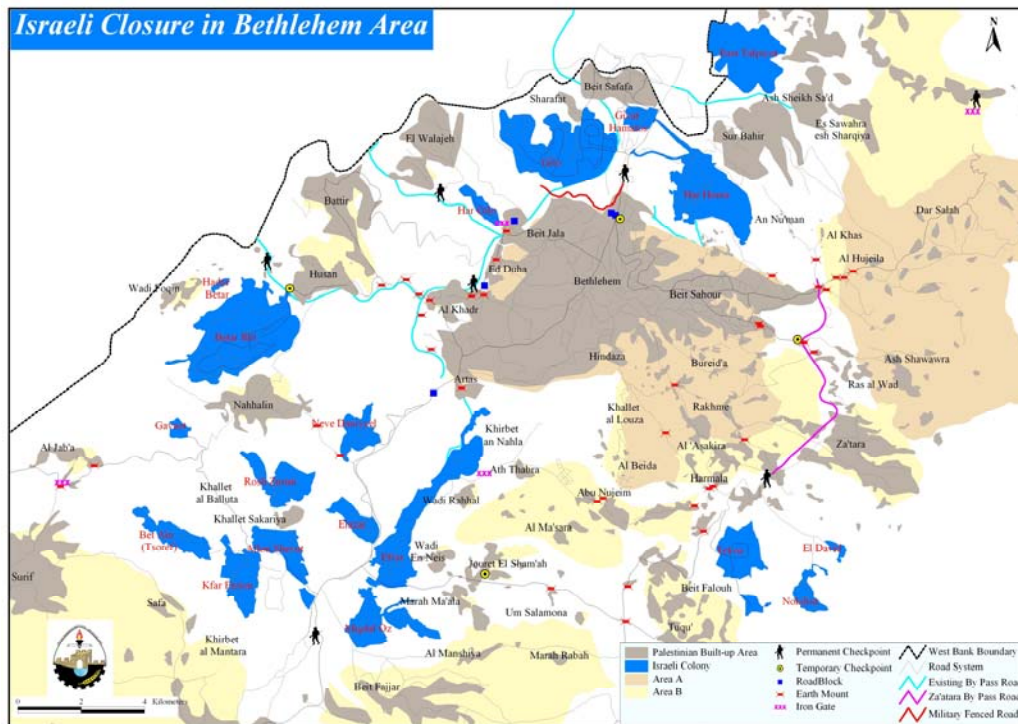


# Annual Report

## January-December 2003

### 1. Introduction

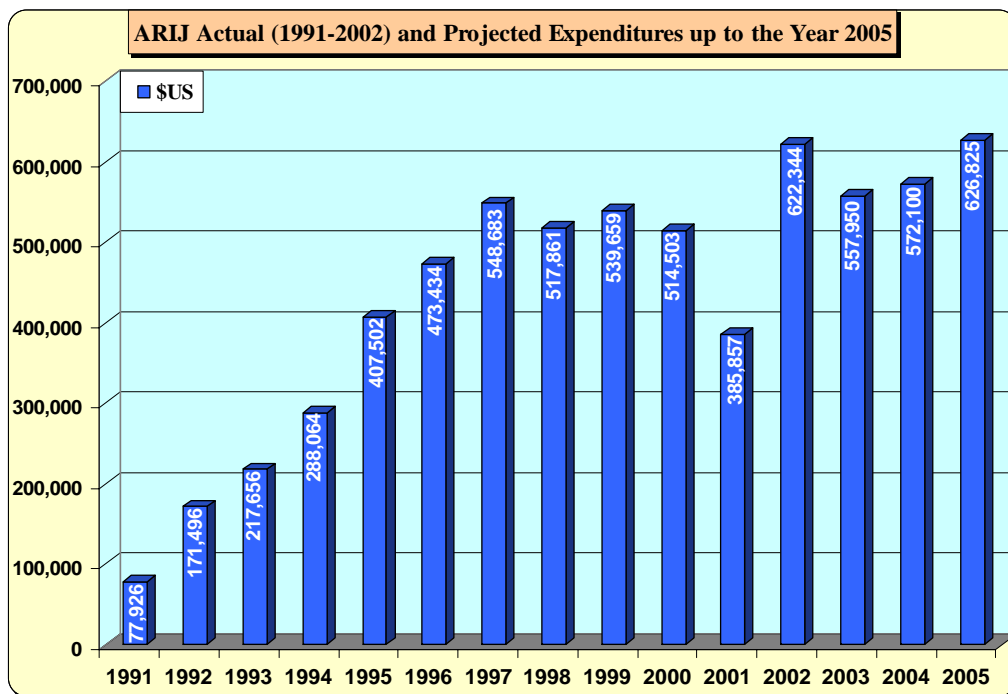
This year started with a continuation of the events of the last year. Following the first day of the year, a curfew was imposed on Bethlehem on the second of January for three consecutive days after which curfews were imposed or lifted intermittently until February 20 when the Israeli occupation forces withdrew from Bethlehem. During this period, Bethlehem was under curfew for 21 days during which ARIJ premises were closed but the majority of the staff were able to work in the alternative sites in Beit-Sahour and Beit-Jala. By the end of March, work at ARIJ began to go back to normal. However, Bethlehem was subjected to intermittent closures throughout the year during which access to ARIJ was restricted. In 2003, there were 59 different barriers consisting of checkpoints, earth mounds and road blocks as shown below.



Under such conditions, ARIJ continued its emergency strategy to cope with the situation. Fieldwork under the current constraints on mobility and access to other Palestinian localities is extremely constrained. Thus, ARIJ staff opted for spending a number of days in each destination site to conduct the necessary fieldwork rather than commuting daily. In order to enhance the work and cover all the targeted areas, ARIJ also was obliged to contract a number of field workers in various districts after training them to conduct the necessary fieldwork. These and other contingency plans have assisted ARIJ to keep its work and meet the expected deliverables under such adverse conditions.

The harsh conditions facing the Palestinian population forced relief and emergency to become a priority. However, ARIJ realizes that this should not replace its basic research program that is essential for promoting sustainable development in Palestine. The Palestinian environment was the first victim of the political conflict. For Palestinians, survival took precedence over environmental protection. For Israel, security concerns took precedence as its occupation forces raised land to construct the segregation zone in the Palestinian areas. Consequently, ARIJ adapted its programs to combine both regular research projects as well as provision of services addressing both short term and medium term needs of the community. To this effect, ARIJ embarked on launching a new set of projects that aim to create the linkage between scientific research and the well being of the society such as introducing composting of domestic solid waste and promoting urban agriculture and dry land farming to alleviate poverty, provide job opportunities and promote food security in marginalized areas.

Following two years of austerity and uncertainty, ARIJ in 2003 was able to restore its activities to that of 2000 and resume its development as shown in the following graph. This is basically attributed to the fact that the Swiss Development Cooperation granted ARIJ a core funding program that enabled it to proceed with its work under such adverse conditions and meet its obligations while it attempts to secure funding for its research projects.



## **2. ARIJ activities in 2003**

### **2.1 Administration and management**

In 2002, ARIJ implemented a consolidated budget for all its activities where each project has its separate financial administration that is integrated in the overall ARIJ program. To facilitate this process, the computer and information systems unit started developing an office automation system which allows for intranet administration and financial management. All of ARIJ's forms such as office leave, sick leave, vacation, cars usage, requisition forms etc are now handled through the intranet. A customized time sheet for each employee has been built and linked with every ARIJ project. For each project, benchmark indicators and time lines have been identified and fed into the system. In addition, all ARIJ acquisitions in the resource centre have been integrated into an intranet accessible and researchable database.

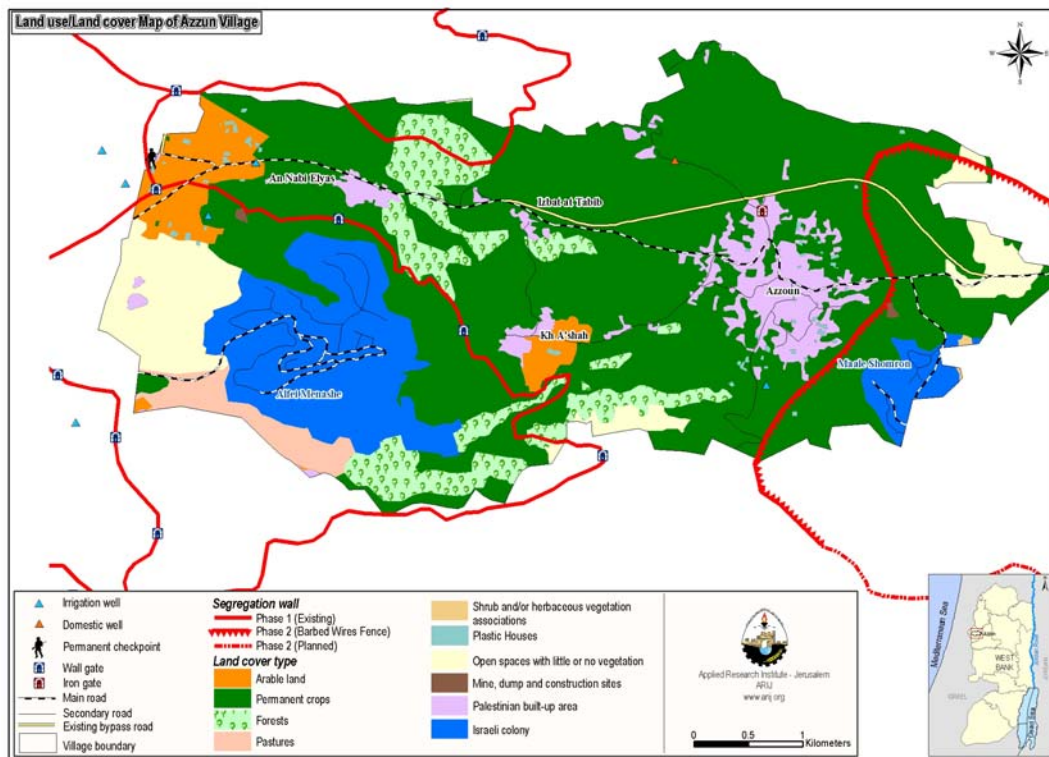
To improve ARIJ's internal monitoring and evaluation system, the board of trustees met and formulated an internal evaluation committee. The objective of this committee is to apply internal evaluation system at ARIJ to improve its administrative system and work environment at the Institute. At the same time, the board of trustees is now preparing the steps for conducting an overall external evaluation within the SDC core funding program.

### **2.2 Research Projects in 2003**

ARIJ activities in 2003 included the implementation of the following research projects.

#### **2.2.1 Urbanization and its impacts on natural resources (phase two):**

Through funding from the International Development Research Center in Canada (IDRC), this project aims to assessing the effects of urbanization on Palestinian natural resources. Through analysis of satellite images and fieldwork, the project will identify the patterns of urbanization in the West Bank and changes of land use as well as estimating the social and economic effects of these changes. A number of workshops will be held to share the information with all stakeholders and the final report is expected to be delivered by March 2004.



### 2.2.2 Improving field crops in the West Bank (Phase three):

ARIJ continued its demonstrations with farmers to improve field crops in the marginal areas in the West Bank through a grant from the Food Security Cash Program of the Canadian Food Grains Bank. The purpose of these activities is to enhance the sustainability of the rain-fed farming system and improve food security. In 2003, 107 farmer families were benefiting from this project, which covered 350 dunums. In addition, an experiment on supplementary irrigation for wheat cultivation was applied to assess its feasibility and potential duplication to reduce the vulnerability of rain fed farming. The results of farmers' demonstration were encouraging. High averages of seeds production per hectare were achieved: wheat up to 1970 kg/hectare, barley up to 1700 kg/hectare, chickpeas up to 1000 kg/hectare, bitter vetch up to 850 kg/hectare, lentils up to 900 kg/hectare, common vetch up to 1500 kg/hectare in addition to high quantities of green forage and dry hay. The yield of supplementary irrigated wheat plants was twice that of the dryland planted wheat plants.

As a sideline activity in this project, ARIJ started a seed breeding program to improve the quantity and quality of wheat, snake cucumber and local squash varieties. More than 40 samples were collected and planted in ARIJ garden. The first selection round has been completed. This activity will continue for several years to come up with the seeds stock of the first pure breeds of the Palestinian target crops.



