



THE APPLIED RESEARCH INSTITUTE - JERUSALEM  
*Towards a Sustainable Palestine*

# Annual Report 2016

**Environment**

**Society**

**Partnership**

**Economy**

**Peace**







**The Applied Research Institute-Jerusalem (ARIJ)**  
*Towards a Sustainable Palestine*

# Annual Report 2016

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## EXECUTIVE SUMMARY

### **This report presents ARIJ activities and deliverables for the period of 1<sup>st</sup> of January 2016 to the 31<sup>st</sup> of December 2016:**

The end of the year 2016 marked 26 years since ARIJ establishment. In 2016, ARIJ has achieved considerable success within all its range of fields including Sustainable Agriculture, Biodiversity & Food Security, Natural Resource Management, Urbanization Monitoring, Good Governance Practices and Management 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 2,055 vulnerable families distributed, over 117 localities in the West Bank and Gaza Strip Governorates had been benefited from these interventions through receiving direct support and inputs and/or receiving services. To achieve these activities 10,900 paid working days created, in addition to 24,124 created unpaid (in-kind) days conducted by family member. Accordingly, the total value of achieved production by different implemented interventions during the year 2016 reached USD\$ 783,325.

The Biodiversity & Food Security Department implemented one project in the field of improving the Palestinian agro-products marketing for the benefit of local market chain. This is in addition to the implementation of 3 consultancies in the field of demonstrating better agro-practices for medicinal and aromatic plants, biodiversity assessment for Jalbon watershed area, and Global Environment Facility (GEF – SGP) country strategy for operation phase 6. The department team has filled 25 interviews, conducted 70 field visits at both national and regional level, 8 training sessions for Palestinian wholesale market managers, working team at NARC, ICARDA, MoA (Ministry of Agriculture) and LRC in the field of plant identification and potential domestication methods, relevant stakeholders working in the field of environment and biodiversity conservation, where more than 107 participants has attended with an average of 45% females. This is in addition to joining 5 memberships and global networks.

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 we 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 sixth year in a row, ARIJ Good Governance Program continue *Improving Good Governance Practices among Cooperatives and Community Based Organization (CBOs) in Palestine* through Promoting the culture of good governance among CSOs including CBOs, grassroots and cooperatives in 120 localities in the West Bank. In addition, improving the capacities of General Directorate of Cooperatives team members, establishing the Cooperative Sector Coordination Group, Increasing the awareness of the Targeted Cooperatives on the importance of the role of internal oversight committees. Also improving the sewage and solid waste services in the targeted localities based on community need assessment.

In the fields 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, and raising public awareness towards water conservation and wastewater treatment. This included developing a solar-powered 5m<sup>3</sup> capacity wastewater treatment plants and operating the 1250m<sup>3</sup> capacity wastewater treatment plant in Al-Aroub.

In the geopolitical arena, ARIJ team continued planning urbanization strategies and schemes for the optimization of land use/cover. Also, ARIJ continued monitoring all Israeli related activities in the occupied State of Palestine. The ARIJ team also continued to provide information services to support local community organizations as well as national organizations by supplying statistical data, reports, maps and geographical records for a variety of purposes. Of note are the 1147 case studies, 366 daily reports, 12 monthly and 4 quarterly reports, the unit's team has visited 196 locations in the West Bank and collected 363 military orders (2016). The Geographical Information System & Remote Sensing team continued assistance in updating figures, fact sheets and maps for ARIJ projects as well as providing services to the local community.

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.

The dissemination of information was achieved through publishing 5 books, 7 scientific articles, 6 special reports, 7 magazine articles, 6 conference papers, 2 technical reports, 1 booklet, 23 social & media, 2 leaflets, 1147 case studies, 12 monthly, 4 quarterly and 366 daily reports. (See Chapter III)

Both ARIJ web page and the social media platforms which includes YouTube, Facebook and Twitter, facilitated more effective and interactive communication among ARIJ and other national and international organizations, communities, and individuals. Followers were distributed as 70% on YouTube, 28% on Facebook and 2% on Twitter. Additionally, ARIJ website recorded 12,441,945 hits in 2016.

In October 2016, ARIJ was awarded with the Certificate of Compliance with the Palestinian NGO's Code of Conduct from the NGO development Center NDC and its Umbrella institutions, PNGO, The Palestinian General Union for Charitable Societies, the National Institute for Palestinian NGO's and the Palestinian General Union for NGO's – Gaza. (See Chapter VI)

Last but not least, ARIJ programs' planned activities for the year 2017 will include, but not limited to, continuing to seek for new research, developmental and pilot/innovative projects, accomplishing the ongoing projects, creating new cooperation, partnership and joint activities, keep on publications. As the total estimated budget for the year 2017 is \$2,694,678. (See Chapter V)



# CHAPTER I: ORGANIZATIONAL STRUCTURE AND MANAGEMENT

## 1.1 General Assembly

ARIJ enjoys the service of 31 professionals and 2 honorary members who constitute the General Assembly of the institution. They provide the ARIJ Administrative Committee with policy and strategic guidance. June 4<sup>th</sup>, 2016. The General Assembly held a meeting where they discussed and approved ARIJ financial and technical reports of 2015 and assigned a new certified financial auditor for the next year, after opening the bids.



**Mr. Omar Mousa**  
(Physician/Educator)



**Dr. Bisher Marzouq**  
(Cancer Surgeon)



**Ms. Jihan Anastas**  
(Interior Architect)



**Mr. Ghassan Andoni**  
(Physicist)



**Dr. Norma Hazboun**  
(Social Scientist)



**Mrs. Ghada Hazboun**  
(Pharmacist)



**Dr. Saleem Zoughbi**  
(Computer Scientist)



**Ms. Fida' Abed Allatif**  
(Urban Planner)



**Mr. Moneer Aidaqaq**  
(Computer Scientist)



**Dr. Ziad 'Abdeen**  
(Molecular Biologist)



**Dr. Hasan Dweik**  
(Chemist)



**Dr. Bishara Abu Ghannam**  
(Electrical Engineer)



**Dr. Karim Abdul Nur**  
(Mathematician)



**Dr. Walid Mustafa**  
(Geographer)



**Mr. Ramzi Zamanli**  
(Executive Director of Near East Council of Churches)



**Mr. Anton Salmali**  
(Lawyer)



**Eng. Jazamous Kharroub**  
(Food Scientist)



**Dr. Spiro Tams**  
(Dermatologist)



**Ms. Lana Raibadi**  
(Urban Designer)



**Mr. Ahmad Rweidd**  
(Lawyer)



**Dr. Jamal Safi**  
(Toxicologist)



**Dr. Simon El Araj**  
(Mechanical Engineer)



**Mr. Husam Wahab**  
(Accountant)

## Honorary Members



**Archbishop Attalah Hana**  
(Archbishop of Orthodox Church of Jerusalem)



**Bishop William Shomali**  
(Bishop of the Latin Patriarch of Jerusalem)

## 1.2 Administrative Committee

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



## CHAPTER II: ARIJ PROGRAMS AND ACTIVITIES

### 2.1 Sustainable Agriculture Program

#### 1- Activities and achievements in the year 2016:

The vulnerability of agriculture sector in Palestine is due to socioeconomic, physical, natural, political, institutional and structural and strategic factors and challenges that affecting the stability and sustainability. These challenges leave the small size farmers expose to agricultural-losses and challenges affecting the agro-food production system in Palestine. That resulting in less amounts of produced agro-commodities, increase the prices, affect the farmers' income, and affect the purchasing power of the Palestinian consumer.

Furthermore, the prevailing of unemployment, the increase in poverty rates and food insecurity in Palestine continuous due to not stabilized 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 water resources. These challenging conditions create a fundamental need to support the Palestinian farmers to keep planting their lands and continue their contribution in food security, Palestinian economy and reducing poverty and vulnerable living conditions.

Therefore, 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 higher productivity. Also, to engage the small farmers into cooperative business hubs that can empower them and increase their access to better income and improved the livelihood of their families. This year witnessed the implementation of diversified agro-interventions which resulted in improving the agro-economic impact on farmer, community and sector level.

The compilation of research and the adoption of green and safe improved and innovated agro-practices have resulted in ending with several successes and sustainable developmental models.



Agricultural research and information help in developing the right strategies, policies and in putting the priorities to manage and improve the agricultural sector and organize the role of different stakeholders to optimize the utilization of available resources and the benefit of farmers and increase their access to the knowhow, fair pricing system and the suitable production calendar through which the production – marketing information system become as a productive and planning tool towards creating a sustainable agricultural system. The partnership and clear segregation of duties among the government, civil society, grassroots and the private sector in addition to the integration of resources rather than competition will lead to strong, effectual, and viable 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, we start witnessing land fragmentation and the extending of urban agriculture with small area of agro-production units. Therefore, ARIJ is working on adapting measures can provide co-benefits to gender equality, economic empowerment and social inclusion.

During the year 2016 The Sustainable Agriculture Program (SAP) managed to implement innovative and diversified agricultural interventions through which 2,055 vulnerable families and 15 women cooperatives distributed over 117 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.



**Improving Field crops cultivation:** 3,960 dunums of field crops in West Bank and Gaza Strip were planted in the winter season 2015/2016 to the benefit of 792 farmers. The planted areas produced 404 tons of seeds, 376 tons of hay, 399 tons of straw and 189 tons of green forages. The Palestinian local varieties and the adapted introduced varieties of wheat, barely; common vetch, alfalfa, sesame, lentils, chickpeas, Black seeds and bitter vetch were planted to measure their adaptation to the climate change. Additionally, a licensed and degradable herbicide was sprayed to reduce the weeds grow in the field crops cultivated lands.

**Improving vegetables cultivation under rainfed:** This year, the cultivations of dryland vegetables (including squash & snake cucumber) was started and located in Bethlehem and Hebron Governorates through providing 25 farmers with organic fertilizers and mulch to plant 12.5 dunums. The farmers had produced 9 tons of fresh vegetables.

**Practicing new Irrigation techniques:** This year the ARIJ continued testing the introduction of balanced pressure drip irrigation system in West Bank and Gaza Strip. The project has benefited 275 vegetables and olives farmers through serving 1005 dunums. The system was applied for open and protected irrigated vegetable crops. The system has resulted in reducing water consumption by 15.5% and increased the production by 16% compared with the traditional drip irrigation system. Also, this system was introduced to olive groves for supplementary irrigation to utilize the harvested rainwater by the constructed cisterns. The preliminary results for the supplementary irrigation showed an increase in the productivity of olive with 20-30% compared with the control ones (not irrigated). Tensiometers to measure soil water content and automated water timers were introduced for the project beneficiaries and will be applied in 2017.

**Land rehabilitation "Micro and Macro water harvesting techniques and implementation":** Through the climate change project, ARIJ specialists managed to rehabilitate 340 dunums of degraded and abundant agricultural lands. Different water harvesting techniques were adapted including terracing, eyebrow and fertile pockets. This technique is practical, feasible, and can be applied by

the farmers. The preliminary results are encouraging and the developed harvesting systems are functioning well in reserving soil and rainwater.

**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 2198 dunums of rangelands by enriching the biomass of these rangelands and increasing their grazing capacity. This activity focused on enriching the growing rangeland grasses, bushes and the trees to stop soil degradation and enhancing its fertility.

**Improving small ruminants' management and production conditions:** Through the DCA fund, the small ruminant improvement project for Bardala village has continued its activities through serving 100 livestock rearing families directly, and 61 sheep rearing families indirectly. The project managed to be a very successful and pioneer model for improving the livestock sector through applying innovative and feasible interventions; In addition to creating a real partnership with the project beneficiaries and all related stakeholders. The diversification of the project interventions helped in benefiting all the community members and groups. The milking and cheese making processes become more hygiene, the flocks health improved (feeding and health care) and their fertility increased, the access of herders to the veterinary services, vaccines and medicines increased by establishing vet-pharmacy with vet services. Finally, through the project, women become participating in all the project activities, improve their hygiene practices and women managed to invest together to establish the veterinary pharmacy of Bardala.



**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 name for the cooperatives agro food products. an implementation of

project to create 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 12 different food commodities of MAWASM through New Farm Company with a total value of 76,207 USD, of which 60.7% in the local market and 39.3% through the export market. Installing Hydroponic and wicking beds systems: 75 units of Hydroponic and Wicking beds systems were established to the benefit of 75 needy families and for handicapped people on individual and organizational levels, in Beit Sahour, Beit Douqo and Surief. 450 people were benefited directly from the project. These units managed to produce 7,074 kg of different vegetables during the year 2016. Additionally, the beneficiaries' capacities were built their by ARIJ staff, especially in managing these units and the planted crops properly, this activity was funded by the Polish Aid and implemented by ARIJ in partnership with the Polish Center for International Aid "PCPM".

This year, the agricultural program managed to practice new technologies and innovative practices to improve the adaptation of agricultural production systems to climate change and to increase the production capacity of agricultural unit qualitatively and quantitatively. The introduction of balanced pressure drip irrigation system, practicing new water harvesting techniques, encouraging farmer groups towards empowering their production activities and increasing their profit, developing plant water production systems (hydroponic, and wicking), introducing better agro-practices, 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 started in partnership with NARC, MoA and ICARDA the domesticating the wild plants of high economic and medicinal values under the activities of WLI regional project. Through AMENCA III, ARIJ in partnership with Care International and ICARDA have started the project activities which are mainly focusing on improving the economic food crops production and marketing efficiency along the vale chain.

