Research Institute-Jerusalem (ARIJ). Palestine.

3.10 Case Studies

Note that all case studies conducted by the Settlement project team are detailed at ARIJ's website www.arij.org. & <http://poica.org/>. The total number of case studies is 748.

3.11 Daily, Monthly, Quarterly and Yearly Reports

1. The Settlement project team published 365 electronic editions of the daily report that cover the daily events in the oPt. (See ARIJ's website at www.arij.org. & <http://poica.org/>).
2. The Settlement project team published 12 monthly reports and 4 quarterly reports on the Israeli occupation activities in Palestine. (See ARIJ's website at www.arij.org. & <http://poica.org/>).
3. Sustainable Agriculture Program (2017). Technical report (progress, annual, and final) prepared and submitted for MCC, CFGB, PCPM, CARE, ICARDA/WLI, Methodist).
4. Water and Environment Research Department. Monthly progress report for the Public water Awareness Campaign (6 reports).
5. Water and Environment Research Department (2017). Reports for the Public Awareness Campaign Water supply and Sewerage facilities Improvement Project for Bethlehem - Beit Jala - Beit Sahour Area including Baseline Survey report; Mid line survey report; Final survey Report; Final Technical Report; Media Plan (matrix). The Applied Research Institute- Jerusalem (ARIJ). Palestine.
6. Water and Environment Research Department (2017). Comparative Financial Analysis and Projection Sludge Dewatering Technologies. The Applied Research Institute- Jerusalem (ARIJ).
7. Palestine. Water and Environment Research Department (2017). Comparative Financial Analysis and Projection Sludge composting technologies. The Applied Research Institute- Jerusalem (ARIJ). Palestine.

3.12 Posters

1. Settlements' Monitoring Unit (2017). Poster of the Geopolitical status of occupied State of Palestine. The Applied Research Institute - Jerusalem (ARIJ). Palestine.

3.13 Manuals

1. Food production manuals prepared and distributed to the food processing cooperatives of MAWASEM commodities. ARIJ, 2017. (Arabic Version).
2. Sair Waste Water Treatment Plant Operation & Lab Manual. ARIJ, 2017. (English Version).

ARIJ PLANS for the year 2018

ARIJ program's planned activities are set according to the Strategy from 2018-2022 and overall goals of ARIJ. Therefore, ARIJ is planning to initiate funds for new project proposals to meet the urgent need for development and research projects that aim to serve the Palestinian people at all levels. The following tables describe planned activities according to ARIJ Strategy for each Program.

4.1 The Natural Resource Management Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2018
<p>Goal 1: To disseminate information related to sustainable development in Palestine. Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p> <p>Goal 3: To improve access to affordable, reliable and sustainable green technologies in Palestine. Objective 3.1: To Increase accessibility and scaling-up eco-friendly green technologies in Palestine, especially at the household/neighborhood levels.</p> <p>Goal 4: To promote sound natural resource management. Objective 4.1: To improve management of environment and utilization of land and water resources.</p> <p>Goal 1: To disseminate information related to sustainable development in Palestine. Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p> <p>Goal 3: To improve access to affordable, reliable and sustainable green technologies in Palestine. Objective 3.1: To Increase accessibility and scaling-up eco-friendly green technologies in Palestine, especially at the household/neighborhood levels.</p> <p>Goal 4: To promote sound natural resource management. Objective 4.1: To improve management of environment and utilization of land and water resources.</p> <p>Goal 1: To disseminate information related to sustainable development in Palestine. Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p>	<p>Funded projects:</p> <ol style="list-style-type: none"> Promote wastewater treatment and reuse in the water scarce areas of the Middle East and North Africa through development and demonstration of innovative financial instruments and inclusive management plans (EU SWIM Program: 2017-2020. Status: Funded 80%. Co-financing probable from MoLG). Jericho water awareness campaign. Funding: Municipality of Paris. Designing and Implementing Community Awareness Campaigns for Twelve Local Communities in West Bank. Funding: Belgium Government.

Goal 1: To disseminate information related to sustainable development in Palestine.

Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.

Goal 2: To promote good governance and democracy in Palestine.

Objective 2.1: to promote inclusive and accountable decision-making.

Objective 2.2: to promote effective public service delivery and government responsibility.

Goal 4: To promote sound natural resource management.

Objective 4.1: To improve management of environment and utilization of land and water resources.

Goal 7: To play an active role in advocating for the Palestinian human rights under the prolonged Israeli occupation; including the right to self-determination as inscribed in the United Nations Charter and the International Covenant on Civil and Political Rights.

Objective 7.1: To advocate for Palestinian human rights under the prolonged Israeli occupation.