The participants in the DLF workshop on 26 August 2003

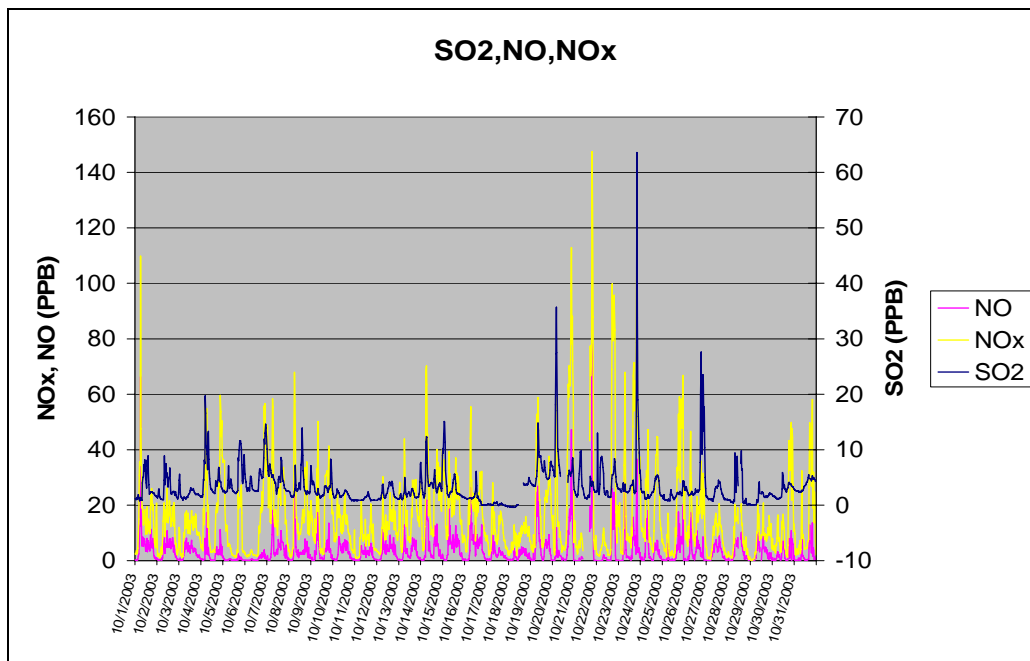
### **2.2.3 Creating compost: towards improving food security in the Bethlehem District**

ARIJ has secured funding from the EU Food Security Program for launching the first pilot project to produce compost from domestic waste in Palestine. In general, organic waste comprises 70 % of the domestic waste in Palestine and so far, has been dumped together with domestic waste in dumping sites. The project aims to introducing a semi automatic but still labor-intensive waste separation system to be followed by an aerobic system of compost production. The compost will be used by the local farmers to restore soil fertility and improve food security in the target areas. The beneficiaries from this pilot project will be 25,000 inhabitants living in five communities in Bethlehem governorate. This project will be implemented in cooperation with the municipalities and village councils involved. One component of the project will also include a public awareness program and the possibility of introducing separation at source. Regrettably, efforts to secure land for a composting facility in Bethlehem has failed due to the refusal of the Israeli occupation authority to license such a facility in area C which is under Israeli control and the resistance of Palestinian communities to allow such a facility in area A which is under Palestinian control but is quite close to inhabited areas. Thus, ARIJ decided to stop this project at this stage and try to reintroduce it later in another district.

### **2.2.4 Trans-boundary air quality effects from urbanization**

The overall aim of the proposed project is the measurement of both meteorological and air quality data and the application of mesoscale metrological model and air quality model to study the area to gain an increased understanding of the air quality problems associated with current levels of regional urbanization. This project is funded by MERC in partnership with the Environmental Protection Research Institute – Gaza, the Department of Meteorology- San Jose State University – USA and the Graduate School of Applied Sciences – The Hebrew University - Israel. In cooperation with the Ministry of Environmental Affairs, ARIJ will establish three units for measuring air quality: in Gaza, Nablus and Bethlehem. An inventory of CO<sub>2</sub> emissions in Palestine and creating a model for movement of pollutants will be made. After more than two years of delay, ARIJ succeeded in 2003 to install and operate the first air quality monitoring station in Palestine. This monitoring station includes four

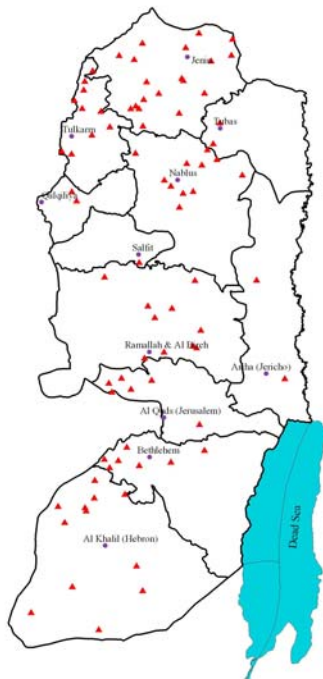
analyzers that measure the concentrations of SO<sub>2</sub>, CO, Ozone, and NO/NO<sub>2</sub>/NO<sub>x</sub> in ambient air in addition to the metrological station. A special lab was established at ARIJ to host the station.



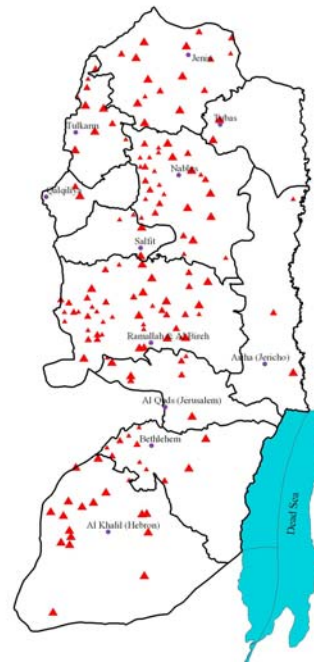
## 2.2.5 Assessing waste management policy in Palestine

This project, which is funded by Tamkeen, aims to analyzing all the national policies relevant to waste management issues by synthesizing the available data and analyzing the complex interactions between waste generation and management on the one hand and their relevant impacts on natural resources and human activities on the other hand. The generated knowledge will be integrated into strategic and “*more sustainable than today*” waste management policies and plans. A systematic view of the waste management issue in Palestine including a database of harmonized and comparable physical economic, and social data related to issues of waste management; assessment of environmental decision making system and policies relevant to waste management issues; realistic waste management options, and analysis of findings of the negative and positive policies in relation to waste management in Palestine are all going to be delivered at the end of the project period. While over viewing the current situation of the waste management in the West Bank several problems has appeared as seen in the next maps, which show the changes in the number of dumping sites in the West Bank in the past four years.

Solid waste dumping sites in 1999



Solid waste dumping sites in 2003



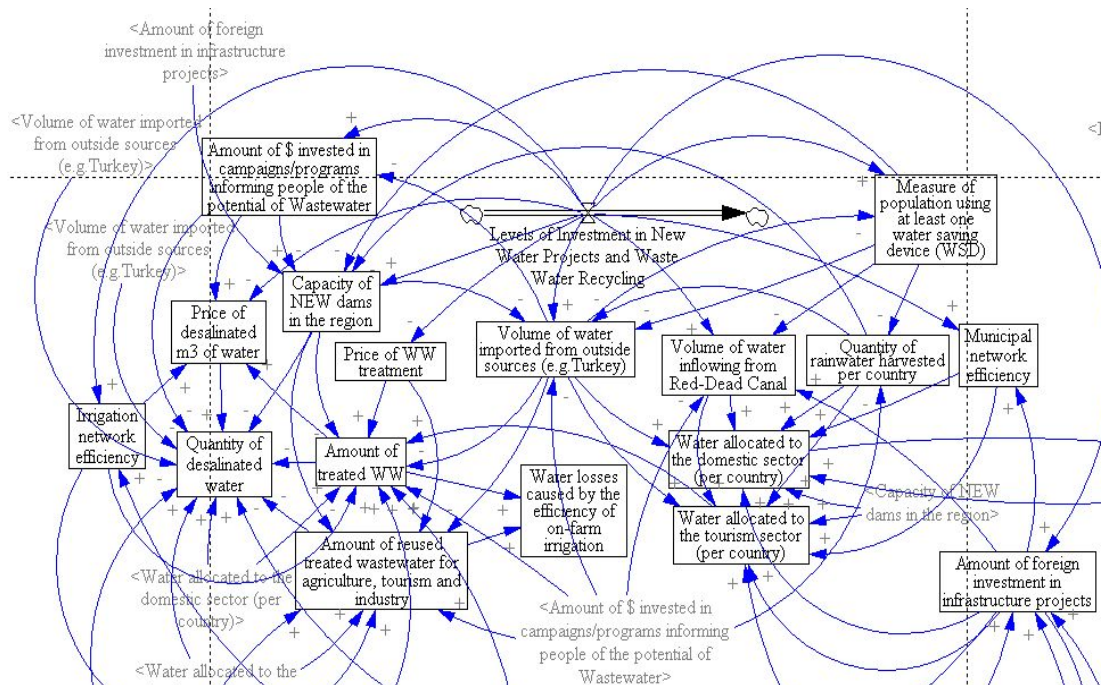
### 2.2.6 Monitoring Israeli Settlements (phase two).

This project is a continuation of phase I of the project, which was supported by the European commission and came to a successful completion by 18 February 2002. ARIJ implemented this project in cooperation with the Land Research Centre of the Arab Study Society. The project's second phase aims to resume the activities of phase I, which included analysis of aerial photos, satellite images, field trips, and case studies, which show the dimensions of settlement policies and their effects on the Palestinian environment. An example is the expansion of Enav colony since 2001, as seen in the following aerial photos.



### 2.2.7 The future of Dead Sea Basin: options for more sustainable water management

The overall objective of the project is to establish the scientific basis for a "better sustainability than today" water management and water-related land management in the Dead Sea basin. The project is funded by the EU INCOMED program, and the partners are the Environmental Planning Department, ARC Seibersdorf Research Centre, Austria; Water Resource Systems Research Laboratory, University of Newcastle, UK; Center for Environmental Policy, Arava Institute for Environmental Studies, Israel; The Applied research Institute – Jerusalem, Palestine; and EnviroConsult Office, Jordan. At the end of the project period it is expected to develop a GIS-based database; realistic development scenarios until the year 2020 that consider social, economic, technical and ecological chances and constraints; understand the interconnections of the water management system; analysis and evaluation of socially, economically and environmentally sound options for a more sustainable water use; mapping of a set of "more sustainable than today" joint development plans with a risk-benefit evaluation, based on dynamic modeling under different development scenarios. Blueprints that are useful for strategic decision-making will be disseminated. The following is *VENSIM Diagram*.



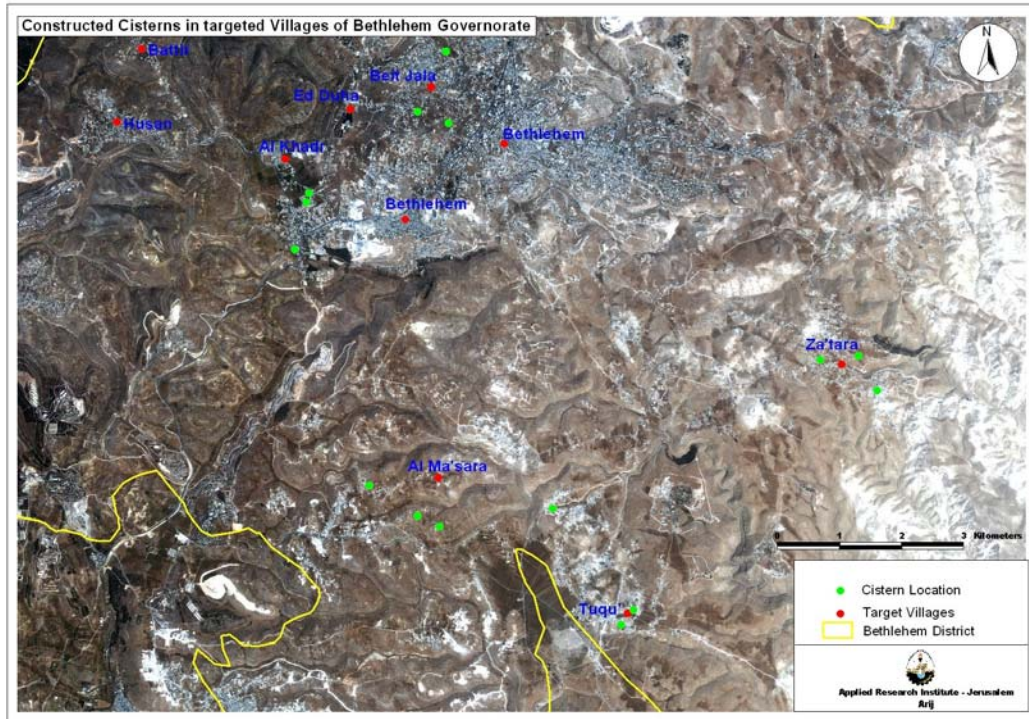
**2.2.8 Policy tools towards sustainable land use and urban environmental management at municipal level under a transitional political context: The case of Bethlehem district, Palestine.**

This pilot study attempts to develop policy tools towards sustainable land use and urban environmental management at municipal level under a transitional political context through the integration of sustainable development concepts and public participation. The project will deal with the interaction between population, urban development and the environment with special emphasis given to demographic factors, land use and the urban environment at the main municipalities in Bethlehem governorate.

**2.2.9 Improving plant production to enhance food security of farming communities in rural areas of Bethlehem Governorate**

The project aims to improve food security of 287 poor and marginalized households (3.3% of total population community) in 10 villages of Bethlehem Governorate through engaging in dryland farming improvement programs, water resource management and green houses construction with increased capacities, skills, and community participation. During the project period three interventions will be implemented: dryland farming programs, Green houses construction, and water management program. 1200 dunums will be targeted for the cultivation of rainfed field crops and forages. 197.6 tons of cereal and legume seeds and 296.4 tons of hay are expected to be produced over the two years. In addition the project aims to establish 15 top-roof rainwater-harvesting cisterns with a capacity of 70 cubic meters per year at household level (15 beneficiaries). The collected water will be mainly utilized to irrigated 15 dunums of vegetables, herbs, and trees where 22.45 tons, 16.7 tons, 18.5 tons of vegetables, herbs, and trees will be produced respectively. Another

32 Green houses will be constructed over 20 dunums. It is expected that 321 tons of fruits and vegetables would be produced at the end of the two years. The following is the location of the constructed cisterns for home gardens supplementary irrigation in targeted villages of Bethlehem district.