The year 2016 witnessed the continuity of the climate change project activities. This project is being implanted by ARIJ in partnership with Care International with the fund from BMZ, Germany. ARIJ is implementing all the project activities in West Bank and in Gaza Strip in partnership with Earth and Human Center for Research and Studies. Also, ARIJ continued implementing projects funded by the DCA, Polish Aid and MCC.

Highlights on the obtained results based on the implemented activities by ARIJ during the year 2016: The field crops and forage products were 404 tons of seeds, 376 tons of hay, 399 tons of straw and 189 tons of green forages with a value of 336,300 USD.

The planted lands with dryland vegetables produced 9 tons of squash & snake cucumber. The market value for the produced vegetables reached 11,840USD.

211 new born of sheep were delivered through artificial insemination to improve the breeds of existing flocks with total value of 41,600 USD.

During 2016 the milk collection center in Bardala village managed to store and sold 5000 liter of milk and 300 tons of white cheese. Thus giving a value of 25500 USD.

The irrigated vegetables resulted from providing the balanced drip irrigation system and seedlings produced 458 tons of vegetables with a marketing value of 361,570 USD.

The value of marketed cooperatives agro-food products reached to 76,207 USD.

The value of produced vegetables by the established hydroponics and wicking beds reach to 6,515 USD.

The program team has conducted 585 coordination meetings, and has performed 10,725 field visits for the beneficiaries' activities (10,725 field days).

The total number of created paid working days in the year 2016 reached 10,900 days and the unpaid (in-kind) working days reached 24,124 days.

The total value of achieved production by different implemented interventions during the year 2016 reached USD\$ 783,325.



Table (1): the distribution of achieved activities by ARIJ under the Sustainable Agriculture Program in the year 2016

Intervention	# Targeted communities	Benefited Households	Dunums	sheep & Goats Heads	Inputs, equipment's & tools	Rainwater Cisterns/pool
Field crops and forage seeds cultivation (SLCAL (BMZ & CARE))	14	792	3960		53.38 tons Seeds of different varieties, 73.605 tons of Ammonium Sulfate & 64.855 tons of Super Phosphate and 19 tons of NPK.	
Rain-fed vegetables cultivation(SLCAL (BMZ & CARE))	4	25	12.5		325 litter of organic fertilizer (compost) and 12500 meter transparent mulch.	
Balanced pressure drip irrigation system to improve water management, construct water harvesting cisterns for olives supplementary irrigation (SLCAL (BMZ & CARE))	50 39 (irrigation) 11 (olive) intervention	275	1005		Drip irrigation, water meters, water tank, pump, compost, tensiometers, fertilizers, water timers, and other management tools	140
Rainwater harvesting and water storage pools (130 CM/pool) for irrigating greenhouses in GS. (SLCAL (BMZ & CARE) +Aktion Deutschland Hilft.	4	46	184		The lining plastic sheet, irrigation system, protection fence. `	46
Land rehabilitation and water harvesting techniques and implementation. (SLCAL (BMZ & CARE))	8	118	340		Fruit trees seedlings, specialized fertilizers and field crops.	0
Rangeland improvement and biomass enhancement. (SLCAL (BMZ & CARE))	7	482	828	8000	Seeds and rangeland bushes and trees seedlings, and specialized fertilizers	4
Hydroponic and wicking bed systems (seeds & seedlings & fertilizer) (Polish Aid & PCPM)	3	75	325m		Provision of production system and planting material.	
Vegetable Packaging Units (Polish Aid & PCPM)	5	75			Tools and equipment used to packaging the vegetables.	
Rainwater harvesting Cisterns rehabilitation (French fund)	6	7			Water harvesting to 1265 m <sup>3</sup> .	
Establishing cooperatives production and marketing hub. (Polish Aid & PCPM)	15	15 cooperatives	20		Agricultural inputs, food processing, marketing tools and equipment	1
Livestock improvement in the Northern Jordan Valley (DCA).	1	100 direct beneficiaries & 61 indirect beneficiaries	9	5400	Provide Milking machines, Stainless steel jars, Irrigation system & Food processing equipment, seed for green forage cultivations (Alfa Alfa), Medicines and Vaccines.	0
<b>Total</b>	<b>117</b>	<b>2,055</b>	<b>6,018.</b>	<b>13,40</b>		<b>191</b>



## 2- Cooperation with the Palestinian Authority, NGOs and Institutions:

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

- The program still representing ARIJ in the Food Security Working Group (FSS) in Palestine.
- ARIJ still representing the Palestinian NGOs Network in the Agriculture Sector Working Group and in the Food Sector Committee.
- ARIJ created steering committee in partnership with MoA to conduct the climate change project and follow up the achievements with agricultural directorates in different targeted Governorate.
- 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.
- ARIJ continued its partnership with Earth and Human Center for Research and Studies through conducting the climate change activities in Gaza Strip.
- ARIJ continued its coordination with the other main agricultural NGOs, such as PARC, AUWC, LRC, ESDC, 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 cooperation with the Ministry of Agriculture nurseries in Hebron and Tubas in order to improve the capacity of the nurseries to produce rangeland seedlings that will be cultivated within the climate change project.

## 3- Updates on 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 and it will starts by April, 2017.

**2.The Australian Agency for International Development (AusAID):** ARIJ, CARE and ICARDA have started AMENCA III program.

**3. United Methodist Church (“Global Ministries”),** ARIJ have submitted a project proposal and it is in the final stage of approval.

### **4.Oxfam Great Britain (OXFAM GB):**

ARIJ signed agreemtn with Oxfam GB to develop Marketing Information System for three main markets in the West Bank.

### **5. Federal Ministry for Economic Cooperation and Development (BMZ) Germany and CARE International:**

ARIJ continue implementing 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 are being implemented by *Earth & Human Center for Research & Studies* “EHCRS”.

### **6. Polish Aid & Polish Center for International Aid “PCPM”:**

7. The implemented project for this year entitled Adopting green hydroponic production to increase food security, income generating and competitiveness of agricultural cooperative sector in Palestine). This phase focused on supporting the vulnerable families through providing them with the hydroponic and wicking beds cropping systems, including the women and specialized institutions in taking care of the handicapped persons. Additionally, the project has focused on continuing the focus on improving and promoting MAWASEM products and its related stakeholders.

### **8. International Center for Agriculture Research in Dry Areas (ICARDA):**

Through ICARDA, ARIJ is one of the regional member organizations of the Water Livelihood Initiative (WLI) which includes applied research and piloting activities to in the field of rainfed agriculture,

irrigated agriculture and rangeland management.

9. **DanChurchAid (DCA):** This is fourth year the livestock improvement project which is funded by the DCA. The relationship with DCA is progressing and there is a potential to receive a new fund for up scaling the the current livestock project for additional three rears.

### 2.1.1 The Biodiversity and Food Security Department

#### 1- Accomplishments and achievements in the year 2016:

During the year 2016, the department joined several memberships and networks; known for their scientific credibility, including the members, NUTRISANN (N4G Global Network / Rede Global de Ensino, Pesquisa e Extensão em Nutrição e SSAN), Charter 4change: Localization of Humanitarian Aid, Earth Charter, and Association of Critical Heritage Studies.

The department has participated in the IUCN<sup>1</sup> World Conservation Congress 2016. Held once every four years, the IUCN World Conservation Congress brings together thousands of leaders and decision-makers from government, civil society, indigenous communities, business and academia, with the goal of conserving the environment and harnessing the solutions nature offers to meet our pressing global challenges. During the 2016 Congress held in Honolulu, Hawaii, from 1-10 September 2016, over 10,000 people from 190 countries participated; 71 institutions from West Asia Region from diverse range of sectors including the private sector. The two main components of the Congress are:

- **The Forum** (2-5 September) hosted more than 1,300 events – from high-level dialogues and training workshops, to knowledge cafes and pavilion panel discussions – 117 of which addressed the theme of business. ARIJ has participated in the forum in number of its campus sessions, workshops, pavilions, and exhibitions. ARIJ gave two presentations during the congress including: “*Challenges that face developing countries in West Asia region in finding funding opportunities for biodiversity conservation*”, and “*Protected Areas in Palestine: status and challenges*”.

- The **Members' Assembly** (6-10 September), IUCN's highest decision-making body, met to take joint decisions on proposed motions concerning biodiversity conservation and sustainable development.. Overall, the Members' Assembly addressed 105 motions and 85 of these were voted on prior to Congress via electronic vote – another first. ARIJ also attended the Congress Assembly. ARIJ with Arab Group for the Protection of Nature (APN) sought to get an approval on a motion on behalf of West Asia members under the title:” *Enhancing Conservation in conflict Torn West Asia*”; requesting engaging West Asia region in the work plan of the IUCN programme 2017-2020. The motion was approved and the programme was adjusted accordingly.



**IUCN World Conservation Congress, Hawaii- USA, September 2016**

Upon series of consultation with OXFAM team during the first half of the year 2016, the BFS department started implementing a project entitled, ***Improving the Palestinian Agro-products***

<sup>1</sup> IUCN: International Union for Conservation of Nature

**Marketing for the Benefit of Local Market Chain,** sponsored by the OXFAM - GB. The implementation of the project will take 10 months until accomplishment, commencing in August 2016 and ending in June 2017. The project aimed to improve the Palestinian agro-products marketing mechanisms through organizing the operations of wholesale central markets, enhancing networking among key stakeholders along market chain, establishing a pilot Palestinian Market Information System, and increasing the awareness of market key players on products' demand and price structure. The project targets three Palestinian wholesale Central Markets (WCMS) namely: Nablus, Hebron, and Qalqiliya WCMS. The project interventions were planned carefully and included the following:

- Establish the partner's network involving Ministry of Agriculture (MoA), ministry of National Economy (MoNE), and Ministry of Local Government (MoLG).
- Formulate / Activate the Project Committees.
- Build an Ideal Model for the management of the Palestinian Wholesale Central Markets.
- Establish the Palestinian Marketing Information System (PMIS) at the targeted Wholesale Central Market.
- Disseminate Agro-commodities Prices to the Market Chain Key Players.
- Advocate for the PMIS system at the Wholesale Central Market and the Market Chain.



**ARIJ team while visiting Amman Wholesale Central Market**

The BFS department has also finalized the GEF-SGP consultancy for developing the GEF-SGP Country Strategy for Palestine. SGP Country Programme Strategy for OP6 (2015-2018), GEF Small Grants Programme (GEF) which was a joint work with Water and Environment Research Department. Of main outcomes of this consultancy is the final conceptual document for the Country Programme Strategy for Operation Phase 6 (OP6) in the State of Palestine; presented mainly the following:

- A full analysis for synergies of GEF/SGP initiative objectives and national priorities including the 16 ratified multilateral environmental conventions; in addition to several national strategies and action plans. This included the analysis of the SGP support of national priorities and coordination with civil society and community-based projects to achieve country priorities and the potential complementary and synergy with Government funded projects and programmes.
- A full analysis for synergies of GEF/SGP initiative objectives with UNDP CO/UN System strategies and donor agencies programmes and strategies.
- Grant making strategy for each selected landscape/seascape in the State of Palestine.
- Analysis for opportunities for donors co-financing
- Grant making strategies for related issues such as CSO-government Dialogue Platform, Policy influence,
- A full Monitoring and Evaluation Plan, Knowledge management plan, Communications Strategy, Resource mobilization Plan, and Risk Management Plan

The BFS department has also conducted a biodiversity assessment for Jalboun Watershed Study as a consultancy for Ministry of Agriculture (MoA) and The Ministry of the Public Construction and Housing /Regional Agricultural Project. The study was supported by series of field surveys and the utilization of the GIS and Remote sensing applications. The main outcomes of the study were analysis on the vegetation cover, agricultural landscape, dominant and associated plant species, main challenges and threats, etc.



#### **Field survey in Ezz Al Dein forest & Talfit Carob and Lentiscus forest- Jalboun Catchment Area**

The BFS department conducted a consultancy entitled: **Demonstrating better agro practices for medicinal and aromatic plants (MAP), 2016** under "Water and livelihood Initiative (WLI) West Bank-Palestine" To understand the related indigenous knowledge concerning the utilization of the Palestinian herbs identifying their morphological, botanical and taxonomical characteristics in parallel to exploring the best collection and domestication method, and investigating an appropriate marketing niche for a selected number of herbs. To integrate the efforts in ensuring a sustainable use for the selected plant species and at the same time improving their conservation measures in nature. To come in line with the Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets; specifically: Strategic Goal D/ target 14, Strategic Goal E/ target 19; in an attempt to reduce the pressure and herbs exploitation from Palestinian nature.