Goal 1: To disseminate information related to sustainable development in Palestine.

Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.

Goal 2: To promote good governance and democracy in Palestine.

Objective 2.1: to promote inclusive and accountable decision-making.

Objective 2.2: to promote effective public service delivery and government responsibility.

Goal 4: To promote sound natural resource management.

Objective 4.1: To improve management of environment and utilization of land and water resources.

Goal 3: To improve access to affordable, reliable and sustainable green technologies in Palestine.

Objective 3.1: To Increase accessibility and scaling-up eco-friendly green technologies in Palestine, especially at the household/neighborhood levels.

Goal 4: To promote sound natural resource management.

Objective 4.1: To improve management of environment and utilization of land and water

4. In coordination with the Good Governance Program: Enhancing Local Authorities' contribution to governance and development processes in Palestine" funded by the European Commission under Enhancing Local Authorities' contribution to governance and development processes in Palestine program.

5. Advocating For a Sustainable and Viable Resolution for Israeli-Palestinian Conflict Funded by the European Commission under EU PeaceBuilding Initiative Program.

Expected funding (Submitted Proposals and Concept Notes):

6. Towards Social Inclusion in Community Development by Providing Platforms for Planning and Advocacy. (EU East Jerusalem Fund. Full Proposal Stage). Expected start date: May 2018.

Proposals at development stage:

7. Feasibility Study Wastewater Disposal and Reuse in South Jerusalem, State of Palestine, to be submitted to the Palestinian Water Authority.

8. Feasibility Study Wastewater Disposal and Reuse in South East Bethlehem, State of Palestine, to be submitted to the Palestinian Water Authority.

resources.

Goal 1: To disseminate information related to sustainable development in Palestine.

Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.

Goal 2: To promote good governance and democracy in Palestine.

Objective 2.1: to promote inclusive and accountable decision-making.

Objective 2.2: to promote effective public service delivery and government responsibility.

9. Developing Strategic plan for Hebron Governorate to be submitted to the UN-Habitat.

4.2 The Sustainable Agriculture Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2018
<p>Goal 1: To disseminate information related to sustainable development in Palestine.</p> <p>Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p>	<p>Enhancing Networking and Partnership</p> <ol style="list-style-type: none"> 1. Establish new cooperation, partnership and joint activities with the agricultural governmental bodies, research institutes, civil society, UN agencies and international organizations as well as accessible specialized consortiums and networks. 2. Activate and empower the existing partnerships and relations with We Effect, CARE International and Oxfam GB, POLISH CENTER FOR INTERNATIONAL AID (PCPM), DANCHURCHAID (DCA), ICARDA, Spanish Cooperation, MCC, CFGB, FAO, GEF Small Grant Program, UNDP, UNRWA, EC, SDC, AusAid, GIZ, BMZ-Germany, WFP, Pontifical Mission, United Methodist Church ("Global Ministries") and Caritas Swiss etc. 3. Enrich the cooperation and partnership with the governmental bodies by providing, sharing experience with main focus on the Ministry of Agriculture and agricultural directorates in the Palestinian Governorates as well as NARC. 4. Continue the relationship with ICARDA and the partner institutions in the Water Livelihood Initiative regional project and develop joint new concepts with ICARDA. 5. Enrich and empower the established relationship with World Wide Views and IUCN. 6. Support the New Farm Company and Green Palestine Company: by enhancing their socially based and eco-green investment. 7. Applying for funding opportunities which are fit with ARIJ's vision and strategic objectives on individually and through partnership and specialized consortiums.

Goal 4: To promote sound natural resource management

Objective 4.2: To enhance conservation, management and utilization of Palestinian natural ecosystems and biodiversity.

Objective 4.3: To contribute in minimizing the climate change and variability impact by increasing the resilience of vulnerable Palestinian communities.

Goal 5: To contribute in improving the livelihood of the Palestinian society.

Objective 5.1: To improve food security, agro-practices, marketing procedures, and economic conditions on household, communities and national level.

Objective 5.2: To achieve sustainable management for controlled harvesting of Palestinian economic plant species.

Objective 5.3: To assess the livelihood conditions and opportunities for development at Palestinian localities.

Goal 4: To promote sound natural resource management

Objective 4.2: To enhance conservation, management and utilization of Palestinian natural ecosystems and biodiversity.

Objective 4.3: To contribute in minimizing the climate change and variability impact by increasing the resilience of vulnerable Palestinian communities.