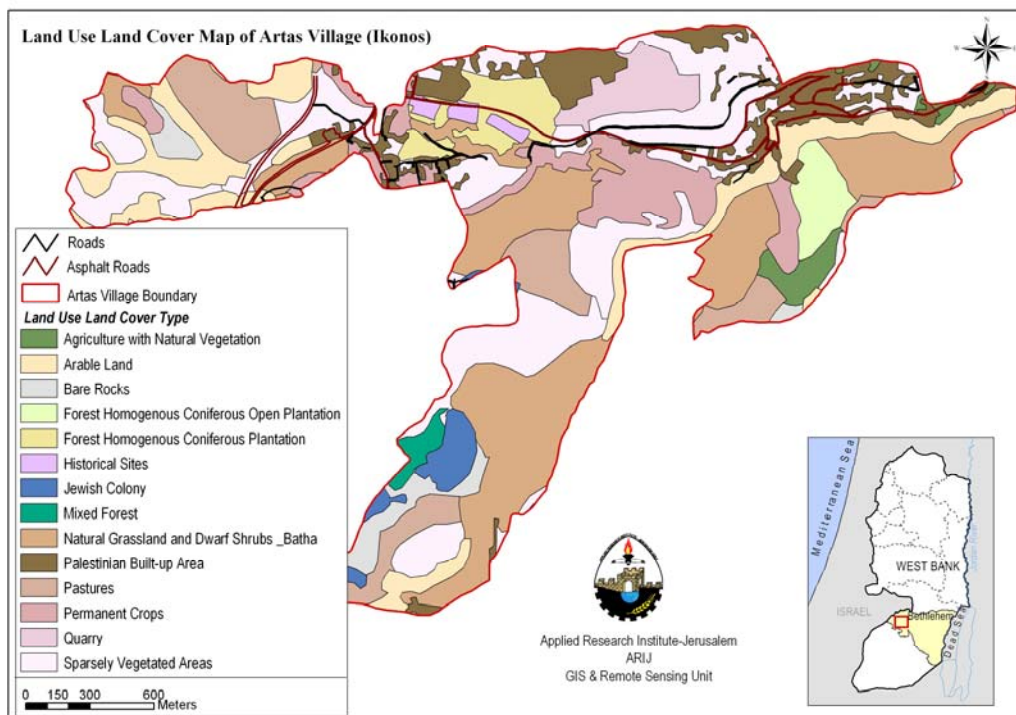
## 2.3 Other activities of the research units at ARIJ

### 2.3.1. Biodiversity and Agricultural Research Unit (BARU)

Despite the political conditions, BARU succeeded in finishing surveying and documenting the oral history of the Palestinian Plants. The project was funded partially by both ARIJ and GEF small grant program. Through this project, ARIJ succeeded in producing the first Palestinian agricultural calendar that is based on the Palestinian farmers' indigenous knowledge including photos of the flowering wild plants in the various months. In addition, a book on the oral agricultural history was published. 1500 calendars and 1500 books were distributed to public libraries and libraries of schools, and universities throughout Palestine. On the other hand, one of the local Television stations hosted the project coordinator for one hour to talk about the project results through discussing and presenting the contents of the book and the calendar.

BARU participated in the implementation of Artas village profile by preparing the agricultural and biodiversity report. It also worked on assessing the impact of segregation wall on the Palestinian agricultural sector and biodiversity resources, which were integrated in the comprehensive report that ARIJ produced on the wall. In 2003, BARU started a seed breeding program to improve the quantity and quality

of wheat, snake cucumber and squash local varieties. More than 40 samples were collected and planted. The first selection round has been completed. This activity will continue for several years to come up with the seeds stock of the first pure breeds of the Palestinian target crops.



A proposal for European Commission entitled:” Sustainable Access to Food and Economic Security in Jenin (SAFES Jenin)” was prepared and submitted jointly with CARE and the Agricultural Engineers Union. The project was approved by EU and its implementation will start in 2004.

ARIJ has also hosted Mr. Sam Vander Ende from the Canadian Grain Bank to assist in developing a set of indicators to assess the impact of its current interventions on the food security of marginalized farmers in the West Bank and developing a three year project to be submitted for potential funding.

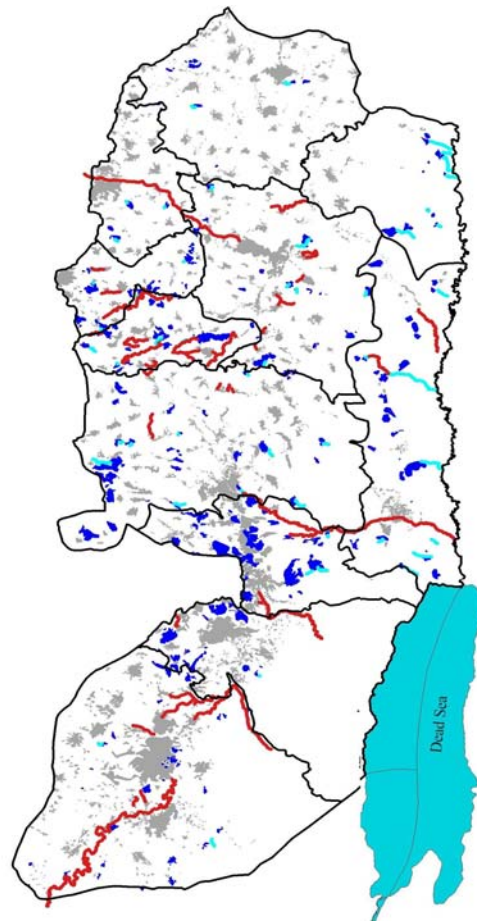
### 2.3.2 Water and Environment Research Unit (WERU)

WERU has focused its activities on the synthesis and visualization of environmental data through linking dynamic models with geographical information systems. In this year most research activities were centered on modeling spatial patterns of optimal water allocation and the development of decision support systems as well as information systems for environmental decision making.

WERU collects, combines and analyses data from disparate sources. Spatial and statistical data are collected from available archives, maps, publications, authorities and empirical research. The latter includes field observations, meteorological and air quality measurements, analysis of remotely sensed data and the synthesis of existing

information to derive new knowledge about the dynamics of the coupled human and natural systems. The Water and Environment Research Unit and the GIS and Remote Sensing Unit are initiating an ambitious plan to update and revolutionize the Palestinian Environmental Information System through a GIS-based database that contains harmonized physical, economic and social data, including consistent sets of maps that document the spatial dimension of current water supply and demand sectors, and of land use patterns that drive water supply and demand.

In parallel, WERU is planning to extend its service delivery in the field of waste management where the ultimate objective is to support decision makers with proper information and decision making tools. In this process, ARIJ has built an extensive wastewater and domestic solid waste GIS-linked databases, including the economic, social and institutional aspects relevant to the aforementioned issues. WERU is assessing the public costs and benefits associated with the different solid and waste water management options and is progressively catalyzing a public discourse on how people foresee their environmental future. The next map shows waste water streams in the West Bank.



WERU is planning to engage in the near future in the thematic field of hazardous waste management. In 2004, ARIJ will host Dr. Linda Hanna, an expert in environmental risk analysis to develop a research proposal aimed at evaluating area-wide contamination from hazardous and toxic waste and performance of a risk assessment.

WERU is still running and evaluating the small-scale waste water treatment plant that has been installed at ARIJ using aerated sludge technology. The unit performance is promising but there are still problems related to the reduction of BOD and COD parameters. The treated waste water is utilized for irrigation of ARIJ garden. If the performance of the unit will continue to improve, ARIJ will then work on building a unit locally and test it in the hope that will be spread to replace the cesspits which are causing pollution of the ground water aquifers. Al-Khader Village Council approached ARIJ to establish water treatment plant to irrigate the recently build playing ground which will be irrigated by fresh water at an annual cost of \$ 7000. ARIJ contacted GTZ to work together on the potential utilization of treated waste water for irrigating the playground.

Through implementing analysis of waste management policies project, ARIJ has succeeded to establish good relations with the official bodies of the local communities that facilitated conducting the surveys of assessing the environmental and socio-economic impacts of the existing waste management systems in the Palestinian Territories. The activities are conducted with support of the Palestinian Environmental Quality Authority (PEQA). ARIJ has also worked very closely with the UNEP delegation in its preparation of a desk study on the status of environment in the Occupied Palestinian Territory. The report that was published in 2003 reflects ARIJ input.

### **2.3.3 GIS and Remote Sensing Unit (GIS & RS unit)**

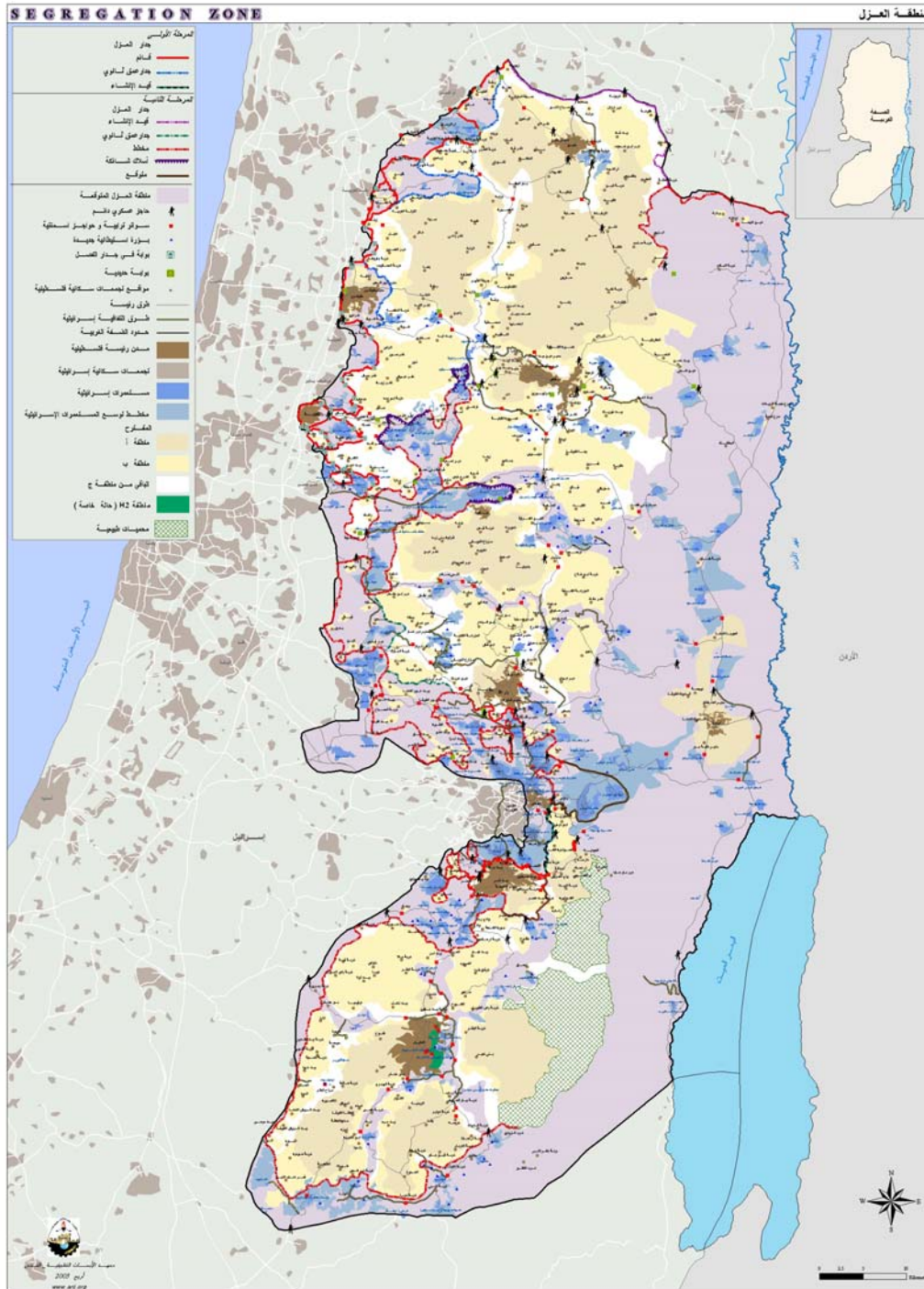
The GIS and RS unit aims to using up-to-date data and mapping technology in research studies, such as land use analysis and planning, environmental and water management and sustainable development in Palestine in relation with the political situation of the area. As Palestine is going through a continuous phase of environmental and land use changes, the continued updating of ARIJ's existing databases is crucial and vital in order to keep up with the new developments on the Palestinian land. Over the past five years, ARIJ has diligently worked on promoting its technical and human resources capabilities in the field of GIS and RS keeping track with the latest technologies. At present, GIS and RS unit has the following software:

1. Three concurrent licenses of ArcGIS 8.3 desktops and workstations. ArcGIS gives the power of visualizing, creating, solving, presenting and developing spatial data combining the potential of Arc/view and Arc/info in one package.
2. ArcIMS software (1 CPU server) to produce dynamic and interactive maps on the web. ArcIMS is an Internet Map Server (IMS) software suite for designing, publishing and administering Internet Mapping.
3. ArcPad 6 software to facilitate the process of collecting ground truth and ground features from the field. ArcPad is an easy to use, GIS and mapping system for mobile computing. ArcPad provides immediate data availability and validation.
4. ERDAS Imagine 8.5 to work with satellite images. It is user friendly software, efficiently used for image processing, interpretation and enhancement as well as in image classification and hyperspectral analysis functions.

5. PCI 9 is GIS and RS software used for satellite images' analysis and interpretation.

It is worth mentioning that the ArcGIS lab kit software and the ERDAS Imagine software are going to be upgraded to 8.3 and 8.7 respectively.

In December 2003, the unit produced a poster map about the segregation wall in the West Bank in cooperation with the Palestinian Institute for Studies of Democracy (Muwatin) that was published by al Ayyam newspaper. More than 15,000 copies of the map were distributed in the Palestinian areas. ARIJ also produced a map in English that was circulated worldwide.



An attempt was started in 2003 to produce a full database including socioeconomic and physical datasets for the Palestinian villages affected by the construction of the segregation wall. A preliminary database files were produced for about 65 villages out of 190 Palestinian localities, work is expected to continue during the year 2004.

During this year, the unit completed the analysis of IKONOS satellite images captured in 2002 for the West Bank and Spot 5 images for Gaza captured in May 2003 to document land use / land cover changes. A study was conducted to classify the climatic zones in the West Bank for building designs and energy efficient buildings purposes. As a result of this study, seven climatic zones were classified, five in the West Bank and two in Gaza.