#### **Of main outcomes:**

- 10 Wild Native Plant species of high conservation and economic value (mainly shrubs and herbaceous species) with special criteria of selection were identified by the project partners ICARDA (International Centre for Agriculture Research in the Dry Area), LRC (Land Research Centre), NARC (National Agriculture Research Centre), MoA (Ministry of Agriculture), and ARIJ.
- Wide collection missions for seeds of selected species was conducted in the northern and southern part of the West Bank.
- Process of drying and storage was conducted at both ARIJ and NARC.
- Two capacity building workshops were conducted for the team work on identification, conservation value, classification, collection in the wild, storage, and utilization of the selected species.
- Methods of collection in terms of their conservation value were set
- Set methods and guidelines for domestication procedures for each collected plant species is under progress.
- Experimental plantations for the collected seeds of the selected plant species at both NARC station and selected nurseries both in the north and south of West Bank is under progress.
- A guideline for wild plant domestication is produced highlighting the value of these species in terms of ecology and economy and the importance of reducing impact of over-exploitation of those species in the wild.



**Capacity Building Workshop –NARC – 18<sup>th</sup> May 2016 – Seed Collection mission in Northern parts of the West Bank (Jenin- Tubas) – 19<sup>th</sup> May 2016**

**2- Cooperation with the Palestinian Government, NGOs and Institutions:**

- ✚ MoA (Ministry of Agriculture), MoNE (Ministry of National Economy), MoLG (Ministry of Local Government): The BFS department has cooperation with the Ministry of Agriculture (MoA)/Ministry of National Economy and its different directorates especially in Hebron, Nablus, Jenin and Qalqiliya through the PMIS, Jalboun and WLI projects/consultancies. They had an important role in facilitating the projects' implementation mainly in providing data, reaching targeted beneficiaries and orienting the surveys and setting the statistical methodologies, etc.
- ✚ EQA (Environment Quality Authority): The BFS department has strong networks with EQA while working together on different aspects such as the IUCN Palestine National Committee. The department supported EQA in preparing "Strategic Objectives and National Biodiversity Targets for the State of Palestine- Aichi Targets 2020", during November and December 2016, updating the CEPF Ecosystem Profile for the Mediterranean Hotspot, Questionnaire for National Coordinators November 2016, Participation in strategies development such as "National Adaptation Plan (NAP) to Climate Change", and "Sustainable Consumption and Production National Action Plan in Palestine 2016.
- ✚ Village councils, municipalities most prominently Hebron, , Nablus and Qalqiliya governorates as required in context of the BFS department projects.
- ✚ NGOs, Agricultural cooperatives and universities such as UWAC, EEC, PWLS, PHG, Al Quds University, PIBS, Bethlehem University.
- ✚ Private sector: The BFS department sought the service of private companies in the field of IT and electronic devices such as Jaffa.net and Nieroukh scales & Metallic Furniture Company
- ✚ Greater Amman Municipality: Experience exchange visit was conduct by the BFS team with Hebron, Nablus and Qalqiliya Wholesale Central Markets managers to Amman Wholesale Central Market.

**3- Cooperation with Regional and International Institutions, Bodies and NGOs:**

- ✚ IUCN (International Union for Conservation of Nature): The BFS department participated in The IUCN World Conservation Congress took place in Hawaii where it get introduced to wide platform of expertise working in relevant fields including biodiversity conservation and climate change adaptation. Initiated the membership with IUCN; through which get introduced to new potential partnerships with NGOs and CBOs from West Asia countries. ARIJ has also formulated the IUCN Palestine National committee and hosting its meetings.
- ✚ GEF- SGP, where the BFS department is participating in developing the GEF- SGP Country Strategy for Palestine for OP6.
- ✚ OXFAM – GB, where the BFS department has shared vision with OXFAM to improve the status of the Wholesale Central Markets in Palestine in an attempt to improve the value chain of the

fresh produce in Palestine and to empower the farmers and the consumers along the market chain.

- ✚ ICARDA , where the BFS department has initiated and developed the idea of conserving the wild plant species of high economic value through domesticating them at home gardens in proximity of their habitats. This is an attempt to better understand their domestication methods and also increase their production to cover the market needs instead of exploiting them in nature.
- ✚ FAO, the BFS department has assisted FAO in conducting its study regarding the microeconomic decision making behaviors of local Palestinian farmers, and provided raw data about the locally produced crops, agricultural area by crop pattern, water sources and the average price of a cup in NIS, average crop prices, irrigation methods, agriculture inputs and their prices, the suitable cropping patterns and the added value in this for farmers; based on the conducted ARIJ project study entitled: "*The Palestinian Farmer Production Analysis and Challenges*". (<http://www.arij.org/baseline-surveys-2/673-the-palestinian-farmer-production-analysis-challenges.html>)



## 2.2 Information Technology Program

ARIJ Information Technology Program aims to contribute to the development of information technology in the Occupied Palestinian Territory, through effective dissemination of information and knowledge. In its work, the program improves ARIJ capabilities in computing technologies and applications. In addition to providing technical assistance to ARIJ different departments, the IT program develops and programs a web based projects information system, creating efficient and logical databases for the different projects of 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](https://twitter.com/ARIJ_Institute)).

### 1- Achievements & activities during 2016

#### **Application Development:**

##### **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.

##### **Application Development for Procurement Department:**

The IT program has developed three applications for the procurement department one for the assets control at ARIJ and another one for payments managements (Payment vouchers) and Car expenses program.

##### **Risk Management IS**

ARIJ has gone through in the year 2015 and 2016 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.

#### **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 will develop 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.

**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 we have more than 250 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 (ie.. Facebook, YouTube, and Twitter) there has been a growing numbers of people following ARIJ news the past few years.

**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. We have 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.

**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. Meetings with the Yasser Arafat Museum and provide them with the technical expertise in developing the information table which is currently used in the museum.

## 2.3 Good Governance Program

### 1- Activities and achievements in the year 2016:

In 2016, 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.

2016 was the final year of the project 'Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian non-State Actors in Local Community Development'

This project invests in building lasting networks of cooperation between citizens, CBOs, local and national authorities in Jerusalem Suburbs. The interventions result in increased institutional capacity of targeted civil society organizations, as well as increased public awareness of how to participate in local decision making with local governmental entities. The project improves solid waste and waste water services in the 6 targeted localities. The project's improvements shall endure on the long run as the local CBOs incorporate the learned initiatives in their developmental priorities. So far ARIJ has about 22 partner CBOs in this project.

The main achievements of the project as follows:

- Stimulating the role of community-based organizations.
- Identifying and advocating for developmental priorities.
- Capacity Building for community-based organizations.
- Improve sewage and solid waste services in the targeted localities
- Installing 32 WWTU in targeted localities.
- Distributing 120 solid waste containers in targeted localities.
- Offering small grants to 8 CBOs to implement community initiatives.



Along the same lines; ARIJ Good Governance Program implemented the project Bethlehem Youth for Equal and Sustainable Public Services, which This initiative will aim at addressing the issue of weak youth engagement in local governance and development in a well-rounded manner divided into two packages: 'Youth & Policy Making', and 'Youth & Integrity', 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 the Bethlehem Governorate will be 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 will learn how to monitor infrastructure projects and achieve a fix rate of 50% as a way to enhance services.

The main achievements of the project as follows:

- 100 youth trained on their rights and good governance at the local level.
- At least 5 local policies changed in targeted localities.
- At least 5 infrastructure projects and 5 services monitored in in targeted localities.

For the sixth year in a row, ARIJ Good Governance Program implemented 'Improving Good Governance among Cooperatives and CBOs in Palestine'. This project addresses good governance

principles among Palestinian cooperatives. It is a continuation of previous phases that initially started in the year 2011. The specific objective of the project is *"Improving Good Governance Practices among Palestinian Cooperatives and Community Based Organization (CBOs)"*. This objective responds to the challenging governance environment that faces cooperatives.

As for the main achievements, they were as follows:

- Promoting the culture of good governance among 24 targeted cooperatives
- Developing good governance enhancement plans for 24 cooperatives
- Empowering 120 change makers from 24 cooperatives all over the West-Bank
- Improving the capacities of all GDC (General Directorate of Cooperatives) team members
- Establishing the "Cooperative Sector Coordination Group (CSSG)"
- Increasing the awareness of 24 Targeted Cooperatives on the importance of the role of internal oversight committees.
- Reaching out to 13 local communities
- Exchange the Knowledge between the Cooperatives.

ARIJ Good Governance Program entered a strategic 5-year partnership with Oxfam to work on **'Finance for Development'** Program. The two overall outcomes of this work is to 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 the OPT, 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.

The ambition 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. This will ultimately lead to more citizens enjoy access to greater quality and quantity of basic socio-economic rights (health, education and welfare) and have their voice heard in a more democratic society. To achieve this ambition, ARIJ will work towards more fair, transparent, predictable and efficient management of public resources, and pro-poor fiscal policies.

## **2- For Updates on 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), Global Partnership for Social Accountability (GPSA), The Coordination Group of the Supporters of the Cooperative Sector "Owneh Group", National Team to Support the Transparency of the Public Budget, Palestinian Cooperative Education Institute (PCEI), Palestinian Association of Certified Public Accountants (PACPA) and Housing Cooperatives in Palestine (PUHC).



## 2.4 Natural Resource Management Program

### 1- Activities and achievements in the year 2015:

#### 1.1 Improving access to water and sanitation services

##### 1.1.1 Wastewater treatment

ARIJ continued developing and promoting wastewater treatment in Palestine using activated sludge processes. Through actions supported by grants from AECID, EU, and UNDP-OFID, ARIJ increased the wastewater treatment capacity in Palestine in 2016 from 12.8 MCM/year to 13.3 MCM/year. The direct impacts of these actions were: (1) the protection of landscapes and 40 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 185 households and the students of an elementary school in Saiir from exposure to waterborne diseases.



ARIJ R&D actions focus on adopting, developing, and contextualizing small to medium scale wastewater treatment technologies. The small wastewater treatment technologies (figure 1) 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. The medium scale plants, such as Saiir wastewater treatment plant (figure 2), are suitable for localities with an existing sewerage network or localities where it is feasible to connect the households to sewerage collection system.



Household level wastewater treatment plants with 9 p.e. treatment capacity.



Saiir wastewater treatment plant with 13,000 p.e. capacity.

### 1.1.2 Reducing the investment, maintenance and operational costs of Household level Wastewater Treatment 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: (1) using, to the extent possible, locally produced materials in the construction of the household level wastewater treatment plants; (2) realizing the cost advantage that arises with increased treatment unit capacity (i.e. economies of scale); and (3) reducing the operational costs by coupling the treatment unit to a PV system.

Increasing the treatment unit capacity from 1 m<sup>3</sup> (9 p.e.) to 5 m<sup>3</sup> (45 p.e.) reduced the per person equivalent investment cost by 37% from USD 389 to USD 284. Coupling the wastewater treatment unit to a PV system with 4.34 kWh capacity increased the per-capita investment cost of the coupled system to USD 471. In spite of the higher upfront investment costs, the coupled Wastewater-PV system offers a more rewarding financial opportunity than the wastewater treatment plant without the PV system since the solar panels generate 7 mWh per year which equals 1,160 USD/year at current electricity market prices. A portion of the generated electricity feeds the WWTP and the remaining energy are used for the household consumption. The solar system has a simple payback period of 6 years. The wastewater treatment unit has a simple payback period of 13 years while the combined wastewater treatment-PV system has a payback period of approximately 8 years (table 1).

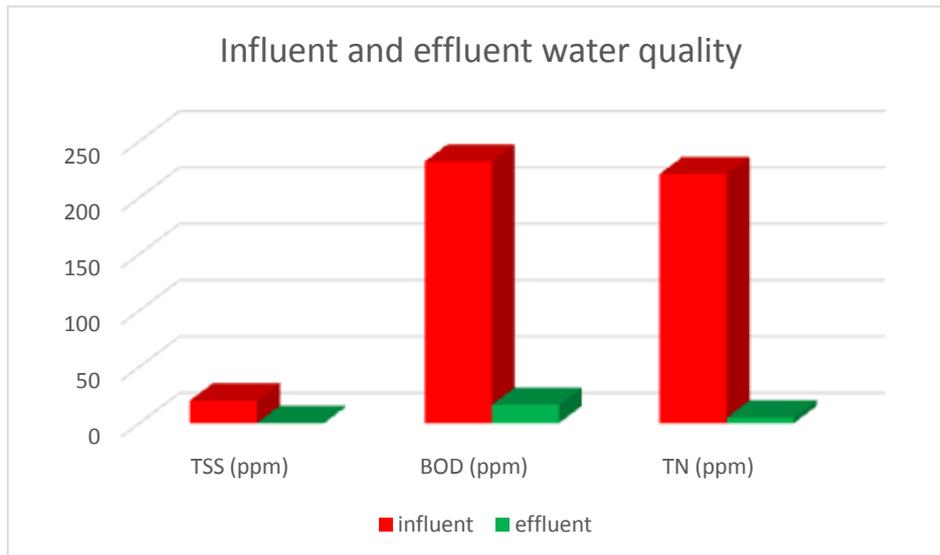
<b>Cash flows:</b>	
<b>NPV of Cash Flow</b>	\$ 625.38
<b>IRR</b>	3.6%
<b>Profitability Index</b>	1.03
<b>Simple Payback</b>	8 Years 4 Months
<b>Discounted Payback</b>	9 Years 8 Months
<i>Assumptions:</i>	
Cost Escalation Factor	1.00%
Benefit Escalation Factor	1.00%
Income Tax Rate	0.00%
Discount Rate	3.00%

Table 4: Cash flows of the solar powered WWTP and the assumptions used in the cash flow calculations. The Net present Value (NPV), Internal Rate of return (IRR), and simple payback period of the total up-front investment costs of the PV system (USD 8,389), the treatment unit (USD 12,645), and the irrigation system (USD 500), was calculated using actual data from all revenue streams which are the solar revenue (USD 1,160 per year), revenue from alfalfa (USD 740/year), and the alternative cost of vacuuming the cesspit (USD 486/year).