Special Research and pilot/innovative activities:

1. Continue the activities of ARIJ's seed improvement program in partnership with related research centers, the established informal seed banks,
2. Scaling up the domestication of Palestinian wild plants initiative.
3. Focus on the following important and viable research and development topics: poverty alleviation, food security enhancement, climate variability (drought mitigation) and adaptation, biodiversity, nature reserves management and biosphere improvement, rangeland protection, adopting environmentally sound agro-practices, conservation agriculture, forest inventory, aridity index, water harvesting and storage, optimization of water use by crops, rangeland preservation and enhancement, urban agriculture techniques, documentation and preservation, sustainable management models, and encouraging the creation of social enterprise models towards community development, minimize dependency on relief and emergency approaches and focusing on developmental approaches, studying the value chain of rural agro-food commodities, shift towards safe agriculture and healthy agro-food.
4. Focus on improving the productivity of olive trees and olive oil quality in Palestine.
5. Increasing agricultural conservation practices in the of field crops and forages, home gardens, and urban agriculture to mitigate the impact of climate change, especially drought, scarcity of water resources and low rainfall.
6. Focusing on applying new water harvesting techniques and transfer them to the farmers by learning and practicing.
7. Up scaling the innovation of vermiculture composting techniques as well as aquaponic/hydroponic and wicking bed systems and technologies.
8. Studying the bio-fertilizers production techniques.
9. Continue improving the adoption of hydro-agriculture techniques to improve urban agriculture.
10. Following up the issue of climate change green fund and searching for creating strong consortiums to apply for this funding opportunity.
11. Improve the small ruminants' management and breeding system through piloting a new feasible and improved production – marketing system.

Continue performing, and accomplish the ongoing projects:

1. Continue the implementation of the second module (second year) with PCPM with targeted cooperatives for getting certification systems for NFC and targeted coops.
2. Accomplish the work on the Methodist Church on wicking bed systems for poor families.
3. Continue the implementation of the approved project by the MCC for providing wicking bed system to the needy families,

<p>Goal 5: To contribute in improving the livelihood of the Palestinian society. Objective 5.1: To improve food security, agro-practices, marketing procedures, and economic conditions on household, communities and national level. Objective 5.2: To achieve sustainable management for controlled harvesting of Palestinian economic plant species. Objective 5.3: To assess the livelihood conditions and opportunities for development at Palestinian localities.</p> <p>Goal 8: To adapt ARIJ managerial performance to local and international standards. Objective 8.3: To strengthen ARIJ organizational & Human Resource capacity.</p> <p>Goal 1: To disseminate information related to sustainable development in Palestine. Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p> <p>Goal 5: To contribute in improving the livelihood of the Palestinian society. Objective 5.1: To improve food security, agro-practices, marketing procedures, and economic conditions on household, communities and national level. Objective 5.2: To achieve sustainable management for controlled harvesting of Palestinian economic plant species. Objective 5.3: To assess the livelihood conditions and opportunities for development at Palestinian localities.</p>	<ol style="list-style-type: none"> 4. Continue the implementation of livestock project with DCA. 5. Continue the work on Souqona project in partnership with ICARDA and Care International 6. Starting the working activities on the Caritas Switzerland. <p>Inspiring Resource:</p> <ol style="list-style-type: none"> 1. Encourage the employees' participation in the specialized workshops and training courses to improve their experiences and know-how in different related topics. 2. Encourage the specialists to participate in the local, regional and international events. 3. Perform research consultancies and provide training courses. 4. Improve the staff experience in queen bees' production techniques, drought mitigation, forest and rangeland management, resource optimization and modeling to ensure the best practices and most feasible approach. <p>Publications:</p> <ol style="list-style-type: none"> 1. Prepare and publish papers, factsheets, applied manuals, leaflets and articles in the following fields: <ol style="list-style-type: none"> a. Land use, crop and water management b. Water harvesting techniques. c. Aquaponic/hydroponic/wicking technology for food production and income generating. d. Ecosystems / crop suitability mapping system. e. Rangeland preservation and improvement practices. f. Forestry and biodiversity preservation procedure agro-land use and resources management. g. Food quality and food hygiene including the nutritional values and nutritional health. h. Rural socially based enterprises with main focus on community benefits, and the involvement of youth and cooperatives.
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4.3 The Information Technology Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2018
<p>Goal 7: To play an active role in advocating for the Palestinian human rights under the prolonged Israeli occupation; including the right to self-determination</p>	<p>1. East Jerusalem schools surveying and developing the web-based mapping information system.</p>

as inscribed in the United Nations Charter and the International Covenant on Civil and Political Rights.

Objective 7.1: To advocate for Palestinian human rights under the prolonged Israeli occupation.

Goal 3: To improve access to affordable, reliable and sustainable green technologies in Palestine.

Objective 3.1: To increase accessibility and scaling-up eco-friendly green technologies in Palestine, especially at the household/neighborhood levels.