This year, the GIS and Remote Sensing unit in cooperation with the Computer Unit launched the first Palestinian Internet mapping site at ARIJ for several projects such as Monitoring Israeli Settlements and the Dead Sea projects using ArcIMS. Considering the restrictions on mobility, this technology will provide users to edit and record GIS layers from remote sites. Towards this end, ARIJ trained 11 reporters from local TV stations in the West Bank governorates to create an internal viable link through collecting and exchanging data on the traffic status, Israeli settlements activities as well as the possible accessibility of Palestinians to the roads using the internet. Another training course was conducted by the GIS and RS unit staff for four days about using ArcView and ArcIMS software to the Land Resource Center-Jerusalem (LRC) staff to build their capacity.

Furthermore, the ArcScene module in ArcGIS 8.3 was utilized to produce several 3-Dimensional maps for the West Bank and Gaza illustrating, especially, the snaking of the segregation wall along the West Bank lands. 3-D maps and movies were generated covering the northern, middle and southern parts of the West Bank. Moreover, the GIS and RS unit prepared a special 'Christmas tree' dynamic presentation for Bethlehem district illustrating the changes in its borders and land confiscated by Israelis from 1967 up-to-date, which was published at ARIJ's web site and sent to ARIJ's friends list.

## **2.4 Consultancies**

In 2003, ARIJ continued its efforts to execute consultancies that will assist in its sustainability as following:

### **2.4.1. Capacity Building for the Adoption and Application of Energy Codes for Buildings.**

The consultancy was made between ARIJ and the UNDP / PAPP to re-analyze the climatic characteristics of the Palestinian Territories (West Bank and Gaza). According to the agreement ARIJ has conducted the research to derive the climatic zones in the Palestinian territories and defined the Palestinian built-up areas according to those zones in attempt to facilitate the process of determining the different building design responses required in each area. The consultancy aimed at analyzing the Palestinian meteorological data to derive climatic zones in the Palestinian Territories; identifying Palestinian built up areas according to the climatic zoning; and deriving sun path in the Palestinian territories for each climatic zone "region".

### **2.4.2. Agro-biodiversity**

ARIJ is implementing a consultancy contract with UNDP/PAPP and MOA for the regional agrobiodiversity project that involves Jordan, Lebanon, Syria and Palestine.

ARIJ is responsible for updating of the Palestinian GIS – flora metadata base and the in situ conservation sites. ARIJ is also leading the team in charge of developing the agrobiodiversity policy and legislation for Palestine. The final report was presented and discussed.

#### **2.4.3. GIS capacity building for Municipalities, Local Government and Village Councils in Bethlehem governorate and the Establishment of a GIS Service Unit**

This project came about as a natural outcome of ARIJ's work with the governorate of Bethlehem in emergency preparedness. It has been developed in cooperation with the municipalities, local government and village councils in Bethlehem governorate and submitted to the Italian Government for funding through UNDP/PAPP. 16 local engineers were trained on the applications of GIS in town planning and a central GIS lab was established in the governorate of Bethlehem with seven PC's and a server, plotter, LCD and color printer. ARIJ has received several requests for training and is trying to meet the growing need.

#### **2.4.4. Poverty and the environment**

Within its program entitled "The poor speak out", UNDP/PAPP contracted ARIJ to submit a report on the relationship between poverty and environmental degradation. The results of the project were discussed in a number of workshops conducted throughout the Palestinian areas.

### **2.5 Human Resource Development.**

ARIJ strongly believes that the development of human resources is a key element in creating a dynamic and innovative science and technology culture that will ultimately contribute to the well being of the country. Throughout their turbulent history, Palestinians have maintained a deep and abiding commitment to education to sustain their survival. However, the educational system in Palestine has not been able to provide a critical mass of qualified scientists needed for the creation of sound research and development base. Therefore, ARIJ has to embark on a long term plan for promoting its human resources to build a team of well-trained and experienced researchers, managers and support staff in the fields of agricultural, environmental, GIS and water research. In the past five years, ARIJ was subjected to a high attrition rate of its staff which has curtailed its development. However, in the past two years, the attrition rate has declined considerably and this has reflected positively on ARIJ performance. To improve its capacity, ARIJ has sent a number of its research staff to other countries to pursue their post graduate studies according to ARIJ needs. Mr. Nezar Farsakh completed his M.Sc. studies in border conflicts at Durham University and came back to ARIJ but, regrettably, had to leave after a couple of months to join the Negotiations Support Unit due to the transportation difficulties between Ramallah and Bethlehem. Miss Jane Hilal completed her M.Sc degree in environmental resource management from Greece and is back at ARIJ. Mr. Ali Abu Rahmeh is pursuing his Ph.D. degree in air quality in the USA. Mr. Shukri Kasakseh is pursuing his M.Sc. degree in air pollution dispersion modeling at San Jose State University. Mr. Ihab Lolas will continue his M.Sc degree in biotechnology in Greece next summer.

In addition, ARIJ provides the opportunity for its staff to attend short term training courses to promote their capabilities. Mr. Nader Hrimat attended a two-week training program on advocacy concepts and practices to improve democracy, which was conducted at the Advocacy Institute in Washington in cooperation with the Palestinian NGO's network. Nader was also nominated to apply for the Ashoka fellow program as the first Ashoka Fellow in Palestine. This program focuses on developing the profession of social entrepreneurship around the world. Dr. Nael Salman attended a one month training course on international program for development evaluation at Carleton University, Canada which was organized by IDRC and the World Bank. Miss Sophia Saad attended the 1<sup>st</sup> Euro-Mediterranean Satellite Navigation (GNSS) Seminar that was held in Cairo, Egypt on 16, 17 February 2003 and addressed the state-of-play in the GNSS sector on institutional, industrial, and research level and supported establishing contacts amongst the MEDA partners and the European Union Member States. Mr. Ghassan Darwish and Miss Abeer Safar attended a two weeks intensive course in Jerusalem on air quality monitoring instrumentation, which allowed them to successfully install and operate the first air quality monitoring station in Palestine. Miss Alice Nassar took a short course at the Arava Institute for Environmental Studies about Water Politics in the Middle East. She also visited different institutions and departments working with water related issues in the area. Alice was further appointed to represent ARIJ in the working group on Environmental Standards at the Palestine Standards Institution, until the return of Mohammad Ghanayem. Mr. Michel Sleibi, Mr. Issa Zboun, and Mr. Faris Sa'ad had also attended training on designing and graphics using Corel Draw for one month in Bethlehem University. Mr. Michel has also attended training on Multimedia using Photoshop.

ARIJ continued its policy of offering internship for expatriates to work at ARIJ on its on-going projects. In 2003, ARIJ hosted Mr. Guillaume Cardon, who worked with the GIS group on modeling the urbanization trends. Regrettably, after three months of work, he was unable to renew his entry visa and had to leave Palestine. Mr. Thomas Eneroth spent six months at WERU working on waste policy analysis before going back to resume his MS.c. in Sweden. Mrs. Ellen Vea Rosnes joined the GIS and RS to work on urbanization and the geopolitical situation in Palestine. And Mr. Patrick has joined also WERU to work on assessing the viability and sustainability of Palestine from an economical point of view.

### 2.5.1 ARIJ STAFF 2003

There are 44 employees including the director general. It should be noted that the females represent almost 36% of the total employees.

#### Names of Employees:

Unit	Name	Position
WERU	Abeer Safar	Research assistant
WERU	Ali Abu Rahmeh	Study leave
BARU	Ali Ghayatha	Research Associate
WERU	Alice Nassar	Research Associate
WERU	Anwar Qabajeh	Research Associate
GIS & RS	Ellen Vea Rosnes	Research Associate / internship
GIS & RS	Elia Khalilieh	GIS Technician
WERU	Elsie Qattan	Research assistant
Computer unit	Fadi Isaac	Director, Computer unit
Computer Unit	Faris Sa'd	Computer Technician
GIS & RS	Fuad Ishaq	Research assistant
Computer unit	George Kheir	Research assistant
WERU	Ghassan Darwish	Research assistant
BARU	Helen Ghawali	Research assistant
Finance Unit	Helen Murad	Financial Director
WERU	Ihab Lolas	Study leave
WERU	Inas Bannourah	Research assistant
Computer unit	Isam Ishaq	Research Associate
GIS & RS	Issa Zboun	Research Assistant
BARU	Iyad Abu Rdeinah	Research Assistant
Director General	Jad Isaac	Director General
BARU	Jamal Ishaq	Research Assistant
GIS & RS	Jane Hilal	Research Associate
WERU	Juliet Bannoura	Research Assistant
WERU	Khaldoun Rishmawi	Director, WERU
Resource Centre	Laila Saqqa	Director, Resource Centre
GIS & RS	Manal Badra	Research Assistant
WERU	Maysoun Bannoura	Research Assistant
Computer Unit	Michel Sleibi	Research Assistant
Support	Miriam Salahat	Janitor
BARU	Moh'd Abuamriya	Research Assistant
WERU	Moh'd Ghanayem	Leave of absence
BARU	Nader Hrimat	Assistant Director General
GIS & RS	Nael Jubran	Technician
WERU	Nael Salman	Manager, Settlements project
Support	Naser Shoukeh	Maintenance
WERU	Patrick Muller	Research Associate / internship
Public Relations	Raed Abed Rabbo	Public Relations Officer
BARU	Roubina Ghattas	Research Associate
Finance Unit	Saher Hilal	Financial Assistant
WERU	Shukri Hihi	Study leave
GIS & RS	Sophia Sa'ad	Director, GIS and RS unit
Secretary	Suha Nazzal	Secretary
WERU	Suhail Khalilieh	Research Assistant

## **2.6 Cooperation, Coordination and Networking**

### **2.6.1 Cooperation with the PNA**

Since the establishment of the PNA, ARIJ has been working hard to foster a relationship of close cooperation with the various Palestinian ministries and institutions especially the Palestinian Ministry of Planning (MOP), Ministry of Agriculture (MOA), Ministry of Local Government (MLG), Environmental Quality Authority (EQA), Negotiations Affairs Department (NAD), Palestinian Water Authority (PWA) and the Palestinian Central Bureau of Statistics (PCBS).

#### **Agriculture**

ARIJ's relationship with the Ministry of Agriculture (MOA) continued to be distinguished and strong as evident by the growing interaction and cooperation. ARIJ is a member of the Agrobiodiversity Steering Committee and Task Force. ARIJ worked with MOA in developing a joint project proposal entitled "Palestinian Villages Agricultural Profile". The project aims to survey the agricultural areas on community level based on the British mandate administrative boundaries and developing an integrated spatial and statistical agricultural database in addition to improve the human resources capacity in the MOA. ARIJ formulated the project document and submitted it officially to the Minister of Agriculture who expressed the readiness of MOA to cooperate with ARIJ to implement such a project. Currently, ARIJ and MOA will be working to come with a Memorandum of Understanding and look for potential funding for this project.

ARIJ has also participated in developing the Legislation for Promoting the Conservation of Agro-biodiversity in Palestine for MOA, as an integral part of the regional project on conservation and sustainable use of dryland agro-biodiversity (Jordan, Lebanon, Syria and the Palestinian Authority) funded by the Global Environmental Facility (GEF) and implemented by UNDP. In preparing the report, a number of meetings, workshops and round-table discussions were held with officials from the MOA and other Palestinian ministries as well as representatives from relevant NGO's, farmers' organizations and the private sector.

ARIJ worked with MOA in its program for revitalizing the agriculture sector in light of the recent political developments. ARIJ also worked with the FAO delegation which was invited by MOA to develop a food security strategy. ARIJ is also a member of the Coordination Committee that was established comprising MOA and NGO's working in the field of agriculture to promote coordination and joint programs to address the emerging needs of the agricultural sector. ARIJ is actively participating in most of the meetings and workshops that are conducted by MOA.

#### **Environment**

This year witnessed the establishment of many youth summer camps in the West Bank especially in Bethlehem Governorate. Improving the youth environmental awareness was one of the main objectives of these camps. ARIJ staff participated actively in promoting environmental awareness through giving lectures and distributing awareness materials. In addition, ARIJ staff worked with local NGO's in

promoting awareness in the local communities on the status of environment and biodiversity in Palestine.

Additionally, ARIJ became a member of the recently established Environmental Group in Bethlehem Governorate (EGBG). This body was established in cooperation between the directorates of PEQA and Ministry of Local Governments as well as all other related governmental and nongovernmental organizations to joint and coordinate the environmental activities in the Governorate and to work to solve the environmental problems. ARIJ was asked by the group to prepare the mission statement and plan of action. The EGBG commemorated the International Environmental Day through conducting a workshop, where ARIJ presented a lecture about the impact of the Israeli colonizing activities on the Palestinian environment and copies of ARIJ environmental publications were distributed. The EGBG also launched a cleaning campaign in Bethlehem governorate in which ARIJ was a major player.

ARIJ participated in a number of workshops held by the Palestine Standards Institution to develop the Palestinian standards of both treated wastewater and air quality. Al Khader municipal council approached ARIJ regarding the potential of using treated waste water for irrigating the grass in its new stadium. ARIJ contacted GTZ to visit the site and explore this potential.

## **Water**

In January 2003, the Palestinian Water Authority asked ARIJ to participate in assessing the environmental impact of the Israeli colonies wastewater in the West Bank to argue against the Israeli demand for compensation for treating the generated wastewater from the Palestinian Territories. ARIJ contributed to the preparation of this report, entitled “Environmental Impact of the Israeli Colonies’ Wastewater in the West Bank/Palestine”, through sending one of its researches of the Water and Environment Research Unit to work with the PWA for three days to make the first draft.

In June 2003, an official letter was directed to ARIJ to assure the cooperation between ARIJ and PWA especially concerning exchange of data for the project “SUSMAQ”, conducted by the PWA, about water management in the Western Basin. ARIJ provided the data needed for evaluating the pollution of the groundwater in the Western Basin and was also given data from PWA about the quality and quantity of water extracted from wells and springs in the West Bank. This data is needed for the project “Analysis of Waste Management Policies in Palestine” conducted by ARIJ, within the framework of Tamkeen project.