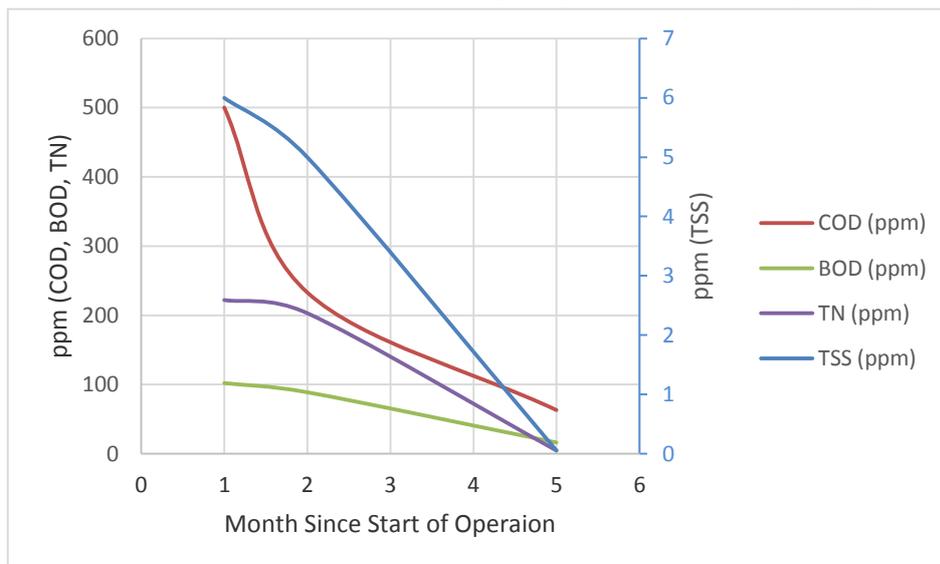
### 1.1.3 Monitoring the quality of treated wastewater

The MoA and the 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 negate 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 have higher investment and operational 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 locally produced input materials, and optimizing operational parameters of the wastewater treatment units.

The quality of the treated wastewater from the household size units is currently classified as Quality Class B according to PSI standards and is suitable for irrigating trees and fodder crops with a minimum number of barriers (0 or 1). Averaged treatment efficiency exceeded 95% (figure 1). The high efficiency was attained within few months after the start of operation of the treatment units (figure 2).



Measured influent and effluent water quality from the 5m<sup>3</sup> capacity wastewater treatment unit.



Progressive improvement in effluent water quality from modifications in operational parameters and from the increase in micro-organism: food ratio.

#### 1.1.4 Wastewater reuse demonstration experiments

Two wastewater reuse demonstration end experimentation sites were established to: (1) test suitable plant varieties for irrigation with treated wastewater; (2) evaluate crop productivity; (3) evaluate the impacts on soil characteristics of irrigation with treated wastewater; and (4) demonstrate successful example to the local farmers of the values of irrigation with treated wastewater.

Compared to the control experiment (irrigation with freshwater), there were not discernible differences in the biomass production of alfalfa in the Za'atara experimental site between irrigation with treated wastewater and freshwater. The production of wet green foliage was measured at 4200 to 4900 kg/dunum/year. However, the buildup of soil Organic Matter, total Nitrogen, total

phosphorous was higher in the soils of the plot irrigated with treated wastewater compared to the control plot (freshwater irrigation). Of concern however, is the increase in soil EC from 760  $\mu\text{c}/\text{cm}$  to 1050  $\mu\text{c}/\text{cm}$  which suggests that the soil might need treatment after few years of irrigation with treated wastewater (table 2).

Test	Unit	Results – plot irrigated with fresh water	Result - plot irrigated with treated WW
Organic Matter	%	3.65 $\pm$ 0.18	4.43 $\pm$ 0.22
Water carrying capacity	%	10.25 $\pm$ 0.51	10.87 $\pm$ 0.54
TN	mg/100g	0.5 $\pm$ 0.03	0.74 $\pm$ 0.04
TP	mg/100g	6.3 $\pm$ 0.31	11.13 $\pm$ 0.6
PH		8.3 $\pm$ 0.41	8.2 $\pm$ 0.41
EC	$\mu\text{c}/\text{cm}$	760 $\pm$ 38	1050 $\pm$ 52

#### Soil chemical and physical characteristics after irrigation with freshwater and treated wastewater.

A second demonstration and experimentation site was established in Saiir (figure 3). Four crops were planted. These were alfalfa, almond trees (3 varieties), pomegranates (2 varieties); and grape vines. The objective of the experimentation site is to determine plant water requirements and to study the impacts of irrigation with treated wastewater on crop quality and productivity.

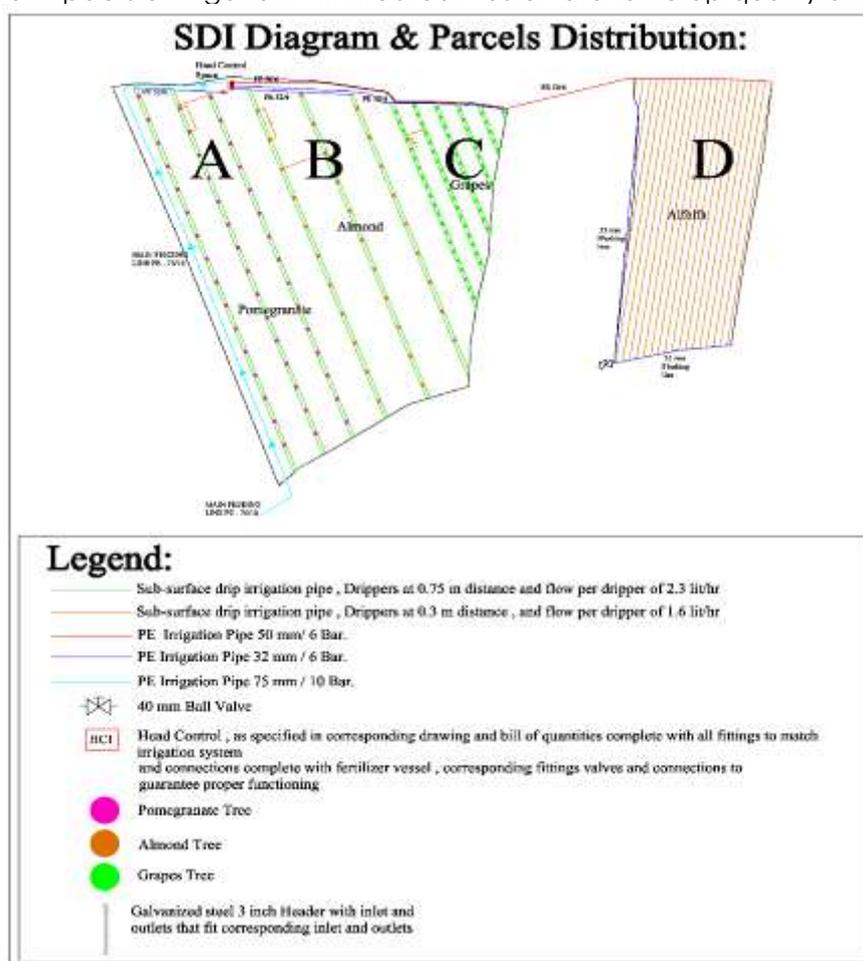


Diagram of experimental agricultural plots in Saiir.

## 1.2 Awareness and knowledge transfer

### 1.2.1 Wastewater treatment and reuse

Six workshops (figure 4), 2 field visit to the wastewater treatment unit in Za'tara, and a visit to treated wastewater reuse sites in Iksal were conducted. During the workshop meetings, ARIJ team brought participants together from civil society organizations, cooperatives, local people, and resources poor farmers in order to share the project findings and results as well as to promote wastewater treatment and reuse. Thirty four farmers from Saiir also travelled to Iksal to learn firsthand the advantages and disadvantages of irrigation with treated wastewater so farmers can make educated decisions about whether to irrigate with treated wastewater.



A workshop with the civil society organizations and the targeted community

A leaflet and a short film were developed in order to reach the widest possible audience and disseminate the project finding, best practices and lessons learned. The leaflet provides an overview of the project including its objective and benefits. Also a general description that summarizes the basics of the designed solar powered, low cost small scale aerated sludge wastewater treatment has been included in the leaflet (Annex 4). The leaflet and the film (<https://youtu.be/bCENfoXPdfQ>) were uploaded at ARIJ website and ARIJ social media.

### 1.2.2 Municipal water conservation and optimal use

ARIJ, with funding from AFD, conducted 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 awareness material included, but not limited to: Web-banners, TV spots, billboard, TV episodes, logo and slogan animated material, radio spots, SMS messages, newspaper ads, leaflets, press releases, TV Feature stories, student and teacher training material, handouts, and equally importantly demonstration equipment of water saving devices. The impacts & outreach of the project is summarized in table 4.

The identified indicators	Target Value	المؤشرات التي ستستخدم في عملية التقييم
estimation of the number of people reached by project stratified by gender	Around 110,147 person Males =55,679 and females = 54468	1. العدد التقديري لعدد الأشخاص الذين شملتهم الحملة التوعوية حسب الجنس.
number of schools visited	67 School	2. عدد المدارس التي تم استهدافها وزيارتها.
number of teachers trained	50 teachers	3. عدد المعلمين الذين تم تدريبهم
number of children and youth trained	21 children and youth	4. عدد الأطفال والشباب الذي تم تدريبهم.
estimation of the number of women participated in the campaign	50 women	5. عدد النساء اللواتي شاركن في النشاطات التوعوية
number of schools adopting	20-25	6. عدد المدارس الذين اعتمدوا بعض

recommended environmental policies	schools	الممارسات البيئية الموصى بها.
Amount of water consumed (pre and post). Family size 7 person	pre = 20 m <sup>3</sup> / month after= 15 m <sup>3</sup> / month	7. كمية المياه المستهلكة (قبل وبعد). (متوسط العائلة 7 افراد)
Number of houses adopting water saving devices (percentage of people have the willingness)	66 %	8. عدد المنازل التي قامت بتركيب أجهزة توفير المياه. ( نسبة الاشخاص الذين لديهم استعداد )
estimated number of people visiting social media	119	9. عدد زوار مواقع التواصل الاجتماعي.
estimated number of people watching awareness campaign	1,750,000	10. العدد التقديري لمشاهدي الاعلانات. والبروموهات والحلقات الخاصة بالحملة
social attitudes regarding willingness to pay water bills, sentiment against illegal connections, willingness to share scarce water resources.	45 %	11. السلوك الاجتماعي بشأن الاستعداد لدفع فواتير الماء ووصلات المياه غير الشرعية والاستعداد لتقاسم مصادر المياه الشحيحة.
estimated number of people participating in the campaign, including youth	5000 person	12. العدد التقديري للمجتمع المحلي ( بما في ذلك الشباب) الذي شارك فعليا في النشاطات التوعوية
The percentage increase of the awareness level among the trainees and the people involved in the town hall meetings.	80 %	13. نسبة الزيادة في الوعي لدى المتدربين والاشخاص الذين شاركوا في اللقاءات المفتوحة
estimated number of students participating in the school competition	350-400 student	14. عدد الطلاب المشاركين في المسابقات
Estimated number of students participating in meetings at the universities	100 student	15. عدد الطلاب المشاركين فعليا في الاجتماعات التي ستعقد بالجامعات
estimated number of people following the Facebook pages	total number follow the main page = 1,535,502 person  Total number following the awareness campaign = 25 to 119 thousand	16. عدد المشاركين في صفحة الفيس بوك
estimated number of people watching you-tube videos about the project	2500 views	17. عدد مشاهدات الفيديوهات على اليوتيوب
estimated number of people reading the news related to the campaign at Ma'an website	9200	18. عدد القراء للأخبار الخاصة بالحملة التوعوية المانية على الصفحة الالكترونية لمعا(وكالة معا الاخبارية)
number of hotels, hospitals adopting water saving devices;	15 out of 40	19. عدد الفنادق والمستشفيات التي قامت بتركيب الاجهزة الموفرة للمياه

Indicators of the effectiveness of the awareness campaign outreach effort.

### 1.2.3 Israeli unilateral actions and updates of geopolitical status

Since 1995, ARIJ has continuously monitored Israeli unilateral actions in the 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 solution 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.

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) monthly meetings with the Palestinian negotiations affairs department; (c) publishing 2451 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.

Project results are attracting significant attention and providing support to several national and international stakeholders: (a) NAD requested ARIJ to produce a report summarizing the Israeli violations in the oPt for the period from June 13, 2014 to May 31, 2015 (<http://www.poica.org/upload/Image/june%202015/ICC-May31.pdf>); (b) Annual contributions to the Notes of the UN Secretary General on the Economic and social repercussions of the Israeli occupation on the living conditions of the Palestinian people in the occupied Palestinian territory, including Jerusalem (e.g. [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/71/86](http://www.un.org/ga/search/view_doc.asp?symbol=A/71/86)); (c) supporting the Palestinian Central Bureau of Statistics with geographic data and documentation on the extent and boundaries of the Israeli settlements and the separation barriers; (d) supporting the Palestinian Environmental Quality Authority (EQA) with data and analysis on the socio-economic and environmental impacts of the separation barrier; (e) we frequently support the research of scholars and graduate students on issues related to inequality between settlers and Palestinian populations, especially those in area C. Furthermore, the study that assessed the needs and identified the opportunities and challenges of development of Palestinian communities in Area C (web loc) is being used by donor and development communities to strategize their interventions. 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.