Goal 4: To promote sound natural resource management

Objective 4.1: To improve management of environment and utilization of land and water resources.

Objective 4.3: To contribute in minimizing the climate change and variability impact by increasing the resilience of vulnerable Palestinian communities.

Goal 1: To disseminate information related to sustainable development in Palestine.

Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.

Goal 2: To promote good governance and democracy in Palestine.

Objective 2.2: To promote effective public service delivery and government responsibility.

Goal 4: To promote sound natural resource management

Objective 4.1: To improve management of environment and utilization of land and water resources.

Goal 7: To play an active role in advocating for the Palestinian human rights under the prolonged Israeli occupation; including the right to self-determination as inscribed in the United Nations Charter and the International Covenant on Civil and Political Rights.

Objective 7.1: To advocate for Palestinian human rights under the prolonged Israeli occupation.

Goal 8: To adapt ARIJ managerial performance to local and international standards.

Objective 8.1: To enhance the performance of ARIJ Administrative Committee (AC) & General Assembly (GA)

Goal 1: To disseminate information related to sustainable development in Palestine.

Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.

2. The IT program will complete the implementation of the information system part of the project "Assessing the impacts of Israeli movement restrictions on the mobility of people and goods in the West Bank (2017-2018)".

3. Start the implementation on the project submitted to the EU Jerusalem office on the use of 3D technology in East Jerusalem to provide citizens and donors the tools and platform needed to strategize their work and involvement in the city.

4. ARIJ e-office suite version 2: The IT Program has in 2005 developed an E-office system for ARIJ that is currently used by all employees at ARIJ. The current system is very old and requires many updates as new internal manuals have been published therefore the IT is planning to develop new version of the system to take in consideration all the changes that have been implemented on ARIJ HR, Financial, Project and Administration manuals.

5. ARIJ is still interested in working with the University of Notre Dame in a project call "Creating a research hub for the people of Palestine". The IT program will coordinate the implementation of the