## **Local Councils**

2003 witnessed further improvements in the relationship and cooperation between ARIJ and the Ministry of Local Government (MLG). The new Minister is showing interest in strengthening that relation. This appeared clearly through the participation of the minister in the round table meetings to discuss the progress in the urbanization project, which is funded by IDRC. ARIJ provided the MLG staff with spatial

geopolitical and land use data. The separation wall and settlements expansion is creating new facts on the ground which is impacting every aspect of Palestinian life.

ARIJ is becoming a main source of information for GIS data on Israeli land confiscation orders. Palestinians from different localities especially those affected are visiting ARIJ regularly to verify their condition through ARIJ's geographical databases. At the same time, strong relationship was established between ARIJ and the leaders of targeted communities through the urbanization project especially while conducting the socioeconomic and community leader surveys.

In cooperation with the Ministry of Local Government, ARIJ finished a project aimed at building an integrated Geographical Information System for a Palestinian community. The project has resulted in creating spatial and statistical databases to Artas village. The databases were transferred to the village council after training one of its engineers on using the system to be used as a decision support system for future development in the village. A workshop was held in the village council building and the representatives of other villages and municipalities asked ARIJ to implement the same project for their villages. Consequently, ARIJ administration discussed this matter with the Finnish Representative to the PNA to extend this successful pilot project to other localities.

Beit Sahour municipality approached ARIJ and two other local NGO's to form an environmental coalition that will work together to improve the environmental services and conditions. A tree planting activity was conducted in the municipality and a cleaning campaign was launched. ARIJ is in the process of developing a proposal with the municipality to promote the development of a healthy city in the area.

## **Negotiations**

Despite the prevailing harsh political conditions and the interruption of peace negotiations between the Palestinians and the Israelis, ARIJ continue to cooperate with the Negotiations Affairs Department (NAD) through the provision of the latest information concerning settlement expansions and other related aspects including land use and natural resources, both spatial and statistical data for the different areas of the West Bank and Gaza Strip. ARIJ is continuously providing the Palestinian leadership with such information. In addition, ARIJ participated in the formulation of the Palestinian position papers on natural resources and land use prepared by NAD. ARIJ provided NAD with information in its preparation for the ICJ hearing regarding the segregation zone. ARIJ has been participating in a number of parallel track meetings.

## **PCBS**

Cooperation with Palestinian Central Bureau of Statistics is continuing. A technical committee of both institutions is meeting regularly to investigate potentials for joint project proposals especially the first Palestinian socioeconomic spatial atlas. ARIJ will work with PCBS and MOA in developing the vulnerability and food security mapping.

## **Physical Planning**

Based on the last Palestinian governmental changes, the Ministry of Planning and International Cooperation (MOPIC) has been divided into two new ministries, the

Ministry of Planning and the Ministry of Foreign Affairs. ARIJ has continued its work and relations with the Ministry of Planning through exchanging data concerning settlements, land use changes, transportation, poverty, and long term planning; and attending experts meetings such as urbanization project roundtable meetings and joining the efforts to submit joint presentations on the international level. The cooperation between the two parties improved significantly, especially during and after Taba peace negotiations, as both of them were the main official bodies supporting the Palestinian negotiators with required information including the spatial and statistical data.

On the other hand, contacts between ARIJ and the Palestinian Geographic Research Center were started and two technical and administrative meetings were conducted in both institutions. Joint project proposal on creating the first Geo-referenced accurate base map was prepared and a memorandum of cooperation is being developed. ARIJ and PGRC have submitted this project to different donors seeking potential funding.

ARIJ was contracted by the Palestinian Ministry of Local Government (MLG) and UNDP to develop a climatic zoning map for Palestine to be used in the housing specification and coding. The report including the climate zoning maps was submitted. Accordingly, the MLG asked to extend the contract with ARIJ to do more work regarding the climatic zoning.

ARIJ is a member of the Technical Advisory Committee for Physical Planning Project, which is currently implemented by the Ministry of Planning. Urbanization and its impacts on natural resources project (Phase II) has continued and the progress in the project activities and results were discussed regularly with MLG and other stakeholders through roundtable meetings and workshops. The analysis of the purchased satellite images (IKONS) was completed and has been used for the urbanization project and for monitoring the Israeli colonizing activities. By the end of the project, ARIJ will provide MLG with all digitised master plans database and land use/ urban analysis maps to improve their database.

### **Scientific Research Strategy**

Based on the last Palestinian governmental changes, the Ministry of Education and Higher Education (MEHE) became mandated with the profile of higher education and scientific research. ARIJ continued its work and relations with the MEHE for producing the Green Paper for a Science and Technology Strategy for Palestine. The Director General of ARIJ was invited to join the Higher Council for Scientific Research in Palestine, which will be responsible for the formulation of science and technology policy as well as the promotion of scientific research in Palestine. The PNA has granted 400,000 \$ to the Council to support research projects among all Palestinian universities and research institutes.

ARIJ has also produced a map about schools distribution in Bethlehem Governorate based on the requisition of the director of the MEHE directorate in Bethlehem Governorate. ARIJ is also a member of the Palestinian child plan, which is working on developing a children human rights action plan and participation.

## **2.6.2 Cooperation with Civil Society Institutions**

ARIJ in cooperation with LRC (Land Research Centre) continues to work closely on monitoring the Israeli colonizing activities and the progress in the separation wall. The European commission is funding the second phase of the project entitled “Monitoring Israeli colonizing activities in the Palestinian Territories”. The project will be implemented jointly by ARIJ and LRC. ARIJ is a member of the national committee for land protection and leads the activities of the Bethlehem committee. ARIJ continued its support to the Palestinian environmental non-governmental organizations network (PENGON) through its role as the secretary and the participation in all its meetings and in the network campaign against the segregation wall. ARIJ has contributed significantly to the published report by PENGON entitled “Stop the Wall in Palestine (facts, Testimonies, Analysis, and Call to Action)”. ARIJ is working jointly with the Palestinian Centre for Human Rights (PCHR) in Gaza in monitoring settlement activities in Gaza. ARIJ trained a number of staff from PCHR on GIS and its use in monitoring land use changes. ARIJ is a member of PNGO and is working actively with the network in its advocacy and lobbying work.

The relationship between ARIJ and the Centre for Cultural Heritage Preservation of Bethlehem 2000 project was developed. ARIJ participated in the meetings organized by the center as part of the Delta project for the Middle East Cultural Heritage Preservation. Also, ARIJ has prepared a scientific paper entitled “Urban and land use patterns in Bethlehem District” which was presented in a conference in Spain. ARIJ was invited by the center to participate in the conference.

The Heinrich Böll Foundation organized in cooperation with ARIJ and the Palestinian Agricultural Relief Center (PARC) a workshop entitled “Fairness in a Fragile World, The Sustainability Debate in Palestine in Light of the Johannesburg Memo”. ARIJ made on presentation assessing the Johannesburg conference and identify Palestinian obligations to localize the global environmental plan. ARIJ is working with local environmental NGO’s in promoting environmental awareness and launching activities such as cleaning campaign and tree planting.

## **2.6.3 Cooperation with regional and international organizations**

In 2003, ARIJ initiated contacts with the department of cartography and Hasso Platte Institute at Potsdam University, which culminated in a number of visits by ARIJ staff aimed at institutional cooperation and development of joint research projects. The development of The Jordan Valley Information System (JOVIS) is the first product of this cooperation. The overall objective of this project, which includes partners from Germany, Lebanon, Jordan, Palestine and Syria, is to develop and implement a dedicated regional geographic information system for the Jordan Valley. JOVIS will use the internet for access to its data and to disseminate data products and services. Graphical user interface and system functionality will be built to the specific needs of regional decision makers, educators as well as the general public. The project has been submitted to the EC for potential funding. In addition, ARIJ received from Hasso Platte Institute a copy of the Landex software, which is a GIS software that is capable of producing 3D images and animation of GIS spatial data. ARIJ intends to work jointly with Hasso Platte Institute in creating a virtual Palestine project. In 2004,

ARIJ will be working with the department of cartography and Hasso Platte Institute at Potsdam University to develop a joint project proposal aimed at producing an interactive atlas for Palestine, hopefully in cooperation with ETH in Switzerland. This atlas will be able to bring on-line geographic information, statistical and descriptive information to planners, researchers, stakeholders and the public by and large.

In 2003, ARIJ was invited to be a founding member of the Global Institute for Technology Advancement "GIFTA", which is a non-profit organization, registered in the USA and dedicated to improve the daily lives of people in the "developing countries" by promoting technology advancement. Its goal is to help developing countries find the necessary help they need to become active in the field of Technology Advancement. GIFTA will be working to help targeted "developing countries" to become active contributor in Technology Advancement. By helping local Universities and Research Institutes to execute state of the art technology research, GIFTA will shape their opportunities and capabilities. By working with local research institute at targeted "developing countries", GIFTA will help identify IT capabilities and resources. By working with research institutes at "developed countries", GIFTA will help match IT capabilities with research ideas, the needed funds, combined with the needed leadership and coaching to execute successful research initiatives. The first activity for GIFTA here is to identify the current state of Information Technology research capabilities in Palestine. The current state analysis will then serve as the base for gap analysis and lay out future IT research initiatives that can improve the state of IT research in Palestine. This study is expected to be implemented in 2004.

Contacts were initiated in 2003 with Prof. Glenn Bowman from Department of Anthropology, University of Kent, United Kingdom to prepare a joint project proposal to document the historical cultural heritage of Bethlehem. Currently contacts are being conducted to develop such a proposal.

ARIJ is continuing its cooperation with the ICRC, OCHA, OCHR, UNEP, FAO and UNSCO by providing valuable information in its field of expertise. A presentation was given for the representative of the high commissioner for human rights in the United Nations Prof. John Dougard concerning the recent developments in Israeli colonizing activities and the unilateral separation plan followed by a tour to the affected Palestinian areas. Another presentation was made to the delegation of the high commissioner for food in the United Nations headed by Prof. John Ziegler focusing on the agricultural and environmental impact of Israeli actions as well as the status of food security in the Palestinian Territories. On 7/3/2003 a presentation on the geopolitical situation and the recent developments in the Rachel's tomb compound was made to the UNRWA delegation Mr. Ray Dolphin.

ARIJ was invited to testify before the UN OHCHR special committee to investigate Israeli practices affecting human rights of the Palestinian people and other Arabs of the occupied territories. The session was conducted in Jordan and ARIJ's testimony was made by the director of Water and Environment Research Unit (WERU).

ARIJ provided data on the separation wall to the UN team who has participated in the Quartet meeting, which was held at Aqaba, Jordan to enhance the peace process in the Middle East.

ARIJ is a member of working group 1 of the Land Water Med Network, which includes representatives from Egypt, France, Lebanon, Jordan, Morocco, Tunisia and Palestine. The main objective of the network, which is supported by the EC, is to provide a platform for experts from the Southern and Eastern Mediterranean countries (SEMC) to exchange information and expertise in geo- information systems for water and land management. This will provide a basis for all parties to work together on common problems. The general objectives of the thematic network include examination of the needs of the participating SEMCs for monitoring land and water resources, the institutions and methods currently involved in such activities, and the potential role of remote sensing as one of the tools for reaching a sustainable environment. The ultimate future goal would be to develop a co-operative process whereby the SEMC institutions would be modernized to utilize remote sensing and other modern as appropriate in land and water resource management.

ARIJ, as a member of the Habitat International Coalition (HIC) of the Housing and Land Rights Network (HLRN), participated in the international conference on Globalization entitled World Social Forum III (WSF III) in Porto Allegro, Brazil and presented a paper entitled "The Israeli Colonization Activities in the Occupied Palestinian Territories". The paper was published in a book entitled Standing up Against the Empire "A Palestine Solidarity Guide: from understanding to action". In addition, ARIJ is actively working with the Arab NGO's Development Network in its advocacy work.

ARIJ worked closely with the UNEP delegation, which visited the OPT and produced a desk study on the environmental conditions in the OPT. ARIJ is working with FAO in its efforts to produce a vulnerability and poverty map for the OPT using the FIVIMS program. ARIJ has been asked to be a member of the steering committee, which will establish the information system for improving nutrition and food security in the OPT. ARIJ is working with CARE international to submit a tender for developing a food security strategy in the OPT.

ARIJ is involved in the MEEF research initiative, which is coordinated by the Watson Institute of International Studies at Brown University, USA with Khaldoun Rishmawi on the organizational committee of the MEEF initiative. The goal of the MEEF project is to produce policy-relevant research and publications on the ecological region shared by Palestinians and Israelis. The project is of trans-boundary nature and investigates the ecology of the areas surrounding the Green Line. A workshop in July 2003 was held to shape research ideas under the umbrella of the MEEF project.

ARIJ has been invited to be a member of the Joint Advisory Committee for the "GLOWA Jordan River" project within the German research program "Global Change in the Hydrological Cycle (GLOWA)" funded by the German Federal Ministry of Education and Research (BMBF). ARIJ is also working with the Mediterranean Eco-operation Program (MEP) in promoting regional environmental cooperation. In addition, ARIJ is a member of the Global Water Partnership (GWP).

ARIJ is continuing its activities to promote NGO cooperation in the Arab world through the Arab NGO network. ARIJ is a founding member of the sustainable livelihood in drylands network in the region. ARIJ is also a participant in the World bank initiative entitled “ the Mediterranean Forum Development “, which aims to promoting developmental cooperation in the region. The next table shows the major visitor to ARIJ in 2003.