Using data generated from the project, we jointly published with academics both peer-reviewed articles and books (e.g. Degarmo 2016<sup>2</sup>; Degarmo *et al.* 2016<sup>3</sup>) that investigated how the Israeli Settlement Enterprise breached international law and provided a comprehensive analysis of the breaches of the Fourth Geneva Convention by the State of Israel since the Oslo Accords. This builds on a rich history in which international organizations, academics, and national authorities frequently cited the project data to debate the impacts of the current conflict on the Palestinians and the Israelis alike (e.g. World Bank<sup>4</sup>; and peer-reviewed journal articles<sup>5,6,7,8,9</sup>) and to promote a peaceful resolution of the conflict by contrasting the values of peace against the values of a continuation of the current political impasse (e.g. *The Cost of the Israeli-Palestinian Conflict*<sup>10</sup>). In addition to reports by international organizations, academics, and think tanks, the project data was used by the

<sup>2</sup><https://www.morebooks.de/store/us/book/the-u-s-israeli-strategic-alliance-and-the-disappearing-palestine/isbn/978-3-659-84630-4>

<sup>3</sup>[https://www.amazon.com/Geneva-Conventions-1949-Case-Israel/dp/3659890162/ref=sr\\_1\\_1?ie=UTF8&qid=1466264941&sr=81&keywords=The+Geneva+Conventions+DE+Garmo](https://www.amazon.com/Geneva-Conventions-1949-Case-Israel/dp/3659890162/ref=sr_1_1?ie=UTF8&qid=1466264941&sr=81&keywords=The+Geneva+Conventions+DE+Garmo)

<sup>4</sup> O. Niksic, N. N. Eddin, M. Cali, *Area C and the Future of the Palestinian Economy*. (World Bank Publications, 2014).

<sup>5</sup> A. El-Atrash, L. Shaheen, Review: 40 Years of Israeli Occupation: 1967–2007. *Journal of Palestine Studies* **44**, 150-152 (2014)10.1525/jps.2014.44.1.150).

<sup>6</sup> C. Leuenberger, A. El-Atrash, Mosquitoes Don't Carry Visas: Walls, Environments and the Hope for Cooperation in Palestine/Israel. *Palestine-Israel Journal of Politics, Economics, and Culture* **19**, 68 (2014).

<sup>7</sup> S. Miaari, A. Zussman, N. Zussman, Employment restrictions and political violence in the Israeli–Palestinian conflict. *Journal of Economic Behavior & Organization* **101**, 24-44 (2014); published online Epub5// (<http://dx.doi.org/10.1016/j.jebo.2014.02.002>).

<sup>8</sup> A.-S. Reichert, Self-Governance in Contested Territory: Legitimate Agency and the Value of Local Knowledge in Qalandia. *St Antony's International Review* **10**, 64-81 (2014).

<sup>9</sup> K. Reynolds, Palestinian agriculture and the Israeli separation barrier: the mismatch of biopolitics and chronopolitics with the environment and human survival. *International Journal of Environmental Studies* **72**, 237-255 (2015).

<sup>10</sup> C. R. Anthony, D. Egel, C. P. Ries, C. Bond, A. Liepman, J. Martini, S. Simon, S. Efron, B. D. Stein, L. Ayer, *The Costs of the Israeli-Palestinian Conflict*. (2015).

implementing agencies in assessing the economic cost of occupation<sup>11</sup>, and documenting the impacts of occupation on the status of Environment<sup>12</sup>.

According to the mid-term and final evaluation reports: (1) the project team was not only successful in reaching-out to the majority of stakeholders, but also had multiplier effects and supported advocacy work outside the project's scope. For instance, of people surveyed by the Mid-term project evaluation consultant, 72% indicated that they have contributed to circulating project data to others through a number of different channels such as word of mouth, teaching, social media, and in publications and reports. In terms of changes in levels of awareness of Israeli land policies, 57% of respondents indicated that the project has increased their level of awareness *very much*, while 38% chose *somewhat*, one respondent chose *a little*, and no respondents indicated *not at all*; and (2) *"The project was found to be highly relevant to stakeholders and beneficiaries at the national and international levels for both governmental and non-governmental actors. Relevance of the project outputs at the community level were found specifically in their contribution to legal cases and in spreading awareness about Israeli plans and orders"*.

The project meetings and presentation to EU delegates, academics, peace-activists, and the general public (Palestinian and International) improved the understanding of these stakeholders of the conflict, the impacts of unilateral geopolitical changes on the viability of the future Palestinian state, and the impediments to a negotiated solution were measured and reported by an independent auditing firm in the Mid-Term Evaluation report. According to the Mid-term evaluation report, stakeholders presented positive opinions about the quality of materials produced, with a number of them indicating that visuals such as maps and tables are a highlight of the materials. While it is difficult to ascertain whether project information have had a direct impact on EU policies towards unilateral Israeli actions in the oPt especially these of the Israeli Settlements enterprise, most of the EU delegates attending the meetings and presentations requested presentation material and reports in softcopy format to share with their peers.

### 1.3 Academic Studies, reports, and Atlases

The NRM program updated two milestone studies namely "The Economic Cost of the Israeli Occupation Report" and the "Status of Environment in the State of Palestine report". The Cost of the Israeli Occupation report analyzed the impacts of Israeli restrictions imposed on the main economic sectors and resource development in Palestine. It calculated the direct costs of these restrictions and the forgone revenue due to lost development opportunities through the use of economic models. These costs do not represent the total cost of the Israeli occupation but the costs associated with the sectors listed in the report. Nonetheless, these economic costs were found to be around 9.46 billion US dollars, representing almost 74.27% of Palestinian nominal GDP<sup>1</sup> of 2014. Please note that this figure is most probably an underestimation and might grow substantially when all economic sectors and the economic multiplier effects are taken into consideration. The report and its predecessor produced in 2011 have been widely cited in literature and is currently published in the UN library (<http://www.un.org/depts/dpa/apal/docs/2012Cairo/p2%20jad%20isaac%20e.pdf>)

The status of environment report is the fourth report building on the reports produced in 1997, 2007, and 2011 reports. It is the only report sequence that monitors and tracks changes in environmental management at the legislative, institutional, strategic, and developmental levels. It monitors and summarizes the changes in laws, bylaws, institutional capacities, signature of environmental conventions, Palestinian strategies, and developmental actions in the fields of natural resources management and the protection of the environment. The report further produces analysis and sets of recommendations (technological and institutional) to overcome some of the environmental challenges in Palestine (<https://goo.gl/TveRXX>).

<sup>11</sup> <http://www.arij.org/publications/special-reports/234-special-reports-2016/766-the-economic-cost-of-the-israeli-occupation-report.html>

<sup>12</sup> <http://www.arij.org/publications/special-reports/126-latest/779-the-status-of-env-2015-2016.html>



In cooperation with the Agricultural program, the NRM program produced a report identifying priority actions and development programs in the so called "Area C" that can empower the existing Palestinian communities to preserve their assets, way of life, and most importantly their continued presence on the land. This report produced: (1) an analysis of Palestinian and Israeli Settlers population distributions in Area C; (2) an analysis of the status of urban planning of the Palestinian communities in Area C; (3) an assessment of the economic potential of developing the natural resources in Area C; (4) an assessment of the socio-economic conditions in Area C identifying challenges the communities face in Area C and ranking of most vulnerable communities; and (5) recommendations of development actions that respond to communities' needs. The report is helping donors make more strategic development decisions to support Palestinian wellbeing in Area C (<https://goo.gl/6DFpJm>).

The Natural Resources program and the Biodiversity and Food Security Department jointly developed the GEF SGP National Strategy using a full participatory approach. The GEF strategy produced sets of recommendations including strategic areas of intervention, landscapes, and development actions that will simultaneously conserve the landscapes, their genetic and biological diversity all while improving the livelihoods of the local populations through the sustainable use of land and water resources. The GEF strategy is now being used to solicit calls for proposals from the selected landscapes and to prioritize sets of complementary/integrated actions that can bring measurable improvements in the status of the environment and the livelihoods of its residents.

ARIJ was contracted by the Ministry of Local Government (MoLG) of the State of Palestine and UN-Habitat to produce Atlas of Outline Plans of Palestinian communities in Area C which were developed by MoLG and UN-Habitat using a participatory approach. According to UN-habitat, *"The outline plans -some 145 multi-layered plans- helped to freeze the potential eviction and displacement of more than 55,000 Palestinians in the territory and advocates the transfer of planning powers in Area C to Palestinians as an essential component of the state-building process"*.

ARIJ was contracted by ATF and UN-Habitat to map the demographic trends, the state of service provision (mobility, road conditions, waste services, water quantity, etc.), and urban development

and planning (or the lack of) in four Jerusalem Border (peripheral) communities in an effort by ATF and UN-Habitat to develop in a participatory approach, strategic interventions and plans to improve the living conditions of the peoples of these communities.

In cooperation with the Department of Agriculture, the NRM program rehabilitated 7 water cisterns and their catchment areas with water holding capacity exceeding 1,000 cubic meters per year in Masafer Yatta. The funding for this action from the French Consulate reduced the costs of watering sheep and goats – the main economic activity in Masafer Yatta- by NIS 35,000 per year. The return on investment is less than 4 years.

In cooperation with the EU Funded SWITCHMED program and the Regional Activity Center for Sustainable Consumption and Production, ARIJ the national partner is preparing a National Workshop and training program that will empower 20 community initiatives led by Palestinian Cooperatives to develop actions and programs based on the principles of sustainable consumption and production. The program will be concluded July 2017.

#### 1.4 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. Towards that end, NRM program conducted or participated in 4 training workshops attended by approximately 80 participants.

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- For Updates on 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 PWA, WSSA, MoA, PCBS, EQA, Municipality of Bethlehem, Municipality of Sair, Ma'an network, and MoLG. We also cooperate with several regional and international organizations including but not limited to UN-Habitat, SCP/RAC, DTD, CENTA, UNCTAD, and UNRWA.



## CHAPTER III: Publications of the Year 2016

During 2016 ARIJ published 5 books, 7 scientific articles, 6 special reports, 7 magazine articles, 6 conference papers, 2 technical reports, 1 booklet, 23 social & media, 2 leaflets, , 1147 case studies, 12 monthly, 4 quarterly and 366 daily reports were published. The following is a list of the published, prepared, printed works:

### 3.1 Books

1. HELAND project (2015). ICT Tools for Sustainable Tourism Management. Promoting Social-economic Sustainable Development through Innovative Technological Actions for Mediterranean Tourism Heritage and Landscape protection Clusters Project. (ISBN: 978-99957-886-6-7).
2. HELAND project (2015). Guidelines for sustainable Heritage management. Promoting Social-economic Sustainable Development through Innovative Technological Actions for Mediterranean Tourism Heritage and Landscape protection Clusters Project. (ISBN: 978-99957-886-4-3).
3. Hrimat N., Alkhouri S., Panosetti F., (2015). Gender and Eco-tourism: Towards Sustainable Development in Al Badhan Village, Palestine. Gender and Heritage, The perspective of six Mediterranean countries. Promoting Social-economic Sustainable Development through Innovative Technological Actions for Mediterranean Tourism Heritage and Landscape protection Clusters Project. (ISBN: 978-99957-886-5-0).
4. Cardia G., Eid E., Corazzini D., Hrimat N., Polo J., Alkouri S., et al. (erranean Tourism Heritage and Landscape protection Clusters Project).
5. Good Governance Program (2016). A Guide for CSO's, Policy Makers and Donors for Improving Services in the Vulnerable Communities of the East Jerusalem, ARIJ, Palestine.

### 3.2 Scientific Articles

1. K. Rishmawi, S.D. Prince, Y. Xue (2016), Vegetation responses to climate variability in the in the Northern Arid to sub-humid zones of Sub-Saharan Africa. *Remote Sensing*.
2. K. Rishmawi, S.D. Prince (2016). Environmental and Anthropogenic Degradation of Vegetation in the Sahel from 1982-2006. *Remote Sensing*.
3. Karen Schleeweis, Samuel N. Goward, Chengquan Huang, Khaldoun Rishmawi, Mary A. Lindsey, Andrew L. Michaelis, Jeffery G. Masek (2016). Using the Landsat archive to map US forest history. *Journal of Digital Earth*.
4. Neigh, C.S., Masek, J.G., Bourget, P., Cook, B., Huang, C., Rishmawi, K., & Zhao (2016). Regional rates of US forest regeneration measured from annual Landsat disturbance history and IKONOS stereo imagery. *Remote Sensing of Environment ForestSAT Special Issue*.
5. Praveen Noojipady, Stephen D Prince, Khaldoun Rishmawi (2016). Reductions in productivity due to land degradation in the drylands of the southwest United States. *Environmental Indicators*.
6. The title: Evaluation and Assessment of Water Budget in the Eastern Aquifer Basin of the West Bank, Palestine. Authors: Fadi Dweik, Mahmmoud Rahi, and Mhd. Salama. Published in the Int. J. Global Environmental Issues, Vol. 16, Nos. 1/2/3, 2017.