<p>Goal 3: To improve access to affordable, reliable and sustainable green technologies in Palestine. Objective 3.1: To increase accessibility and scaling-up eco-friendly green technologies in Palestine, especially at the household/neighborhood levels.</p> <p>Goal 1: To disseminate information related to sustainable development in Palestine. Objective 1.1: To improve dissemination of ARIJ's reports and work to the various stakeholders.</p> <p>Goal 7: To play an active role in advocating for the Palestinian human rights under the prolonged Israeli occupation; including the right to self-determination as inscribed in the United Nations Charter and the International Covenant on Civil and Political Rights. Objective 7.1: To advocate for Palestinian human rights under the prolonged Israeli occupation.</p>	<p>project through linking private sectors within Palestine and outside with the different research and academic institutes to promote collaboration and improve the research capacity within the higher education sector.</p> <p>6. Advocacy: The IT Program will continue its work in publishing on the different social media tools available to increase the number of followers and connections to be able to promote ARIJ work around the world. The program will also be responsible for creating documentaries related to ARIJ work and mission and publish all materials on our YouTube channel.</p>
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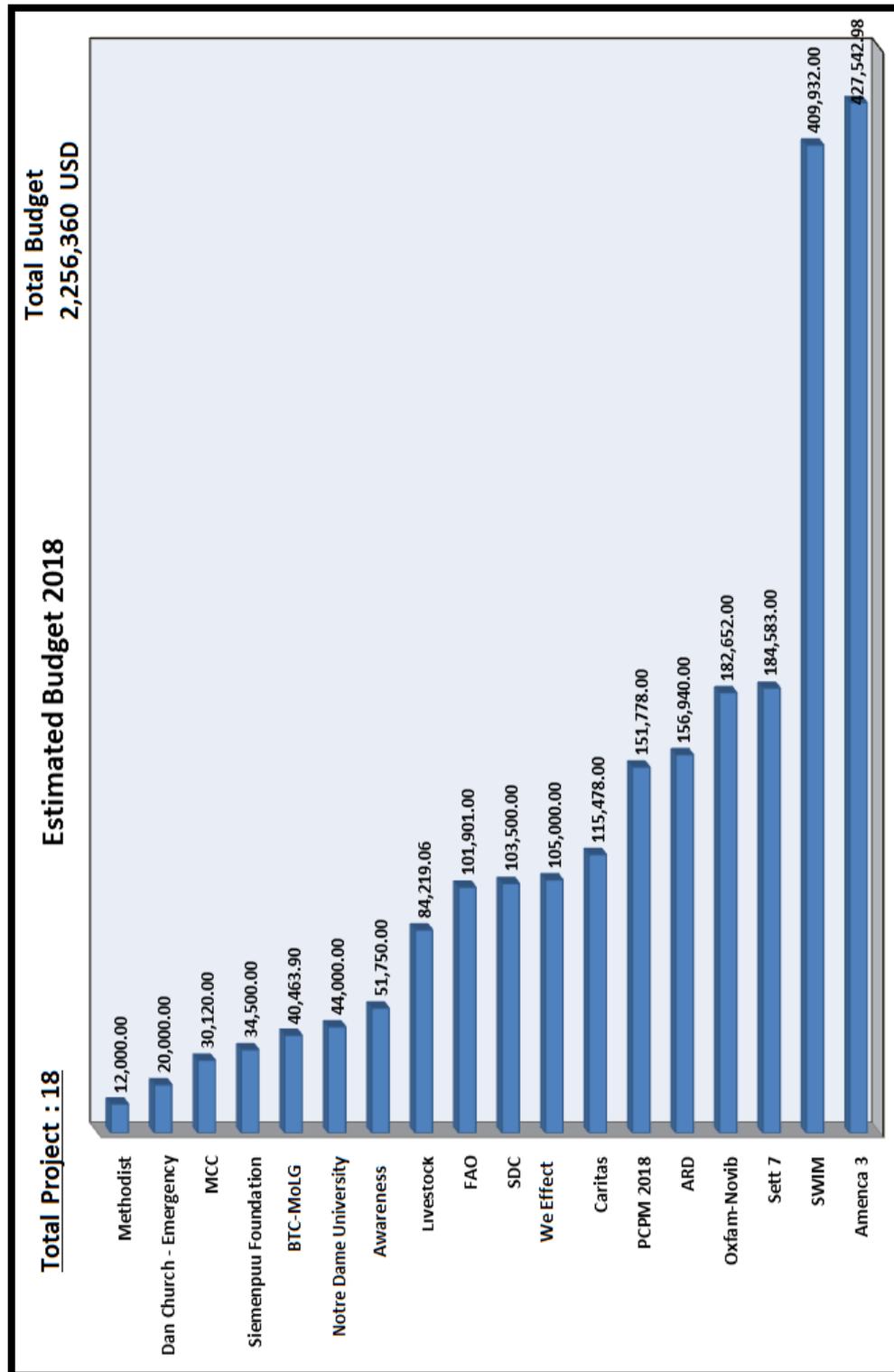
4.4 The Good Governance Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2018
<p>Goal 2: To promote good governance and democracy in Palestine. Objective 2.1: to promote inclusive and accountable decision-making. Objective 2.2: to promote effective public service delivery and government responsibility. Objective 2.3: to promote equitable civic participation and voice. Objective 2.4: to promote government fair policies and openness. Objective 2.5: to increase women and youth participation in economic development.</p>	<p>Funded Projects:</p> <ol style="list-style-type: none"> 1- First year of "Enhancing Local Authorities" contribution to governance and development processes in Palestine" funded by the European Commission. 2- Third Year of the strategic partnership "Finance for Development" funded by Oxfam International; commence work with the Palestinian Ministry of Labor. 3- Extension for "Money for Medicine" funded by Oxfam International. 4- Core Fund by We Effect (Swedish Cooperative Centre).