<b>Date</b>	<b>Visitor</b>
23/1/03	George Khoury, Abdallah Lahham and Younis Sbeih, UNDP.
24/1/03	Messrs. John Viste and Ayman Mashni from CARE
29/1/03	Dr. David O’Brien, Thomas Rhodes, Paul Ramsey and Laurence J. Cumbiner, MERC.
18/2/03	Meryl Bernard , ICRC
7/3/03	Mr.Ray Dolphin, the operations support officer program, UNRWA.,.
11/3/03	Austrian representative to the PNA
27/3/03	European consuls general and representatives to the PNA.
7/5/03	Amnesty International
17/5/03	The Consul General of France and his delegation
24/5/03	Mr. Martin Beck , DAAD
26/5/03	The Egyptian political attaché
28/5/03	The American political attaché from the American consulate General
28/5/03	A French delegation from the French cultural council
9/6/03	Mr. Kiego Rokoranta ,the Finnish representative to the PNA
10/6/03	UNEP delegation
24/6/03	EC delegation
28/6/03	Dr. Joan Dougard, UNCHR
6/7/03	Professor John Ziegler and his delegation,
14/7/03	EC delegation.
29/7/03	GTZ delegation
19/8/03	GTZ delegation
20/8/03	EC Food Security delegation
9/9/03	CRS delegation
9/9/03	UNSCO delegation
9/9/03	The political attaché in the Egyptian embassy.
17/9/03	SDC delegation.
23/9/03	ICRC delegation
23/9/03	TIPH delegation
25/9/03	Swiss parliamentary delegation.
1/10/03	Mr. Bill Carter from Johnston institute and Alan Weaver from MCC
10/10/03	Mr. Greg Shapland from the British ministry of foreign affairs.
10/11/03	A delegation from the German agricultural cooperatives
11/11/03	A delegation from the Korean cultural center in Bethlehem
18/11/03	A delegation from the Green movement in Spain

## **2.7 Conferences and workshops**

Due to the restrictions on travel, ARIJ staff had to cancel their participation to a number of conferences in 2003. Nevertheless, ARIJ staff organized and attended a number of conferences and workshops that were held locally and internationally.

On 18 January, 2003, ARIJ organized a workshop under the auspices of the Palestinian Minister of agriculture to share the results of the Oral Plant History project. Sophia Saad participated in the 1<sup>st</sup> Euro-Mediterranean Satellite Navigation (GNSS) Seminar arranged by the European Commission on 16, 17 February 2003.

The seminar addressed the state-of-play in the GNSS sector on institutional, industrial, and research level and supported establishing contacts amongst the MEDA partners and the European Union Member States.

Nader Hrimat participated in an advocacy fellows program held at the Advocacy Institute in Washington between 16 and 28/02/03 and organized by PNGO. In March, 2003, Raed Abed Rabbo participated in a 3 days workshop in Ramallah for developing a national plan of action for Palestinian children. On 9 April, 2003, Issa Zboun participated in a workshop organized by the Palestinian Centre for Cultural Heritage Preservation in preparation for the regional workshop entitled “territorial cultural system planning”. On 3 May, 2003, ARIJ held a workshop to discuss the road map.

In March 2003, Alice Nassar attended a short course on Water politics in the Middle East at AIES. Sophia Saad participated in the second and third workshops of the ‘Capacity building for the Adoption and application of Energy Codes for Buildings’ project conducted by the Ministry of Local Government in cooperation with (UNDP/PAPP), which were held on the 15<sup>th</sup> May 2003 and the 15<sup>th</sup> October 2003. She presented a research paper describing the methodology adopted and activities executed by ARIJ to classify and identify the different climatic zones of the Palestinian Territories. The generated climatic zones and related output results will be used as a contribution (input) in the set of building design guidelines and the codes of energy efficient buildings.

On 9 June, 2003, ARIJ organized a workshop in Artas village council to disseminate results of the environmental database of Artas, which was attended by a number of stakeholders. On 11 June, 2003, ARIJ organized a workshop with the ministry of local government in Ramallah where Nael Salman and Majed Abu Kubi’ shared the results of the urbanization project.

At the end of the GIS training project, ARIJ organized a workshop on 1/7/2003 in which the 16 engineers presented their graduation projects to the municipal councils, directorates and governorate officials. Jad Isaac and Khaldoun Rishmawi attended the Middle East Environmental Futures Initiative, which was held at Brown University in July 2003.

ARIJ organized a workshop on 26/8/2003 for the dryland farming in Bethlehem district as part of the project: Field Crops Improvement (Phase III) funded by the Canadian Food Grains Bank and MCC. More than 40 farmers attended the workshop, in addition to the directorate of Agriculture in Bethlehem, staff of the regional agrobiodiversity project and local agricultural institutions.

Fadi Isaac attended and participated in the International Conference of Palestinian, Israeli and European Social Movements, which was held in Bilbao, Spain for the period 17 – 19 October 2003, where he gave lectures about the Israeli colonization activities and the segregation plan in the Palestinian areas.

On 9/11/2003, ARIJ in cooperation with Dar al Nadwa organized a workshop and an exhibition of pictures and maps on the segregation zone. Sophia Saad attended a regional workshop on the use of remote sensing as a tool in cultural and natural

heritage in the Mediterranean countries, which was held in Beirut during 14<sup>th</sup> – 19<sup>th</sup> December 2003. ARIJ attended the second regional conference on water demand management and pollution control that was held in Sharm El Sheikh during 14-17 December, 2003.

In additions, ARIJ regularly attended the meetings, workshops and seminars organized by PNGO, PENGON, PWA, MOA and MAS as well as those of the Dead Sea and Land Water Med projects.

## **2.5 Dissemination of information**

In 2003, ARIJ was very productive in disseminating the findings of its research through publications, lectures and the internet.

### **2.5.1 Publications in 2003**

1. Abeer Safar, Ghassan Darwish, Inas Bannourah, Khaldoun Rishmawi and Jad Isaac, Analysis of Waste Management Policies in Palestine: alternative waste management policies, ARIJ (2003).
2. Alice Nassar, Jad Isaac, Hydro politics in the Eastern Mediterranean, ARIJ (2003).
3. Sophia sa'ad, Climatic Zoning for Energy Efficient Buildings in the West Bank and Gaza, MLG and UNDP (2003).
4. Eyad Yacoub, Alice Nassar, Environmental Impact of the Israeli Colonies Wastewater in the West Bank/ Palestine, Palestinian Water Authority (PWA) (2003).
5. Hanna Maoh and Jad Isaac, The Status of Transportation in the West Bank, in World Transport Policy and Practice, John Whitelegg and Gary Haq editors, Earthscan Publication Ltd (2003).
6. Iyad Abu Rdeina, The Israeli Colonization Activities of the Occupied Palestinian Territories, in Standing up Against the Empire "A Palestine Solidarity Guide: from understanding to action", Housing and Land Rights Network, Habitat International Coalition, World social Forum III, Porto Allegro, Brazil (2003).
7. Jad Isaac and Mohammad Ghanayem, the Scientific and Technological Gap in the Arab World from a Regional and Global Perspective, the Arab Journal for Sciences, 39,116-133 (2003).
8. Jad Isaac and Nael Salman, An Overview of the Geopolitical Foundations for Peace Between Israelis and Palestinians, Frontières Palestiniennes : regards croisés des géographes, Institut de Géographie de Paris (2003).
9. Jad Isaac and Nael Salman, Undermining Peace: Israel's Unilateral Segregation Plans in the Palestinian Territories, ARIJ (2003).
10. Jad Isaac and Roubina Ghattas *et al.* 2003. Land use in Rainfed Areas Implications on Poverty and Marginality in the Eastern Slopes of the West Bank, Welfare Association (in Arabic) (2003).
11. Jad Isaac and Sbeih Sbeih, Poverty and the Environment in Palestine, Palestinian poverty report, UNDP/PAPP (2003).
12. Jad Isaac, and Mohammed Ghanayem, Environmental Degradation and the Israeli Palestinian Conflict, in Ambiente e Guerra, Odradek Publications,

- Italy (2003).
13. Jad Isaac, Land and the Israeli-Palestinian Conflict, the North-South Institute (2003).
  14. Jad Isaac, Palestinian Water Scarcity: politically or physically induced, ARIJ (2003).
  15. Jad Isaac, Towards a Sustainable Peace Between Israelis and Palestinians, In the name of security, A sociology of peace and war in Israel in an era of change, Majid Al-Haj and Uri Ben-Eliezer editors, Haifa University Press (2003).
  16. Khaldoun Rishmawi, Abeer Safar, Ghassan Darwish, Tomas Weinroth and Jad Isaac, Analysis of Waste Management Policies in Palestine: Environmental, social and economic risks, ARIJ (2003).
  17. Nader Hrimat and Mohammed Abuamriya, Field Crops Improvement in Bethlehem Governorate, Technical report, submitted to MCC and CFGB (2003).
  18. Nael Salman and Jad Isaac, The Israeli Segregation Plans in the Palestinian Territories, Engineering Association (2003).
  19. Nael Salman, and Jad Isaac, The Segregation Plans in the PT, Beit Sahour magazine, Arabic Orthodox club (2003).
  20. Nael Salman, Nader Hirmat, Jad Isaac, Landscape Planning in Palestine, DELTA Project, Sevilla, Spain (2003).
  21. Roubina Ghattas, Nader Hrimat and Jad Isaac, Status of Forestry in Palestine, MEDFOREX, Padua University, Italy (2003).

### **2.5.2 ARIJ Case studies**

During 2003, a total number of 81 case studies and 13 reports that cover the Israeli activities in all Palestinian Governorates were written and published on POICA website (the joint website between ARIJ and LRC) and on ARIJ website. 57 case studies and 12 monthly reports were prepared and disseminated on ARIJ's web-site, Eye on Palestine. In addition, ARIJ has been updating its comprehensive report entitled "Undermining Peace Israel's Unilateral Segregation Plans in the Palestinian Territories" which discusses the social, environmental as well as the economic impacts of the construction of the separation wall. ARIJ presented and provided electronic and printed hard copies of the report to the diplomatic core, international agencies as well as Palestinian ministries. The following list includes the titles of the case studies:

1. Land confiscation in Turmus 'Aya village, December 2003.
2. A New EREZ at the segregated Mazmura -Bethlehem governorate.
3. Uprooting of the olive trees in 'Aboud village.
4. The new colonial project in Jabal al-Mukabbir, December 2003.
5. The snaking Wall enters area (A) in Bethlehem, December 2003.
6. Reshaping the West Bank, New military orders in Tubas district. December 2003.
7. Segregating Rantis village lands, December 2003.
8. The Olive harvest season in Palestine, November 2003.
9. Humiliation at the Israeli military checkpoints. November 2003.
10. The forgotten "Al Aqaba" village, November 2003.
11. Living under the sky roof, November 2003.

12. A fall from Grace, Al Zahra building towers victims of the Israeli explosives.
13. Fencing Beit Jala, October 2003.
14. Homeless in Rafah, October 2003.
15. Victims of the Israeli Segregation Wall. A Humane Perspective, October 2003.
16. Cutting the northern arteries of the West Bank, October 2003.
17. Assault on the Jordan Valley, October 2003.
18. Jaiyous village: a story of human suffering, October 2003.
19. Al-Khas and Al Nu'man villages suffocated by the Israeli colonization, October 2003.
20. New Qiryat Arba' at the northern entrance of Bethlehem city, September 2003.
21. Colony expansion in the Gaza Strip during the period of 2001-2003. arabic edition.
22. Israeli colonization activities in the Occupied Palestinian Territories after Aqaba Summit, September 2003.
23. IOF Impair the Gaza Strip, September 2003.
24. Annexing Rachel's Tomb: Updated Israeli military order, September 2003.
25. The commencement of circulating the orthodox Housing Project in Beit Sahour, September 2003.
26. The Israeli Checkpoints in the Northern Districts of the West Bank, Facts on the Ground, August 2003.
27. House demolition and land seizure in Al Walaja Village in Bethlehem district, August 2003.
28. Villagers of Nahhalin witness the destruction of their environment!!! August 2003
29. The series of Israeli annexation and threatening are now targeting AL-Midya village in Ramallah district, August 2003. (*Joint Work with LRC*)
30. New colony outposts are still erected, August 2003.
31. Kiryat Arba' colonists in Hebron carry out continuous attacks against the Palestinian family of Dana, July 2003.
32. Colony Recreation center on the expense of a Palestinian land.
33. The withdrawal of the Israeli Occupation Forces out of Area A from Bethlehem District. July, 2003.
34. Ras Al Amoud Neighborhood: A hot spot in East Jerusalem, June 2003.
35. The Segregation Wall- New map provided for the wall by the IOF, June 2003.
36. New wave of Israeli Violations, June 2003.
37. Dismantling or reallocating, June 11, 2003.
38. The Map accepted, the Road blocked, May 31, 2003.
39. The Segregation Wall, A new Episode of changing Jerusalem Boundaries. May 2003. (*update*)
40. Al-Khas and Al-Nu'man villages between the jaws of occupation, May 10, 2003.
41. Homeless in front of their homes, May 7, 2003.
42. Ghettos are still created in Bethlehem District, May 7, 2003.
43. Za'tara By-pass road works in photos.
44. Land theft continues in Hebron, April 2003.
45. Lands declared as state land in Nahhalin village for future colony expansion, April 2003.
46. People of Tulkarm Camp seek new refuge.

47. House demolition alert in Beit Sahour, April 2003.
48. An Assessment of the Israeli Practices on the Palestinian Agricultural Sector
49. House demolition campaign in Al-Walaja village in Bethlehem District
50. New Expansion at Abu Ghuneim Mountain
51. New Ghetto in Bethlehem, February 2003. (*Arabic, French*)
52. Report about violated and confiscated lands in Artas village, February 2003.
53. Israel Eradication Campaigns to Palestinian villages of Bethlehem District, January 28, 2003.
54. Alarming demolition orders in Nazlat 'Isa Village, January 21, 2003.
55. Military orders to demolish 72 commercial shops and houses and in East Barta'a, January 21, 2003.
56. Plan for five new Colonies in Rimal Haloutza near the Egyptian borders, January 2003.
57. Israel land slays Wadi Fukin, January 14, 2003

### 2.5.3 Presentations

This year, ARIJ intensified its work to increase the local communities' awareness regarding the separation wall and the threats of Israeli colonizing activities. Towards this goal, ARIJ staff launched a campaign to promote awareness about the impacts of the segregation plan in the various Palestinian districts. In addition, ARIJ staff participated in a number of international and local TV's programs and presented the maps and data. In addition, seven reports were published in the local newspapers. Several presentations were made throughout the year for different international groups and decision makers as shown below.