7. Alkhouri S. and Dieter P., (2015). Case Study: Using Google Earth to Optimize Water Harvesting for Agriculture. In Climate Change Adaptation in Agriculture, Forestry & Fisheries by Applying Integrated Water Resources Management Tools. ACSAD in cooperation with GIZ.

### 3.3 Special Reports

1. J. Isaac, M. Khalil, K. Rishmawi, "The economic Cost of Israeli Occupation of the Occupied Palestinian Territories," (Applied Research Institute- Jerusalem (ARIJ), Bethlehem, 2015).
2. R. Ghattas, K. Rishmawi, J. Isaac, I. Zboun, J. Hilal, A. Abu Zahra, I. Khalifeh, "Opportunities and Challenges of Palestinian Development in Area C," (Applied Research Institute- Jerusalem (ARIJ), Bethlehem, 2016).
3. J. Hilal, E. Abu Mohour, E. Bannourah, N. Sahouri, K. Rishmawi, R. Ghattas, "Status of Environment in the State of Palestine," Status Of Environment No. 4 (Applied Research Institute-Jerusalem (ARIJ), Bethlehem).
4. Roubina Ghattas. April 2016. Plant cover in Jalboun Water Catchment Area - Jalboun Watershed Study Report . The Applied Research Institute-Jerusalem (ARIJ).
5. Saher Alkhouri (2016). ARIJ's Message on the Occasion of World Day to Combat Desertification 2016. Applied Research Institute – Jerusalem (ARIJ).
6. Ahmad Dabouqi, Roubina Ghattas (2016). Palestinian Agro-Market Value Chain and its challenges. The Applied Research Institute- Jerusalem (ARIJ). Palestine.

### 3.4 Magazine Articles

1. Roubina Ghattas, February 2016. "Wetlands for our Future: Sustainable Life Style". The Applied Research Institute-Jerusalem (ARIJ). Palestine.
2. Roubina Ghattas and Ahmad Dabouqi, March 2016. Role of Woman along the Agriculture Market Value Chain. The Applied Research Institute- Jerusalem (ARIJ). Palestine.
3. Roubina Ghattas, February 2016. Reflections on Food Security under the Conditions Prevalent in Area C. This Week in Palestine. Issue 2014.
4. Roubina Ghattas, May 2016. Mainstreaming Biodiversity; Sustaining People and their Livelihoods, Biodiversity International Day 22nd May 2016. The Applied Research Institute- Jerusalem (ARIJ). Palestine.

5. روبينا غطاس. شباط 2016. المناطق الرطبة من أجل مستقبلنا: أنماط العيش المستدامة. معهد أريج. فلسطين
6. وحدة التنوع الحيوي والأمن الغذائي – حزيران 2016. الإنتاج والاستهلاك الزراعي الفلسطيني والأمن الغذائي بين الأسر الفلسطينية. معهد الأبحاث التطبيقية – القدس (أريج). فلسطين
7. وحدة أبحاث المياه والبيئة ووحدة التنوع الحيوي . يوم البيئة العالمي 5 آذار 2016: حماية التراث الطبيعي واجب وطني. معهد الأبحاث التطبيقية – القدس (أريج). فلسطين

### 3.5 Conference Papers

1. Rishmawi, K.; Isaac, J.; and Kassis; M. (2016). The Economic Cost of the Israeli. Oral presentation at the Fourth Scientific Conference of the Faculty of Law and Judicial Practice in Palestine on the Protection of Natural Resources.

2. Rishmawi, K. (2016). Adopting Innovative Technologies to increase Water Use Efficiency (WUE), Water Productivity (WP) and farm gate income in Palestine. Oral presentation at the 2016 Water Day Conference, Al-Khadouri University, Palestine.
3. Rishmawi K., Alkhouri S., et al. (2016). An Evaluation of Jalbon Watershed Water Budget: potential to bridge the gap between water supply and demand (abstract). Conference on Rainwater Harvesting and Management. Birzeit University, Palestine.
4. Fadi Dweik (2016). The socio-economic dimension of water use in Mediterranean Agriculture: a case study from Palestine. Conference organized by the MoA in Ramallah under the ENPARD project.
5. Roubina Ghattas (2016). Challenges that face developing countries in West Asia region in findings funding opportunities for Biodiversity Conservation. Oral presentation at the IUCN World Conservation Congress, Hawaii Convention Center, USA.
6. Roubina Ghattas (2016). Protected areas in Palestine: Status and Challenges. Oral presentation at the IUCN World Conservation Congress, Hawaii Convention Center, USA.

### 3.6 Technical Report

1. GEF SGP national strategy 2016.
2. Roubina Ghattas, October 2016. Demonstrating Better Agro-practices for Medicinal and Aromatic Plants in Palestine. Water and Livelihood Initiative (WLI). The Applied Research Institute- Jerusalem (ARIJ). Palestine

### 3.7 Booklets

1. Presents the status of livestock in Bardala village, the developmental impact of the project and the suitable ways for rearing sheep, ARIJ, 2016. (Arabic Version)

### 3.8 Social & Media

1. Good Governance Program (2016). 2 Radio Spots ARIJ/EU-NSA Project (Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian Non State Actors in Local Community Development), Palestine.
2. Good Governance Program (2016). Bedha Qa'ada Play. ARIJ/EU-NSA Project (Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian Non State Actors in Local Community Development), Palestine.
3. Good Governance Program (2016). Jerusalem Suburbs: Services and Challenges Documentary. ARIJ/EU-NSA Project (Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian Non State Actors in Local Community Development), Palestine.
4. Good Governance Program (2016). Who Votes for Abu Khader Play, ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
5. Good Governance Program (2016). AlHadeeqa Play. ARIJ/ Integrity Action, (Bethlehem Youth for Equal and Sustainable Public Services).
6. Good Governance Program (2016). 1 Radio Spot, ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.

7. Good Governance Program (2016). Coops Success Stories. ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
8. Good Governance Program (2016). Role of CSOs in Jerusalem Suburbs T.V Program ARIJ/EU-NSA Project (Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian Non State Actors in Local Community Development), Palestine.
9. Good Governance Program (2016). Owneh Group Brochure. ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
10. Good Governance Program (2016). Owneh Facebook Page. ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
11. Good Governance Program (2016). Owneh Website. ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
12. Good Governance Program (2016). Owneh Group members' video. ARIJ/We Effect Project, (Improving Good Governance among Cooperatives and CBOs in Palestine), Palestine.
13. Good Governance Program (2016). Press Tour. ARIJ/EU-NSA Project (Towards Better Services in the Vulnerable Communities of the oPt through engaging Palestinian Non-State Actors in Local Community Development), Palestine.
14. Billboards to Increase local authorities revenues.

*Sustainable Agriculture Program 2016:*

#	Activities	Quantities	comments
15	Short awareness videos	5 videos	About the livestock project, including success stories and the overview about the project impact.
16	Publishing Radio advertisement spots	180 spots	Different radio stations in 3 governorate
17	Participant in local fairs	2	Ramadan & Olive oil festival
18	Facebook account & YouTube	2	Create new account for "Mawasem"

19. Biodiversity and Food Security Department (2016). "Wetlands for our Future: Sustainable Life Style" Wetlands International Day 2<sup>nd</sup> of February 2016. The Applied Research Institute-Jerusalem (ARIJ). Palestine.
20. Biodiversity and Food Security Department (2016). Palestinian Agro-Market Value Chain and its challenges. The Applied Research Institute- Jerusalem (ARIJ). Palestine.
21. Biodiversity and Food Security Department (2016). Mainstreaming Biodiversity; Sustaining People and their Livelihoods, Biodiversity International Day 22<sup>nd</sup> May 2016. The Applied Research Institute-Jerusalem (ARIJ). Palestine.
22. Biodiversity and Food Security Department (2016). Blossoming Spring in Palestine. The Applied Research Institute-Jerusalem (ARIJ). Palestine.
23. Water and Environment Research Department and Biodiversity and Food Security Department. Environment International Day 5<sup>th</sup> March 2016: Protecting Natural Heritage is a National Obligation The Applied Research Institute- Jerusalem (ARIJ). Palestine.

### 3.9 Leaflets

1. Small scale Waste water treatment unit, Good Governance Program and BARU.
2. Roubina Ghattas, February 2016. "Wetlands for our Future: Sustainable Life Style". 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://www.arij.org). & <http://poica.org/>. Total number of case studies is 1147.

### 3.11 Monthly & Quarterly Reports

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://www.arij.org). & <http://poica.org/>)

### 3.12 Daily Reports

The Settlement project team published 366 electronic editions of the daily report that cover the daily events in the oPt. (See ARIJ's website at [www.arij.org](http://www.arij.org). & <http://poica.org/>)

### 3.13 Atlases

1. Spatial Plans fro Palestinian Communities in Area C of the West Bank, 2016. <http://geo.molg.pna.ps/areac.html>
2. An Atlas of four marginalized communities in East Jerusalem: (Kafir Aqab, Ar-Ram, Anata, and Az- zayim), 2016.



## Chapter IV: ARIJ PLANS for the year 2017

ARIJ program's planned activities are set according to the Strategy from 2013 to 2017 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 2017
<ol style="list-style-type: none"> <li>1. Goal 1: To collect, analyze and disseminate information related to sustainable development in the Israeli occupied Palestine               <ol style="list-style-type: none"> <li>A. Objective 1.1: Enhanced accessibility to reliable environmental, socio-economic, and geopolitical information and knowledge in the Israeli occupied Palestine</li> <li>B. Objective 1.2: Improved dissemination of ARIJ's reports and data to the various stakeholders.</li> </ol> </li> <li>2. Goal 2: To foster initiatives that lead to clean and healthy environment through improving natural resource management in the Israeli occupied Palestine.               <ol style="list-style-type: none"> <li>A. Objective 2.1: Improved conservation, management, and utilization of land, environment and water resources in the Israeli occupied Palestine.</li> </ol> </li> <li>3. Goal 3: To play an active role in advocating for the Palestinian human development and security at local, regional and international levels.               <ol style="list-style-type: none"> <li>A. Objective 3.1: Increased international community knowledge on the of Palestinian human security level</li> </ol> </li> </ol>	<p><b>Funded projects:</b></p> <ol style="list-style-type: none"> <li>1. 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).</li> <li>2. Bethlehem Water Awareness Campaign (AFD Funding, 2016-May 2017)</li> <li>3. Advocating for a Sustainable and Viable Resolution of Israeli-Palestinian Conflict (2017-2020. Funding: EU Peacebuilding Initiative).</li> <li>4. Bethlehem Mobility Study. Phase One - Data collection. (Municipality of Paris Funding: 2016-June 2017).</li> <li>5. Improving water availability and accessibility in the water-stressed localities of Masafer Yatta. (French Consulate: Dec.2016 – May 2017).</li> </ol> <p><b>Expected Funding (Submitted Proposals and Concept Notes):</b></p> <ol style="list-style-type: none"> <li>1. Assessing the impacts of Israeli movement restrictions on the mobility of people and goods in the West Bank (2017-2018. SDC funding. Expected start date June 2017).</li> <li>2. Jericho Water Awareness Campaign (Municipality of Paris. Expected start date July 2017).</li> <li>3. A replicable model of affordable renewable energy for poor-communities in Bethlehem-Palestine. (EKOenergy's Climate Fund. Expected start date June 2017).</li> <li>4. Towards Social Inclusion in Community Development by Providing Platforms for Planning and Advocacy. (EU East Jerusalem Fund. Concept Note Stage).</li> </ol> <p><b>Proposals at development stage:</b></p> <ol style="list-style-type: none"> <li>1. Reducing the cost of energy inputs of producer, services, and consumer cooperatives in the Jericho Area (To be submitted to GPP June 2017).</li> </ol>