Chapter III: ARIJ Estimated Budget for the year 2018

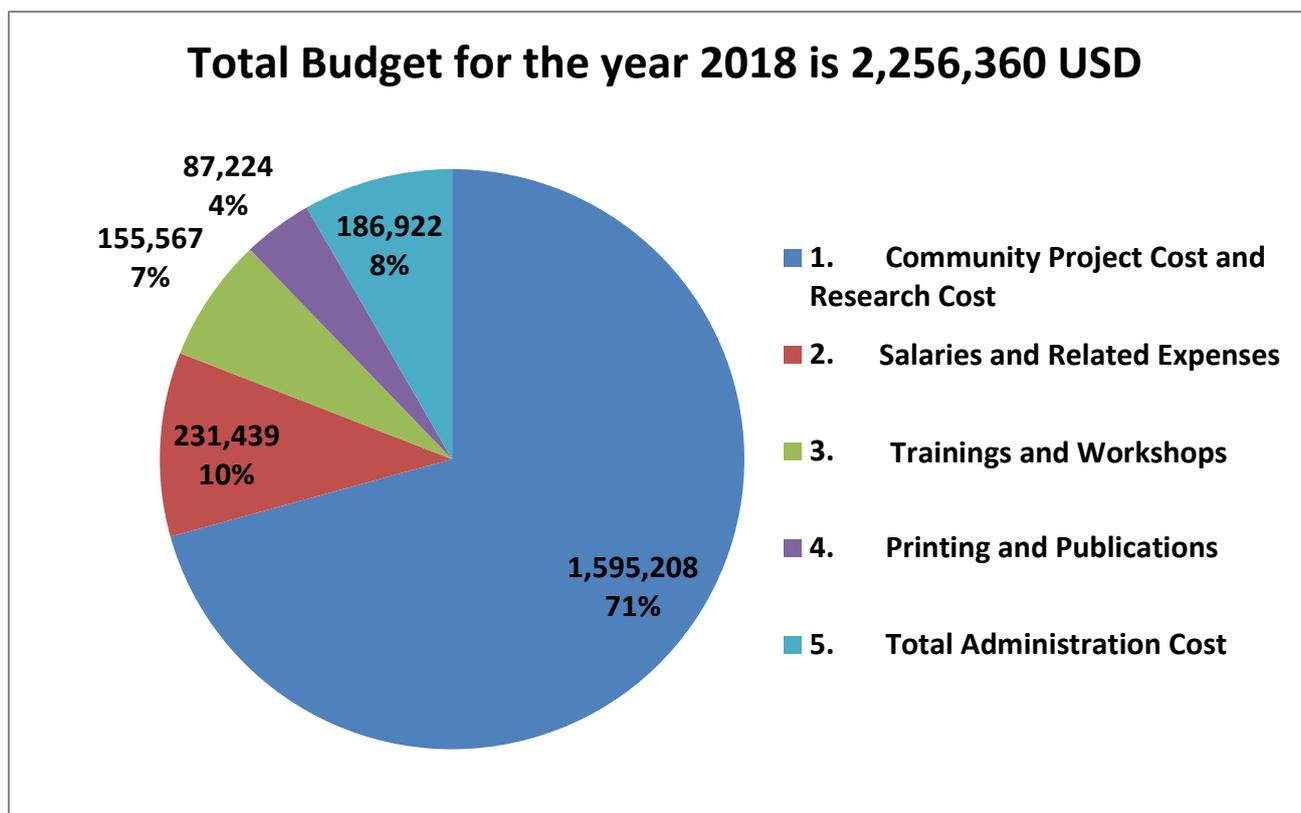
The distribution arrangement of the budget reflects the need of the Palestinian society for both the research and developmental projects. It is about the demand of the Palestinian people for creating opportunities for growth and change in order to increase their awareness, knowledge, skills and attitudes.

The following chart shows the distribution of ARIJ estimated budget in 2018 among projects/donors.



ARIJ budget is mainly distributed among community project and research costs, salaries and related expenses, administrative cost, trainings and workshops, and publications. The allocated budget for community project and research cost will form 71% of ARIJ overall estimated expenses in the year 2018; this amount of money will be transferred directly to the beneficiaries as cash or materials. The salaries and related expenses accounts for 10%, the administrative cost, trainings and workshops, and publications accounts for 19% of the total budget.

The allocation of ARIJ budget per main items for the year 2018:



The following table shows the estimated budget of the year 2018:

Budget Item 2018	TOTAL (USD \$)
1. Community Project and Research Cost	1,595,208
2. Salaries and related expenses	231,439
3. Trainings and Workshops	155,567
4. Printing and Publications	87,224
5. Total Administration Cost	186,922
Office Rental	5,505

Communication	22,405
Transportation	62,858
Office Supply & IT Equipment	32,885
Utilities	4,961
Audit Fees	6,697
Administrative cost	51,611
TOTAL Budget for the year 2018	\$2,256,360

علمية محكمة، تقارير خاصة، تقارير تقنية، كتيبات، دراسات حالة، ملصقات، رسم توضيحي، خرائط، تقارير يومية وشهرية وتفصيلية متعلقة بالانتهاكات للأرض والبيئة وغيرها.

تبع قوة المعهد من روح التعاون وحسن النوايا والقضية المشتركة التي يؤمن بها كافة موظفي المعهد وهيئته الإدارية وجمعيته العمومية، بالإضافة إلى الجهات المانحة والشركاء. وأخيراً ليس آخراً، فإن الأنشطة والبرامج المخطط لتنفيذها من قبل المعهد للعام 2018م وعلى سبيل المثال لا الحصر ستتركز في الإستمرار في البحث عن مشاريع وفرص بحثية جديدة تتعلق بالتطوير والمبادرة والابتكار. وفيما يتعلق بإجمالي الميزانية المتوقعة للعام 2018، فمن المتوقع أن تصل إلى 2,256,360 دولار أمريكي في حين أن الميزانية العامة للمعهد للعام 2017 وصلت إلى 2,844,305 دولار أمريكي.