<b>Date</b>	<b>Description of the presentation</b>
13/1/03	Presentation for US political attaché at the American Consulate concerning settlements and the segregation plans.
14/1/03	Presentation concerning the geopolitical situation for an American delegation from the World Council of Churches.
23/1/03	Presentation for a British trade union delegation through the Holy Land Trust.
5/2/03	Presentation and an interview on the water situation in Palestine for an EU delegation.
10/2/03	Presentation for a delegation from the German Representative Office concerning the geopolitical situation and the recent developments in the settlement activities.
12/2/03	Presentation for a Spanish delegation concerning the geopolitical situation.
17/2/03	Presentation for an Austrian delegation concerning the geopolitical situation.
17/2/03	Presentation for Journalists from New York times concerning the geopolitical situation and the recent developments.
21/2/03	Presentation for a French delegation
22/2/03	Presentation for a delegation from Bethlehem through Children Defense International concerning the situation in Bethlehem
27/2/03	Presentation for a Christian peace team delegation concerning the geopolitical situation, land and natural resources
6/3/03	Presentation for the EU consulates in Bethlehem municipality

	concerning Rachel's tomb and the recent developments in settlement activities
7/3/03	Presentation for a UN delegation concerning the recent developments in the Rachel's tomb compound.
11/3/03	Presentation for a delegation from the Israeli Peace Now movement, Knesset Members, Journalists, and professors from Tel Aviv and Hebrew University in Everest Hotel
11/3/03	Presentation for the Austrian representative to the PNA concerning the geopolitical situation
27/3/03	Presentation for diplomatic missions in Jerusalem and the PNA concerning Rachel's tomb and the separation wall.
28/3/03	Presentation for a Swiss Delegation.
29/3/03	Presentation for a German parliamentary delegation concerning the geopolitical situation and the recent developments in the settlement activities.
3/4/03	Presentation for an EU delegation on settlements and the segregation plan.
14/4/03	Presentation for a delegation from the Bible college about ARIJ activities.
15/4/03	Presentation for a Canadian academic delegation concerning settlements and the separation wall.
7/5/03	Presentation for Amnesty International delegation concerning the recent developments in the separation wall and the settlement activities
10/5/03	Presentation for an American delegation concerning the geopolitical situation.
17/5/03	Presentation for a French delegation headed by the Consul General of France concerning the Israeli aggressions and the confiscation orders for Beit-Sahour orthodox housing compound and the bypass roads
28/5/03	Presentation for the American political attaché concerning the settlement activities, Rachel's tomb and Beit-Sahour orthodox housing project.
28/5/03	Presentation for French delegation from the French cultural council
9/6/03	Presentation for the Finnish representative to the Palestinian authority on settlement activities and the Artas project
14/6/03	Presentation for an American delegation from the Episcopal Diocese of Massachusetts through the Holy Land Trust concerning the geopolitical situation.
16/6/03	Presentation for a German delegation through the Alternative Tourism Group concerning the geopolitical situation.
20/6/03	Presentation for an American academic delegation through the Holy Land Trust concerning the geopolitical situation
25/6/03	Presentation to PVO's and international organizations in Jerusalem concerning settlements and the separation wall
28/6/03	Presentation for the representative of the UN High Commissioner for Human Dr. John Dougard concerning the recent developments in settlement activities, the wall and by pass roads.
30/6/03	Presentation for the representative of Switzerland to the PNA concerning ARIJ and its projects and activities
1/7/03	Presentation for an American delegation through the Holy Land Trust
2-3/7/03	Presentation on environmental awareness to the "Children for protecting nature in Palestine" covering land use, protecting natural resources in Bethlehem and the separation wall and its environmental impacts.
6/7/03	Presentation for the representative of the UN High Commissioner for

	Food Professor John Ziegler and his delegation on the impact of the wall on agriculture and the environment.
11/7/03	Presentation to the local community and members of Taayush peace movement in Al Khas and Al Numan concerning the geopolitical situation and the separation wall.
15/7/03	Presentation for a young leadership delegation through the Orient House in Jerusalem concerning the geopolitical situation.
17/7/03	Presentation for an American ecumenical at Al-Tantur concerning the geopolitical situation and the separation wall.
7/8/03	Presentation for a fact finding mission delegation from churches from the USA headed by Bishop Sameer Kafety concerning the geopolitical situation.
	Presentation for the political attaché in the US consulate in Jerusalem concerning the recent developments in settlement issue.
13/8/03	Presentation in the Arab orthodox club in Beit-Sahour concerning the separation wall, the by pass roads and their effects on the Palestinian communities.
26/8/03	Briefing to the European consulates and representatives to the PNA concerning the recent updates concerning the Rachel's tomb case, Jerusalem and Bethlehem.
27/8/03	Presentation for a Belgian delegation concerning the geopolitical situation and the economic impacts of the settlements and the wall on the Palestinian community.
27/8/03	Presentation for a Swiss delegation from the ministry of foreign affairs concerning the geopolitical situation.
1/9/03	Presentation to an international delegation in Dar Al Nadwa concerning settlements and the segregation plan.
2/9/03	Presentation for a CPT delegation concerning the separation wall
4/9/03	Presentation in the Center for cultural heritage concerning the Developed spatial and statistical integrated land use database in Artas village.
6/9/03	Presentation for a British trade union delegation through the Holy Land Trust concerning the geopolitical situation.
9/9/03	Presentation to a UN delegation on the segregation plan,
10/9/03	Presentation for a French parliamentary delegation concerning the geopolitical situation.
11/9/03	Presentation for an Austrian delegation concerning the geopolitical situation.
15/9/03	Presentation for journalists from Austria concerning the geopolitical situation and the wall.
22/9/03	Presentation to the Egyptian representative to the PNA regarding the segregation plan.
23/9/03	Presentation to ICRC delegation on the segregation plan.
27/9/03	Presentation for a French parliamentary delegation concerning the geopolitical situation.
4/10/03	Presentation in Ramallah to a number of PNA officials concerning the settlements and the wall..
9/10/03	Presentation in Bethlehem Catholic Work Club concerning the separation wall.
10/10/03	Presentation for a British Foreign Office delegation concerning the segregation plan.
13/10/03	Presentation for a WCC delegation concerning the geopolitical situation and the separation wall.
15/10/03	Presentation for French and British delegations concerning the

	geopolitical situation.
21/10/03	Presentation for a Canadian Parliamentary delegation concerning the settlements and the separation wall.
21/10/03	Presentation to the Environmental Consortium in Bethlehem on the segregation wall and its impact on the environment.
22/10/03	Presentation for European consuls and representatives to the PNA concerning the geopolitical situation updates.
25/10/03	Presentation for an Anglican Church delegation from United Kingdom through ATG concerning the geopolitical situation.
27/10/03	Presentation for a German delegation concerning settlements expansion and the separation wall.
1/11/03	Presentation for a delegation from MCC concerning the geopolitical situation.
3/11/03	Presentation for a delegation from Holland concerning the geopolitical situation and the wall through Dar-Al Nadwa.
4/11/03	Presentation for a Spanish delegation concerning the geopolitical situation and the wall.
6/11/03	Presentation for a delegation from WCC concerning the geopolitical issues.
10/11/03	Presentation in the President's office in Jericho concerning the segregation wall.
11/11/03	Presentation to a German delegation on the segregation wall.
18/11/03	Presentation to a Spanish delegation from the Green party on the environmental conditions.
20/11/03	Presentation for a French delegation concerning the separation wall and the latest development in settlement activities.
25/11/03	Presentation for a CPT delegation concerning the wall and the settlements.
26/11/03	Presentation for a German delegation from the ministry of foreign affairs on settlements and the segregation plan.
2/12/03	Presentation to an American delegation on settlements.
13/12/03	Presentation in the Peace center in Bethlehem on the geopolitical situation and the segregation wall under the auspices of the minister of local government.
19/12/03	Presentation in Al-Walajeh Local village council concerning the separation wall and its effects.
20/12/03	Presentation for an American delegation concerning the geopolitical situation and water and environment.
24/12/03	Presentation for a solidarity delegation with the Palestinian people from the USA through Dar-Al Nadwa concerning the geopolitical situation and the separation wall.
25/12/03	Presentation in Rapprochement center in Beit-Sahour concerning the wall and presenting the Christmas message prepared by ARIJ.
29/12/03	Presentation for an American academic delegation concerning settlements expansion and the separation wall.
31/12/03	Presentation for a delegation from the faculty for Israeli Palestinian peace (FIPP).

In most cases, the presentations were distributed on a CD to the guests who have used them widely in their advocacy and lobbying work. Due to the great demand on the presentations, ARIJ found itself obliged to put it as downloadable file on its homepage where it has been published on a number of electronic journals.

## 2.5.4 ARIJ and the world-wide web

Considering the restrictions imposed on movement and accessibility, ARIJ found it imperative to use the world-wide web to disseminate its findings and communicate with the world. The following tables show the number of visitors to ARIJ homepage in 2003 and the changes over the past five years.

**Visitors to ARIJ website in 2003**

<b>Month</b>	<b>Requests</b>	<b>Pages downloaded</b>
Jan 2003	79656	10715
Feb 2003	106760	19334
Mar 2003	299405	53801
Apr 2003	383808	72250
May 2003	309579	51492
Jun 2003	214484	43406
Jul 2003	236710	52387
Aug 2003	212764	48027
Sep 2003	270108	48679
Oct 2003	360585	66633
Nov 2003	354065	67674
Dec 2003	314822	62280
<b>Total</b>	<b>3142746</b>	<b>596678</b>

**Changes in the number of visits to ARIJ homepage between 1999 and 2003**

<b>Year</b>	<b>Total</b>	
	<b>Requests</b>	<b>Pages Downloaded</b>
<b>1999</b>	<b>516142</b>	<b>127041</b>
<b>2000</b>	<b>1277561</b>	<b>198608</b>
<b>2001</b>	<b>2191187</b>	<b>275629</b>
<b>2002</b>	<b>1734378</b>	<b>237120</b>
<b>2003</b>	<b>3142746</b>	<b>596678</b>

It is quite evident that there is great demand on the information provided by ARIJ. While such a demand encourages ARIJ to keep up the provision of data, there is a growing concern among ARIJ staff that putting so much information on the internet may be counter productive. In several cases, the maps, figures and other data on ARIJ homepage has been used and disseminated without proper acknowledgement to the source. Considering the significance of providing reliable information on the situation in Palestine, it was decided that ARIJ continues its current policy of disseminating the information as widely as possible despite the concern regarding the intellectual property rights. Realizing the high traffic on ARIJ's website, it was decided to expand the capacity of the internet connection for downloading and uploading using Asdl. In December 2003, ARIJ put on its homepage an interactive presentation of the geopolitical situation in Bethlehem which was extensively used.

## 2.6 Sustainability of ARIJ

ARIJ held a series of brainstorming sessions that involved the staff, board members as well as local and expatriate professionals that aimed at addressing the issue of its sustainability. Since its establishment fourteen years ago, ARIJ has been struggling to ensure funding for its activities through submission of specific research projects to funding agencies. Considering the political situation and donor shift towards emergency and relief, ARIJ's efforts to continue guaranteeing funding for its activities has been hampered. In 2003, the board of ARIJ met several times to discuss the future opportunities to sustain the institutions and improve its self-reliance. A number of alternatives were proposed to promote the sustainability of ARIJ and these were explored throughout the year including:

1. **Creating an endowment** that will be used to cover a good portion of the operational expenses of ARIJ. A committee was formed from board members to put a plan of action for launching this initiative. Regrettably, there has been no progress on this alternative.
2. **Diversifying the sources of funding** focusing on international competitions for research grants away from bilateral donors. To this effect, ARIJ has been able to secure funding from the EU, IDRC, SDC, UN, MCC, Tamkeen, VOCA, PRIPODE and GEF. In 2003, funding from multilateral donors has reached up to 94.9% of the total budget.
3. **Securing medium term support** for its overall program similar to the current SDC support. Contacts were made with several funding agencies and donors in an attempt to form a consortium of donors that will jointly provide core funding for ARIJ. While there have been some positive developments along this alternative with some donors, there has been no formal actions taken until now.
4. **Increasing the number of local consultancies** and their magnitude. In this regard, ARIJ has been able to cover close to 1.7% of its annual operations through local consultancies.
5. **Executing international consultancies.** ARIJ has teamed with a number of American, British, Canadian, Finnish, German and Jordanian consultancy firms and submitted qualifications for executing local and international consultancies. ARIJ secured a consultancy from the World Bank in partnership with the Environmental Resources Management institute (ERM), UK and Eco-Consult, Jordan to conduct a waste water technical, legal and institutional analysis and management options. ARIJ is also continuing its implementation of the GIS consultancy of the regional agrobiodiversity project for UNDP. ARIJ also implemented a consultancy for UNDP and the ministry of local government to provide climatic zoning for the West Bank and Gaza in order to specify construction specifications aimed at reducing energy consumption.
6. **Providing paid services locally and internationally.** ARIJ continued to embark on this effort and succeeded in providing a meager amount of less than \$ 5,000 in return for providing maps to both local and international institutions and individuals.

**7. Generating income from the sales of its publications.** ARIJ was able to make some income from the sale of the atlas and other publications. A second reprint of the atlas was made as well as a CD version. An abbreviated geopolitical atlas for the Israeli Palestinian conflict will be published in 2004 with partial support from the Catholic relief services (CRS). ARIJ intends to publish the abbreviated atlas in French in cooperation with the French Geographers association. An Arabic version of the atlas will also be prepared for potential distribution in the Arab world.