	<ol style="list-style-type: none"> <li>2. MED Space "Sustainable tourism initiative in the Mediterranean Basin", to be submitted to the ENI CBC MED EU program</li> <li>3. MEDGO "POKEMON Go application to encourage tourism in the Mediterranean using ICT technology", to be submitted to the ENI CBC MED EU program</li> </ol>
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## 4.2 The Sustainable Agriculture Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2016
<ol style="list-style-type: none"> <li>1. Goal 1: To collect, analyze and disseminate information related to sustainable development in the Israeli occupied Palestine               <ol style="list-style-type: none"> <li>A. Objective 1.1: Enhanced accessibility to reliable environmental, socio-economic, and geopolitical information and knowledge in the Israeli occupied Palestine</li> </ol> </li> <li>2. Goal 2: : To foster initiatives that lead to clean and healthy environment through improving natural resource management in the Israeli occupied Palestine.               <ol style="list-style-type: none"> <li>A. Objective 2.1: Improved conservation, management, and utilization of land, environment and water resources in the Israeli occupied Palestine.</li> <li>B. Objective 2.2: Enhanced conservation and management of Palestinian biodiversity</li> </ol> </li> <li>3. Goal 3: To contribute to improving the livelihood of the Palestinian society               <ol style="list-style-type: none"> <li>A. Objective 3.1 Improved food security, agro-practices, marketing procedures, and economic conditions of</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Establish new cooperation, partnership and joint activities</b> with the agricultural governmental bodies, research institutes, civil society and international organizations as well as accessible specialized consortiums and networks.</li> <li>2. <b>Activate and empower the existing partnerships and relations</b> 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, UNRWA, EC, SDC, AusAid, GIZ, BMZ-Germany, WFP, pontifical mission United Methodist Church ("Global Ministries") and Caritas Swiss etc.</li> <li>3. <b>Enrich the cooperation and partnership with the governmental bodies</b> by providing, sharing experience with main focus on the Ministry of agriculture and agricultural directorates in the Palestinian Governorates as well as NARC.</li> <li>4. <b>Continue the relationship with ICARDA</b> and the partner institutions in the Water Livelihood Initiative regional project and develop joint concepts with ICARDA.</li> <li>5. <b>Enrich and empower the established relationship</b> with World Wide Views and IUCN, and aim to attain official membership.</li> <li>6. <b>Support the New Farm Company and Green Palestine Company:</b> by enhancing their socially based and eco-green investment.</li> <li>7. <b>Applying for funding opportunities</b> which are fit with ARIJ's vision and strategic objectives on individually and through partnership and specialised consortiums.</li> </ol> <p><b>Special Research and pilot/innovative activities:</b></p> <ol style="list-style-type: none"> <li>1. Continue the activities of ARIJ's seed improvement program in partnership with related research centers, the established informal seed banks, and scaling up the domestication of Palestinian wild plants initiative.</li> <li>2. Focus on the following important and viable research and development topics: poverty alleviation, food security enhancement, climate variability (drought</li> </ol>

<p>marginalized societies through agricultural production inputs, infrastructure and know-how</p> <p>4. Goal 4: To adapt ARIJ managerial performance to international requirement.</p> <p>A. Objective 4.1: Improved resource mobilization and devising new approaches to fundraising.</p>	<p>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, avoid relief and emergency approaches, studying the value chain of rural agro-food commodities, shift towards safety agriculture and healthy agro-food.</p> <ol style="list-style-type: none"> <li>3. Focus on improving the productivity of olive trees and olive oil quality in the OPT.</li> <li>4. Increasing agricultural conservation practices in the 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.</li> <li>5. Focusing on applying new water harvesting techniques and transfer them to the farmers by learning and practicing.</li> <li>6. Up scaling the innovation of vermiculture composting techniques as well as aquaponic/hydroponic and wicking bed systems and technologies.</li> <li>7. Improve the small ruminants' management and breeding system through piloting a new feasible and improved production – marketing system.</li> </ol> <p><i>Continue performing, and accomplish the ongoing projects:</i></p> <ol style="list-style-type: none"> <li>1. Continue the implementation of the climate change project which is funded by the BMZ-GIZ fund in partnership with Care International (West Bank and Gaza) and CARE Germany as well.</li> <li>2. Continue the implementation of the second module (second year) with PCPM with targeted cooperative on log shelf life commodities and fresh vegetables cultivation and production.</li> <li>3. Start working on the approved project by the Methodist Church on wicking bed systems for poor families.</li> <li>4. Start the implementation of the approved project by the MCC for providing wicking bed system to the needy families,</li> </ol> <p><i>Inspiring Resource:</i></p> <ol style="list-style-type: none"> <li>1. Encourage the employees' participation in the specialized workshops and training courses to improve their experiences and know-how in different related topic.</li> <li>2. Encourage the specialists to participate in the local, regional and international events.</li> <li>3. Perform research consultancies and provide training courses.</li> <li>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.</li> </ol> <p><i>Publications:</i></p>
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	<ol style="list-style-type: none"> <li>1. Prepare and publish papers, fact sheets, applied manuals, leaflets and articles in the following fields:             <ol style="list-style-type: none"> <li>a. Crop and water management</li> <li>b. Water harvesting techniques</li> <li>c. Aquaponic/hydroponic/wicking technology for food production and income generating.</li> <li>d. Ecosystems / crop suitability mapping system</li> <li>e. Rangeland preservation and improvement practices</li> <li>f. Forestry and biodiversity preservation procedure Agro-land use and resources management</li> <li>g. Food quality and food hygiene including the nutritional values and nutritional health.</li> <li>h. Rural socially based enterprises with main focus on community benefits, and the involvement of youth and cooperatives.</li> </ol> </li> </ol>
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### 4.2.1 The Biodiversity & Food Security Department

ARIJ Strategic Goals and Objectives	Planned activities for the year 2016
<ol style="list-style-type: none"> <li>1. Goal 1: To collect, analyze and disseminate information related to sustainable development in the Israeli occupied Palestine</li> <li>B. Objective 1.1: Enhanced accessibility to reliable environmental, socio-economic, and geopolitical information and knowledge in the Israeli occupied Palestine</li> <li>2. Goal 2: : To foster initiatives that lead to clean and healthy environment through improving natural resource management in the Israeli occupied Palestine.</li> <li>C. Objective 2.1: Improved conservation, management, and utilization of land, environment and water resources in the Israeli occupied Palestine.</li> <li>D. Objective 2.2: Enhanced conservation and management of Palestinian biodiversity</li> <li>3. Goal 3: To contribute to improving the livelihood of the Palestinian society</li> <li>B. Objective 3.1 Improved food security, agro-practices, marketing procedures, and economic conditions of marginalized societies through agricultural production inputs, infrastructure and know-how</li> </ol>	<ol style="list-style-type: none"> <li>1. Empower the partnership with IUCN and MedWet initiative through activating the new memberships and finding opportunities of cooperation with new partners.</li> <li>2. Continue surveying Palestinian Protected Areas and work on inventing the targeted protected area in participation of relevant stakeholders.</li> <li>3. Assessing food Production Consumption Assessment; in focus on the Palestinian Wholesale Central Markets.</li> <li>4. conduct the "Locality Profiles and Needs Assessment" in Tulkarem and Jenin Governorates and updating the rest of Governorates</li> <li>5. Follow up the funding for project entitled: "<b>Developing Climate Change Resilient Communities, Terrestrial Ecosystems and Habitat Connectivity in Palestine</b>" that will be submitted for the Green Climate Fund in partnership with EQA (Environment Quality Authority).</li> <li>6. <b>Implementing World Heritage Best Practices in the Conservation and Management of Battir</b>" that is submitted to UNESCO Manama Office.</li> <li>7. Follow up the implementation of the consultancy entitled: "<b>Demonstrating better agro practices for medicinal and aromatic plants (MAP)</b>" under the Water and Livelihood Initiative (WLI) with the consultancy partners NARC, ICARDA, MOA, LRC.</li> </ol>

<p>4. Goal 4: To adapt ARIJ managerial performance to international requirement.</p> <p>B. Objective 4.1: Improved resource mobilization and devising new approaches to fundraising.</p>	<p>8. Apply for funding for ideas related to Contribute to the preservation of 'Wild Economical Plant Species" through adapting profitable cultivation by small-scale farmers towards conducive economic development of vulnerable communities in the West Bank to several donors.</p> <p>9. Submitting new project proposals in partnership with other organizations, to assist in improving food security, biodiversity inventory, forests preservation, natural heritage conservation and sites nomination in Palestine.</p> <p>10. Performing research consultancies and providing training courses as necessary.</p> <p>11. Get involved with national and international conferences in the field of biodiversity and food security through applying abstracts and/or papers.</p> <p>12. Submit a chapter about Quercus Species in the Mediterranean Region</p> <p>13. Build team capacities in different field as appropriate including marketing and value chain, economic feasibility studies, strategic planning and others.</p>
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### 4.3 The Information Technology Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2016
<p>1. Goal 1: To collect, analyze and disseminate information related to sustainable development in the Israeli occupied Palestine</p> <p>2. Objective 1.2: Improved dissemination of ARIJ's reports and data to the various stakeholders.</p> <p>3.</p> <p>4. Goal 2: To adapt ARIJ managerial performance to international requirement.</p> <p>5. Objective 2.1: Improved resource mobilization and devising new approaches to fundraising.</p> <p>6. Objective 2.2: Enhanced internal control, monitoring and evaluation systems.</p>	<p>1. East Jerusalem schools surveying and developing the web based mapping information system.</p> <p>2. 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.</p> <p>3. Working on project proposal for the EU Jerusalem office on the use of 3D technology in East Jerusalem to provide citizens and outsiders the tools and platform needed to strategize their work and involvement in the city.</p> <p>4. ARIJ e-office suite version 2: The IT Program</p>

	<p>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 we are planning to develop new version of the system to take in consideration all the changes that have been implemented on our HR, Financial, Project and Administration manuals.</p> <p>5. 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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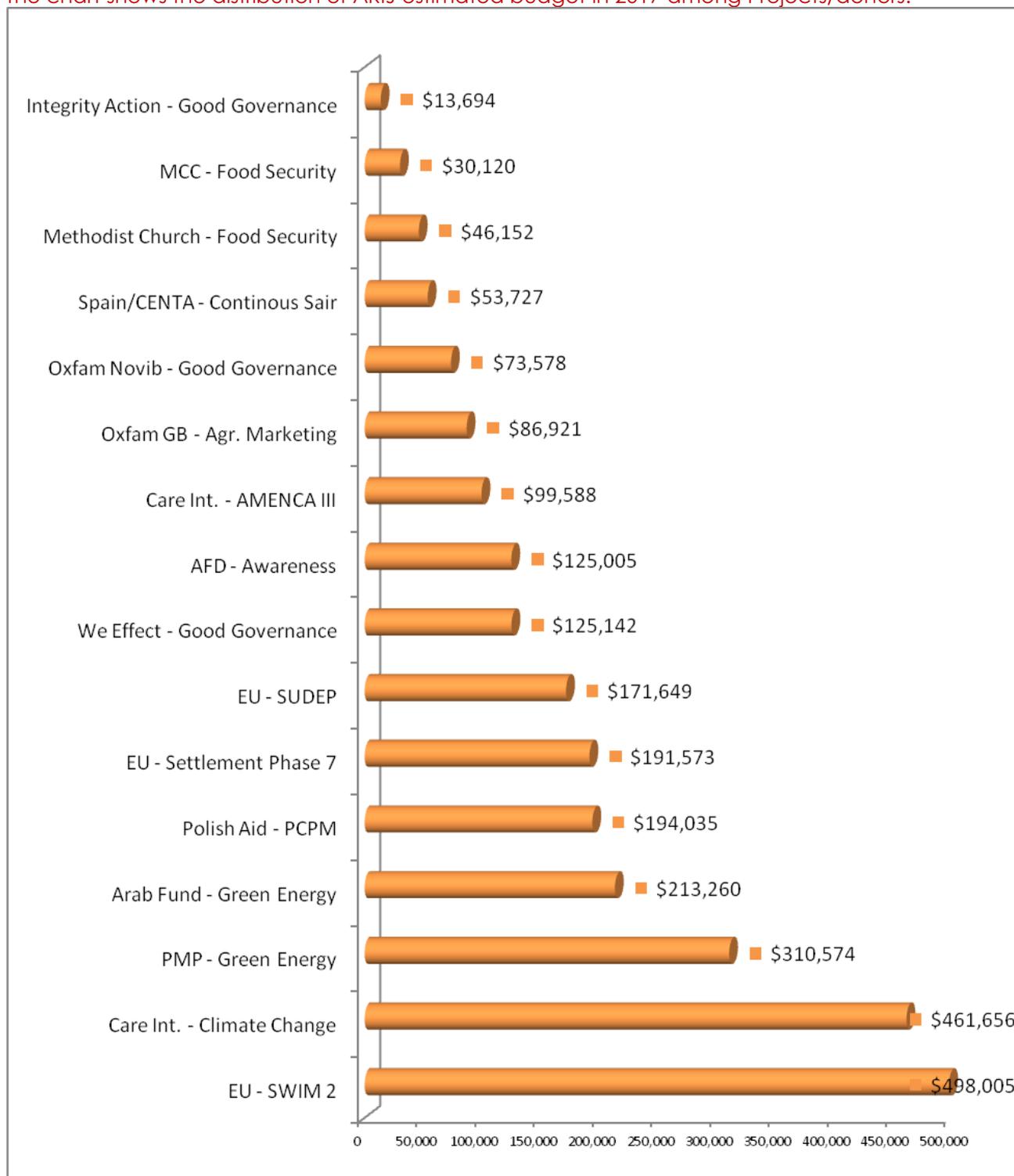
#### 4.4 The Good Governance Program

ARIJ Strategic Goals and Objectives	Planned activities for the year 2016
<ol style="list-style-type: none"> <li>1. Goal 1: To promote good governance in the Israeli occupied Palestine</li> <li>2. Goal 2: To play an active role in advocating for the Palestinian human development and security at local, regional and international levels.</li> <li>A. Objective 2.1: Increased international community knowledge on the of Palestinian human security level</li> </ol>	<ol style="list-style-type: none"> <li>1- Fourth year of "Improving Good Governance among Cooperatives and CBOs in Palestine" funded by SIDA and We Effect.</li> <li>2- Second Year of the strategic partnership "Finance for Development" funded by Oxfam Novib.</li> <li>3- Extension for "Bethlehem Youth for Equal and Transparent Public Services" funded by Integrity Action.</li> </ol>