المستهدفة بناء على تقييم احتياجات المجتمع. قام برنامج الحكم الرشيد ببناء القدرات وزارة الحكم المحلي الفلسطينية ووزارة العمل الفلسطينية حول الموازنة التشاركية وميزانية المواطن، كما أصدر ميزانية المواطن لوزارة الحكم المحلي لعام 2017.

وفي مجال إدارة المياه والبيئة، قام فريق عمل قسم أبحاث المياه والبيئة بتنفيذ عدد من الأنشطة المتعلقة بمعالجة مياه الصرف الصحي وإعادة استخدامها في الزراعة. حيث شملت هذه الأنشطة على متابعة العمل على تطوير وتشغيل محطة وادي العروب لمعالجة المياه العادمة بقدرة متوسطة تقدر بحوالي 1250 متر مكعب في اليوم، ويجري العمل حالياً على تطوير المحطة وتزويدها بنظام للطاقة الشمسية وذلك لتخفيف أعباء فاتورة الكهرباء الشهرية في المستقبل عن المحطة الأمر الذي سيعزز من استمراريته وقدرتها على تغطية التكاليف التشغيلية. كما تابع فريق العمل تنفيذ عدد من الحملات التوعوية التي تهدف الى رفع الوعي العام نحو المحافظة على المياه من أجل حمايتها وإستخدامها بشكل أفضل وذلك من خلال نشر وتعزيز الظواهر والقيم الايجابية داخل المجتمعات المحلية.

وفيما يتعلق بالوضع على الصعيد الجيوسياسي، واصل فريق العمل في معهد الابحاث التطبيقية - القدس (أريج) على مراقبة ورصد جميع الأنشطة الاستيطانية الإسرائيلية ذات الصلة في دولة فلسطين المحتلة. وواصل فريق اريج أيضا تقديم خدمات المعلومات لدعم منظمات المجتمع المحلي والمنظمات الوطنية من خلال توفير البيانات الإحصائية والتقارير والخرائط والسجلات الجغرافية لأغراض متنوعة. ونجح فريق العمل في إعداد ونشر 748 حالة دراسية و365 تقريراً يومياً و 12 تقريراً شهرياً و 4 تقارير ربع سنوية. هذا وقد تم من خلال المشروع تنفيذ 194 زيارة لمواقع مستهدفة من قبل الإحتلال وأيضاً جمع 179 أمراً عسكرياً (العام 2017). واستمرت وحدة المعلومات الجغرافية والاستشعار عن بعد بالعمل على تحليل المعلومات التي تم جمعها من الميدان وايضا تحديث المعطيات والارقام لأوراق البحث والتقارير والخرائط وبتقديم خدمات المعلومات الجغرافية لدعم منظمات المجتمع المحلي والمنظمات الاهلية الوطنية والحكومية من خلال توفير البيانات الإحصائية والتقارير والخرائط والسجلات الجغرافية.

وعلى صعيد برنامج تكنولوجيا المعلومات في المعهد فهو المسؤول عن تطوير، تصميم، تنفيذ، صيانة وتشغيل مجموعة واسعة من أنظمة المعلومات المتعلقة بعمل المعهد. وعلاوة على ذلك، فإن البرنامج مسؤول عن الحفاظ على المواد ونشرها على جميع مواقع الإنترنت الخاصة بالمعهد بالإضافة إلى وسائل التواصل الاجتماعي مثل فيسبوك، يوتيوب، وتويتر. ويقوم برنامج تكنولوجيا المعلومات في المعهد أيضا بتصميم مواقع وصفحات المشاريع وعمل التصاميم لمنشورات المعهد وطباعتها رقمياً. بالإضافة، فإن البرنامج مسؤول عن التصوير الفوتوغرافي وتحرير وإخراج أفلام الفيديو ونشرها. وبناءً على ذلك، فقد زار موقع المعهد الإلكتروني ما يزيد عن 6,777,830 للحصول على معلومات خلال العام 2017، كما زار الموقع الخاص بمراقبة الانتهاكات الإسرائيلية POICA التابع للمعهد حوالي 8,469,981 وما يزيد على 13,500 شخص قاموا بالاشتراك بوسائل التواصل الاجتماعي المختلفة التابعة للمعهد.

على صعيد التشبيك والتعاون، قام معهد أريج خلال العام 2017م ببناء وتطوير علاقات قوية مع العديد من المؤسسات والمنظمات غير الحكومية الدولية والإقليمية والفلسطينية من أجل تعزيز وإقامة تعاون مشترك في مختلف المجالات. كذلك، قام المعهد ببناء شراكات والحصول على عضوية العديد من المنظمات الحكومية وغير الحكومية في فلسطين ومؤسسات من دول إقليمية ودولية. وقد عمل المعهد على تسهيل حصول الباحثين والمعنيين على المعلومات من المعهد من خلال نشر مقالات

للمخلصين في ذي

يعرض هذا التقرير السنوي أنشطة وإنجازات معهد أريج خلال الفترة الواقعة ما بين 1 كانون الثاني 2017م و 31 كانون الأول 2017م

حقق معهد الأبحاث التطبيقية - القدس (أريج) تقدماً كبيراً ونجاحاً مميّزاً العام 2017 نحو تنفيذ مهمته المتمثلة في تعزيز التنمية المستدامة في فلسطين والإعتماد على الذات لدى الشعب الفلسطيني من خلال سيطرة أكبر على موارده الطبيعية. وقد نفذت جمعية أريج مجموعة كبيرة وواسعة من المشاريع والأنشطة في كافة محافظات الوطن، بالإضافة إلى المساهمة بفاعلية في الشراكات المثمرة مع مختلف المنظمات وأصحاب العلاقة.

ركزت المشاريع والأنشطة التي نفذت في العام 2017 على مجموعة واسعة من المجالات والتي شملت الزراعة المستدامة، ممارسات الإدارة والحكم الرشيد، إدارة الموارد الطبيعية ومراقبة ورصد التحضر والواقع الجيوسياسي في المنطقة، بالإضافة إلى العمل من أجل النهوض بتكنولوجيا المعلومات والمعلومات الجغرافية.

في مجال الزراعة، تمكن برنامج الزراعة المستدامة (SAP) Sustainable Agriculture Program من تنفيذ تدخلات زراعية مبتكرة ومتنوعة شملت 2284 عائلة مهمشة، في أكثر من 130 تجمع في الضفة الغربية وقطاع غزة. وقد استفادت المحافظات من هذه التدخلات من خلال تلقي الدعم والمساعدة بشكل مباشر و / أو تلقي الخدمات. ولتحقيق هذه الأنشطة، تم توفير 22,974 يوم عمل مدفوع للقطاعات العمالية، بالإضافة إلى 15,193 يوم عمل غير مدفوع (مساهمة عينية) نفذها أفراد العائلات المستفيدة. وبناءً على ذلك، فقد بلغت القيمة الإجمالية للإنتاج المحقق من خلال التدخلات المختلفة المنفذة خلال العام 2017 ما قيمته 875,050 دولار أمريكي. وقد واصل البرنامج أبحاثه العلمية في تحديد النباتات البرية القيمة والقابلة للاستئناس الزراعي بما في ذلك جمع البذور وتجربة زراعتها وملائمتها للزراعة في الحدائق المنزلية إضافة إلى تقنيات الزراعة المائية النباتية.

وفيما يخص برنامج الحكم الرشيد، فهو يواصل جهوده لضمان التوافق على الأولويات السياسية والاجتماعية والإقتصادية في المجتمع الفلسطيني من خلال تشجيع الحكم الرشيد والتركيز على أن يتم مشاركة المواطنين بما في ذلك الفقراء والمهمشين في عملية صنع القرار بشأن تخصيص موارد التنمية. وحتى الآن، وصل برنامج الحكم الرشيد إلى أكثر من 500 000 مستفيد، والتي تشكل السيدات نصفهم. كما تم تحقيق ما نسبته 75% كمعدل ثابت، وذلك بناءً على نتائج استخدام برنامج Development Check، وهو برنامج تطبيقي يتم الحصول من خلاله على تحديد الأوقات الحقيقية لردود فعل المواطنين على مشاريع التنمية بطريقة شفافة وتشاركية وفعّالة. كما يمكن التطبيق مراقبي المجتمع الفلسطيني من قياس معدل نجاحهم في تنفيذ الإصلاحات للمشاكل المحددة. وللسنة السادسة على التوالي، واصل فريق العمل تحسين ممارسات الحوكمة الرشيدة ضمن التعاونيات والمنظمات المجتمعية في فلسطين من خلال تعزيز ثقافة الحكم الرشيد بين منظمات المجتمع المدني بما في ذلك المنظمات المجتمعية والقاعدية والتعاونيات في 120 منطقة في الضفة الغربية. وبالإضافة إلى ذلك، تحسين قدرات أعضاء فريق المديرية العامة للتعاونيات - عون، وإنشاء فريق تنسيق القطاع التعاوني، وزيادة وعي التعاونيات المستهدفة بأهمية دور لجان المراقبة الداخلية، وتحسين خدمات الصرف الصحي والنفايات الصلبة في المناطق

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