## Chapter V: ARIJ Estimated Budget for the year 2017

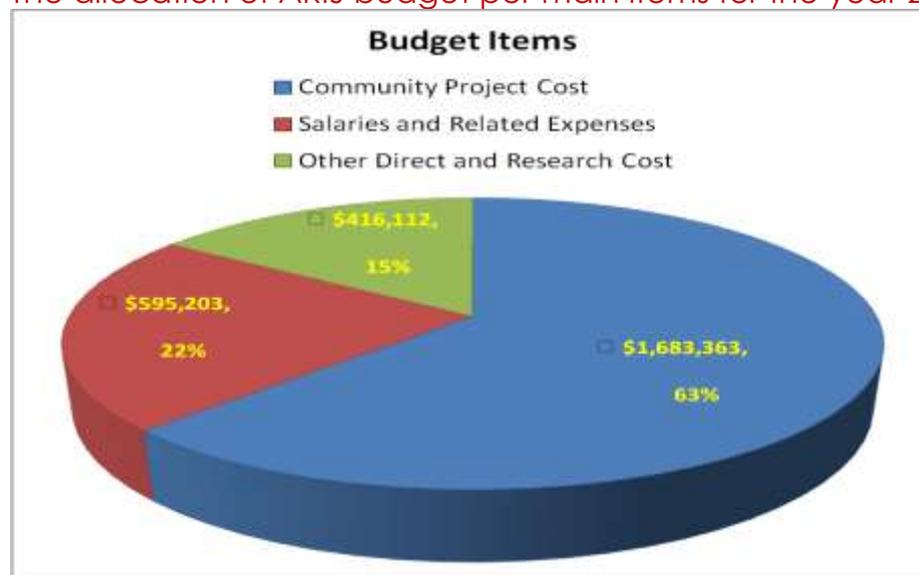
The distribution arrangement of the budget reflects the need of the Palestinian society for both the research and developmental projects. It is about the demand of the Palestinian people for creating opportunities for growth and change in order to increase their awareness, knowledge, skills and attitudes.

The chart shows the distribution of ARIJ estimated budget in 2017 among Projects/donors.



ARIJ budget is mainly distributed among community project costs, salaries and related expenses, and other direct and research costs as well as overhead costs. The allocated budget for community project cost will form 63% of ARIJ overall estimated expenses in the year 2017; this amount of money will be transferred directly to the beneficiaries as cash or materials. The salaries and related expenses accounts for 22%, the other direct and research costs accounts for 15% of the total budget.

The allocation of ARIJ budget per main items for the year 2017:



The following table shows the estimated budget of the year 2017:

Item	Total
<b>Community Project Cost</b>	<b>\$1,683,363</b>
<b>Salaries and Related Expenses</b>	<b>\$595,203</b>
<b>Other Direct and Research Cost</b>	<b>\$416,112</b>
Office Rental	\$5,336
Transportation	\$55,365
Utilities	\$2,529
Communications	\$13,996
Sundries	\$7,500
Office Supplies	\$3,490
Publications	\$47,916
Radio & TV awareness	\$47,355
Software	\$3,543
Training Workshops	\$159,017
Staff capacity building	\$3,000
Computer Equipments & upgrades	\$49,101
Miscellaneous	\$5,000
Audit Fees	\$12,966
<b>Total Budget</b>	<b>\$2,694,678</b>

## Chapter VI: Certificate of Compliance with the Palestinian NGO's Code of Conduct

In October 2016, ARIJ was awarded with the Certificate of Compliance with the Palestinian NGO's Code of Conduct from the NGO development Center NDC and its Umbrella institutions, PNGO, The Palestinian General Union for Charitable Societies, the National Institute for Palestinian NGO's and the Palestinian General Union for NGO's – Gaza.

The certificate states that ARIJ complies with the Palestinian NGOs Code of Conduct and committed to good practices which includes Compliance with covenants and laws, Priorities of development, Participation , Networking & coordination, Transparency, Accountability, Equality & Inclusiveness, Good Governance, Prevent conflict of interest, Influence & Effectiveness, NGOs Integrity, Dispute Resolution.



## الملخص التنفيذي

يعرض هذا التقرير السنوي أنشطة وإنجازات معهد أريج خلال الفترة الواقعة

ما بين 1 كانون الثاني 2016 و 31 كانون الأول 2016:

شهد نهاية عام 2016 مرور 26 سنة على تأسيس المعهد، وقد حقق معهد أريج خلال عام 2016 نجاحات متميزة في مجالات عمله المتنوعة، ومن بينها الزراعة المستدامة والتنوع الحيوي والأمن الغذائي، وإدارة الموارد الطبيعية والتنمية، ومراقبة الأنشطة الإستيطانية، ونظم المعلومات الجغرافية والاستشعار عن بعد والتخطيط العمراني، وتكنولوجيا المعلومات، والحكم الرشيد.

في مجال الزراعة، تمكن طاقم برنامج الزراعة المستدامة من تنفيذ العديد من الأنشطة والتدخلات الزراعية المبتكرة والمتنوعة والتي استفاد منها 2,055 أسرة من الأسر الفقيرة والمهمشة موزعة على 117 تجمعاً في محافظات الضفة الغربية وقطاع غزة من خلال توفير مدخلات الإنتاج لها وتزويدها بخدمات الإرشاد والدعم الفني الزراعي. ومن خلال تحقيق هذه الأنشطة، تم إنشاء 10,900 يوم عمل مدفوعة، بالإضافة إلى 24,124 يوماً غير مدفوعة الأجر (عينية) لأفراد الأسر، وبلغت القيمة الإجمالية للمنتجات الزراعية التي نجمت عن التدخلات الزراعية المنفذة في عام 2016 حوالي \$783,325.

كما نفذت وحدة التنوع الحيوي والأمن الغذائي مشروعاً واحداً في مجال تحسين تسويق المنتجات الزراعية الفلسطينية في مجال سلسلة القيمة، وبالإضافة إلى ذلك نفذت أريج 3 مشاريع استشارية في مجال تحسين تسويق المنتجات الزراعية الفلسطينية وبالأخص في النباتات الطبية والعطرية، وتقييم التنوع الحيوي لمنطقة تجمعات المياه في جالبون، وإستراتيجية الدولة من خلال مؤسسة مرفق البيئة العالمية لمرحلة التشغيل رقم 6. وكذلك أجرى فريق عمل المعهد 25 مقابلة وتعبأت استبيانات، وأجرى 70 زيارة ميدانية على المستويين الوطني والإقليمي، ونفذ 8 دورات تدريبية في مجال التعرف على النباتات وطرق التدجين المحتملة للمزارعين والتجار ومصنعي الأغذية الفلسطينيين، ولفريق عمل المركز الوطني للبحوث الزراعية، والمركز الدولي للبحوث الزراعية في المناطق الجافة. ووزارة الزراعة الفلسطينية، ومركز بحوث الأرض، وأصحاب المصلحة المعنيين العاملين في مجال الحفاظ على البيئة والتنوع الحيوي، وحيث حضر أكثر من 107 مشاركاً بمعدل 45٪ من الإناث. وبالإضافة إلى ذلك انضمت أريج كعضو إلى 5 شبكات عالمية.

وفيما يخص برنامج الحكم الرشيد، فهو يواصل جهوده لضمان التوافق في المجتمع الفلسطيني على الأولويات السياسية والاجتماعية والاقتصادية من خلال تشجيع الحكم الرشيد والتركيز على أن أصوات الفقراء والمهمشين يتم مشاركتهم في عملية صنع القرار بشأن تخصيص موارد التنمية. وحتى الآن، وصل برنامج الحكم الرشيد إلى أكثر من 500 000 مستفيد، نصفهم من الإناث. كما حقق فريق العمل معدل ثابت بنسبة 75٪ في فحص التنمية، وهو برنامج تطبيقي يتم الحصول من خلاله على تحديد الأوقات الحقيقية لردود فعل المواطنين على مشاريع التنمية بطريقة شفافة وتشاركية وفعالة. كما يمكن مراقبي المجتمع الفلسطيني من الإبلاغ عن معدل نجاحهم في تنفيذ الإصلاحات للمشاكل المحددة. وللسنة السادسة على التوالي، واصل فريق العمل تحسين ممارسات الحوكمة الرشيدة بين التعاونيات والمنظمات المجتمعية في فلسطين من خلال تعزيز ثقافة الحكم الرشيد بين منظمات المجتمع المدني بما في ذلك المنظمات المجتمعية والقاعدية والتعاونيات في 120 منطقتاً في الضفة الغربية. وبالإضافة إلى ذلك، تحسين قدرات أعضاء فريق المديرية العامة للتعاونيات، وإنشاء فريق تنسيق القطاع التعاوني، وزيادة وعي التعاونيات المستهدفة بأهمية دور لجان المراقبة الداخلية. تحسين خدمات الصرف الصحي والنفايات الصلبة في المناطق المستهدفة بناء على تقييم احتياجات المجتمع.

وفي مجال إدارة المياه والبيئة، قام فريق عمل بحوث المياه والبيئة بتنفيذ أنشطة تتعلق بمعالجة مياه الصرف الصحي وإعادة استخدام مياه الصرف الصحي المعالجة في الزراعة، وزيادة الوعي العام نحو المحافظة على المياه ومعالجة مياه الصرف الصحي. وشمل ذلك تطوير هذه المحطات بقدرة 5 متر مكعب تعمل بالطاقة الشمسية وتشغيل محطة معالجة مياه صرف صحي بقدرة 1250 متر مكعب في وادي العروب.

وعلى الساحة الجيوسياسية، واصل فريق أريج التخطيط لاستراتيجيات ومخططات التحضر من أجل تحقيق الاستفادة المثلى من استخدام / تغطية الأراضي. كما واصل فريق عمل المعهد على رصد جميع الأنشطة الإسرائيلية ذات الصلة في دولة فلسطين المحتلة. وواصل فريق أريج أيضاً تقديم خدمات المعلومات لدعم منظمات المجتمع المحلي والمنظمات الوطنية من خلال توفير البيانات الإحصائية والتقارير والخرائط والسجلات الجغرافية لأغراض متنوعة. ونجح فريق العمل في إجراء 1147 حالة دراسية وكتابة 366 تقرير يومياً و12 تقريراً شهرياً و4 تقارير ربع سنوية، وزيارة 196 موقعا في الضفة الغربية ونجح في جمع 363 أمر عسكري. واستمرت وحدة المعلومات الجغرافية والاستشعار عن بعد بتقديم خدمات المعلومات الجغرافية لدعم منظمات المجتمع المحلي والمنظمات الأهلية الوطنية والحكومية من خلال توفير البيانات الإحصائية والتقارير والخرائط والسجلات الجغرافية.

وبالنسبة لمستجدات التشبيك والتعاون، فقد بنى معهد أريج علاقات جديدة وقوية مع العديد من المؤسسات الدولية والإقليمية والفلسطينية والمنظمات غير الحكومية من أجل التعزيز وإقامة التعاون المشترك في مختلف مجالات عمل المعهد، حيث جرت شراكات وعضويات مع منظمات حكومية وغير حكومية من فلسطين ومؤسسات إقليمية ودولية.

وقد تم نشر المعلومات من خلال 5 كتب وكتيب واحد و7 مقالات علمية و6 تقريراً خاصاً و7 مقالات في المجلات و6 ورقات مؤتمرات وتقاريرين فنيين و23 مقالات على وسائل الإعلام الاجتماعية ومنشورين و1147 حالة دراسية و12 تقريراً شهرياً وأربع تقارير ربع سنوية، و366 تقارير يومية.

وقد سهلت كل من صفحة معهد أريج ومنصات التواصل الاجتماعي التي تضم يوتيوب وفاسيبوك وتويتر التواصل بفاعلية كبيرة بين المعهد والمنظمات الوطنية والدولية الأخرى والمجتمعات والأفراد. وقد وزعت نسب طرق التواصل مع المعهد على النحو التالي: 70٪ على يوتيوب، و28٪ على الفيسبوك و2٪ على تويتر. وبلغ عدد الزيارات لموقع أريج 12,441,945 الإلكتروني خلال عام 2016.

وفي تشرين الأول 2016، حصل المعهد على شهادة الالتزام لقواعد السلوك التي وضعها مركز تطوير المنظمات غير الحكومية للمنظمات غير الحكومية الفلسطينية. بالشراكة مع الاتحاد الوطني الفلسطيني للجمعيات الخيرية، والمعهد الوطني للمنظمات غير الحكومية الفلسطينية والهيئة العامة الفلسطينية واتحاد المنظمات غير الحكومية - غزة.

أخيراً وليس آخراً، فإن خطة معهد أريج لعام 2017 ستركز على الاستمرار في السعي للحصول على تمويل لتغطية تكاليف نشاطات المعهد من خلال التقديم لمشاريع جديدة إما بحثية أو تنموية أو ابتكارية، وفي نفس الوقت إنجاز المشاريع القائمة، وخلق فرص جديدة للتعاون والشراكة المؤسسية والأنشطة المشتركة، والحفاظ والاستمرار بنشر المعلومات. وفي عام 2017، قدرت الميزانية الإجمالية للمعهد \$2,694,678. (انظر الفصل الخامس).





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