**8. Establishing affiliations with international research institutions and universities.**

**9. Securing funding from the PNA for its operations.** ARIJ is advocating the need for the PNA to promote R&D in Palestine as an essential ingredient for sustainable development. This has been well reflected in the green paper on science, technology and innovation that will be presented by the ministry of higher education and scientific research. In 2003, the PNA allocated \$400,000 from its own sources to support research projects in Palestine. A Science Research Council was established to issue the calls, evaluate and allocate funds for the proposals.

**10. Investing in potential income generating projects that link the results of applied research with the local community.** Towards this end, ARIJ joined the Agricultural Engineers Cooperative and a number of agricultural cooperatives in the West Bank to establish New Farm Company for marketing and agribusiness. The aim of this company is to transfer the results and accomplishments of applied agricultural research into agribusiness. New Farm was successful in implementing its first project, which is to market locally and internationally the Palestinian virgin olive oil after classifying, refining and packaging it. ICRC and the UN included the New Farm olive oil in their food aid packages to the Palestinians. While the company is registered as a regular profit making company, the profits of this company will be distributed to the Institutions (shareholders). ARIJ hopes that such an initiative will assist in its sustainability.

**11. Investing in a building**

ARIJ has recognized the need to have its own building to insure its sustainability as it is renting the existing facility. Contacts have been initiated with the landlord for potential purchase of the current facility but with no success so far. The current facility is quite limited in physical space and thus, ARIJ is unable to expand in its labs and research units. Thus, the Board of Trustees decided to purchase a building to become a potential permanent site for ARIJ. A two-story building with a total area of 610 m<sup>2</sup> at a skeleton stage was purchased which is located not far from the current site. ARIJ is now looking for potential fund to cover the cost of interior construction and furniture.

## 2.7 Work Plan 2004

### 2.7.1 Continuing the following research projects

- Urbanization and its impacts on natural resources
- Trans-boundary air quality effects from Urbanization
- Assessing waste management policy in Palestine
- Monitoring Israeli Settlements
- The Future of Dead Sea Basin: Options for More Sustainable Water Management
- Policy tools towards sustainable land use and urban environmental management at municipal level under a transitional political context, the case of Bethlehem district, Palestine.
- Improving Plant Production to Enhance Household Food Security in Marginalized Communities of Bethlehem Governorate, Phase four, funded by MCC and Canadian Food Grains Bank.
- Improving Plant Production to Enhance Food Security of Farming Communities in Rural Areas of Bethlehem Governorate, funded by ACDI/VOCA

### 2.7.2 Implementing funded new projects

1. *Sustainable Access to Food and Economic Security in Jenin (SAFES Jenin)*. The proposal was prepared and submitted jointly with CARE and the Agricultural Engineers Union to the EC. The SAFES Jenin project aims to improve food security for 763 poor and marginalized Palestinian households in ten villages in the Jenin governorate of the West Bank. The targeted villages area characterized by their vulnerable populations, high dependency on the Israeli labor market, lack of access to nearby cities and towns, lack of easy access to water, and in some cases, proximity to the newly built ‘security’ wall. The project is comprised of an integrated set of activities that are designed to increase the capacities and skills of beneficiaries, to strengthen community participation, and to provide sustainable livelihoods for the residents of Jenin Governorate. Activities include: the introduction of high-yielding small ruminants, diverse crops, and water conservation systems; training and extension services in animal husbandry, water resource management, and small-scale agriculture; and the development of village-based producer and marketing cooperatives or associations.
2. *Improving Plant Production to Enhance Household Food Security in Marginalized Communities of Bethlehem Governorate (Phase Four)*. The project aims to continue and expand the activities of the MCC/CFGB supported project that has been on-going for the last three years. That is, “... to enhance the sustainability of the rain-fed farming system and improve food security”. The strategic goal of the project is to improve household food security of 79 poor and marginalized households in 10 villages of Bethlehem Governorate through supporting the cultivation of field crops, forages, dryland vegetables and planting range land bushes in addition to continuing the work on seed improvement and breeding program.

3. ***Geo-Political Atlas of the West Bank and Gaza.*** Currently the GIS unit is producing a political Atlas of the West Bank and Gaza, which constitutes of about 50 maps describing the political situation in the Palestinian Territories. This Atlas will present the political stages that were experienced by the Palestinian Territories during the last century along with the current situation in different maps as well as portraying maps for the historical Palestine during several ruling periods. It is expected to publish this Atlas in one month time to be distributed all over the West Bank, Gaza and the Arab world.

### 2.7.3 Potential New projects

1. ***Assessment of the Viability and Sustainability in the face of uncertainty: Possible futures for Palestine.*** The project aims to develop a decision support system that captures the possible development of key viability and sustainability indicators under several Israeli-Palestinian conflict Resolution plans. The results will be translated into tabular abstracts, cartographic presentations and policy relevant conclusions to present to governments, policy makers and the lay public in an attempt to catalyze public discourse on the environmental and socio-economic dimensions of the Resolution plans. Several work-packages were planned to be implemented over two years period, where sets of possible socio-economic and ecological management and development options, sets of sustainable development and viability Indicators and a conceptual and dynamic model describing the interrelations between the physical and socio-economic systems will all be worked out. Results will mainly be disseminated to decision makers and relevant institutions through workshops, public accessed website and newsletters.
2. ***The Palestinian Agricultural Village profile project.*** This project aims to create the first Palestinian agricultural village profile for the West Bank and Gaza Strip. The project also aims to support the Palestinian Ministry of Agriculture planners' and decision makers with basic land use maps and agricultural information database in order to develop sound policies, to facilitate decision making and to develop sustainable development plans based on scientific analysis. To meet the objectives an agricultural land-use and land vegetation cover patterns in Palestinian Territories will be surveyed and assessed through developing an agricultural land use suitability map at a scale of 1: 20,000, GIS electronic database and agricultural statistical database in an integrated format. The Ministry of Agriculture related staff will be trained on utilizing and updating the databases and they will participate in data collection and field surveys. After three years of project period, a comprehensive report and land use maps will be produced and published. A memorandum of understanding will be signed between MOA and ARIJ to continue their cooperation in updating the agricultural database and land use maps on annual basis to sustain the project findings and benefits.
3. ***Jordan Valley Information System (JOVIS).*** This project aims to develop and maintain comparable and harmonized physical and socio-economic geo-databases and to disseminate the information using a web-based geographic information system, the Jordan Valley Information System (JOVIS). It will produce a topical, consistent and harmonized geo-database for the whole

Jordan River Basin. This is foreseen as the basis for any future regional planning in the Basin. Several communication channels will be exploited for the dissemination of the accumulated knowledge in this project; these are World Wide Web project website, JOVIS, mass media, Group meetings and a final workshop. Three User-Specific Versions of JOVIS will be developed, namely JOVIS for Decision makers, JOVIS for educators and JOVIS for the lay public. JOVIS will be used as the primary channel for the dissemination of data, data services and map products. The project consortium consists of three partners from EU countries (Germany (GE)) and four from the study region (Palestine (PL), Lebanon (LB), Syria (SY) and Jordan (JO)).

4. ***Interactive atlas with Potsdam and ETH.*** The GIS and RS unit is going to work on creating an interactive atlas of Palestine in cooperation with Potsdam University in Germany. This atlas will be able to bring geographic information, statistical and descriptive information to planners, researchers, stakeholders and public people.
5. ***Political Atlas of the West Bank and Gaza in French.*** This atlas is going to be prepared along with the Political atlas as it also aims to present the political stages that were experienced by the Palestinian Territories during the last century along with the current situation in different maps as well as portraying maps for the historical Palestine during several ruling periods, however, this atlas will be published in French language and will be produced in cooperation with Beir-Zeit University in the West Bank, Rouen University, and CNRS (National Center for Scientific) in France.
6. ***Remote Sensing & Historical Atlas of Palestine.*** It is planned to work on producing and publishing a new atlas that would combine the historical atlas and the remote sensing atlas in Palestine, which involves dedicating time and human resources to collect related datasets such as historical maps and information covering the period of about one century of the Palestinian history. The atlas will be supported by collecting related data and generating satellite images for the Palestinian localities since the year 1917 up-to-present and IKONOS images since 2000-2002. In addition, the analysis to study the impact of the segregation wall on the Palestinian localities that started in 2003 will be continued to produce a full database including socioeconomic and physical datasets in an attempt to produce a village profile for each locality affected by the wall.
7. ***Developing the Palestinian Agricultural village profile.*** An attempt has started in 2003 to produce a full database including socioeconomic and physical datasets for the Palestinian villages affected by the construction of the segregation wall. A preliminary database files were produced for about 65 villages out of 190 Palestinian localities, work is expected to continue during the year 2004.
8. ***On-farm Conservation of field crop landraces in the West Bank.*** The project aims to conserve local field crop landraces *in situ* in the sustainable traditional farming systems of the rural marginalized farming communities in Bethlehem Governorate, through understanding farmer's decision at farm level, community-based conservation (women), and farmer participatory plant

breeding (PPB), with increased technical, institutional and community capacities and participation. At the end of the three years project period, it is expected mainly to maintain/ conserve germplasm of local field crops' landraces (wheat, barley, chickpeas, and bitter and common vetch) and their genetic diversity *on farm* and *off farm* at ARIJ and MOA stations; and capacities and skills of farming communities mainly women farmers and agricultural extension agents to adequately manage, conserve, and utilize the targeted landraces is increased where bridges between conservationists, farmers (women), agricultural development agencies and policy makers are built.

9. ***Update of the Palestinian Environmental Information System*** (Proposal to be developed in the first half of 2004). The project aims to update the environmental databases available at ARIJ through conducting new field surveys to develop environmental profiles at both the governorate and the West Bank levels as a decision support system for Environment Authority.
  
10. ***Surveying and documenting the status of Palestinian olive trees in the Palestinian Territories***. The project aims to take countermeasures for the preservation and activation of olive tree heritage, through establishing an overall database for the olive tree in Palestine and promoting plans for the enhancement of olive agriculture and preservation of olive tree fields. The project will be divided into two phases, where phase I will mainly focus on basic research and establishment of a database and phase II on preserving and activating the heritage olive trees by utilizing the database, development of the database, and awareness campaign.

#### **2.7.4 Consultancies**

- ***Agro-biodiversity project*** funded by MOA/UNDP aims to promote the conservation and preservation of important wild relatives and landraces agricultural species. This project is in its fourth year and would be continued during the year 2004. Currently, the GIS and RS unit is in the process of producing the project fourth year interim report that is going to be submitted to the Global Environmental Facility (GEF), ICARDA and UNDP.
  
- ***Wastewater Treatment and Reuse in the West Bank and Gaza*** funded by the World Bank aims to assess the situation in the West Bank and Gaza Strip with regards to wastewater treatment and reuse and to investigate feasibility options for wastewater reuse projects. It is carried out by the Environmental Resource Management (ERM) in cooperation with ARIJ and Eco-Consult.

#### **2.7.5 Provision of services and participation in activities**

ARIJ is planning to promote further cooperation and joint work with the Palestinian ministries and national institutions. ARIJ will continue providing different types of services for the local Governmental and non-governmental institutions, in addition, to

the local people in its relevant fields of specialty. ARIJ, for example, will continue serving the agricultural sector through conducting agricultural extension services to local farmers, and producing an agricultural land use map for the West Bank. ARIJ will also provide services through continue monitoring and updating the Israeli activities and its new orders in terms of colonies expansion, check points, by pass road and recently the progress in constructing the Israeli segregation wall and its impact on the Israeli-Palestinian conflict resolutions and the Palestinian socio-economic, environmental, and security status.

ARIJ will continue hosting delegations from all over the world that come for presentations concerning the issues of colonies, the geopolitical situation, water and environment. ARIJ staff members are ready to make presentations locally, which are growing in demand, and internationally when the staff invited to speaking tours in USA, and Europe.

**Work with the Ministry of Agriculture on**

- Agricultural sector working group meetings
- MOA and Palestinian NGO's committee
- Regional dry land farming project
- The national committee for Combating desertification
- Developing agricultural villages' profile
- Developing the Vulnerability and food security map

**Work with the Negotiations Affairs department (NAD) in**

- Preparing and analyzing Position papers
- Meetings and consultations
- Data compilation
- Providing statistical and spatial data about land use and natural resource

**Work with the Ministry of Higher Education in**

- Preparing the green paper for Research Strategy and Policy in Palestine
- Attend the meetings to discuss and modify the green paper
- Preparing the white paper and lobbying for its ratification
- Participating in TEAM meetings of the EU in the field of remote sensing and GIS
- Participating in the Science Research Council meetings
- Land water med meetings

**Work with Environmental Quality Authority in**

- Monitoring environmental degradation in the West Bank through conducting field surveys and doing qualitative and quantitative analyses for different environment quality parameters
- Environmental Awareness
- Testing small scale waste water treatment
- Waste policy analysis
- Installation of a second air monitoring station in Nablus
- Developing environmental standards

### **Work with the Ministry of local Government in**

- Producing land use and urban expansion maps including the urban master plans for different municipalities.
- Providing GIS and remote sensing information for the Ministry's engineers and planners
- Conducting joint workshops to disseminate the results of the urbanization assessment
- Establishing joint committees to address urbanization issues
- Using the GIS application to assist the Ministry in determining the location of the Palestinians land ownership whether located in Area A or B or C, before giving building permits

### **Work with Civil Society Institutions in**

- PNGO and PENGON in advocacy and lobbying against the segregation wall
- Promoting environmental awareness
- Greening Beit-Sahour in cooperation with the municipality and PARC to develop an environmental profile for Beit Sahour.
- Cooperation with Bethlehem municipality and Bethlehem Governorate to monitor Israeli aggression especially the construction of the Israeli segregation wall and the participation in the different social specialized activities regarding environmental, water, socioeconomic, and social issues
- Members in CARE partnership network for exchanging information and funding cooperation

## **2.7.6 Development of ARIJ**

### **a. Computer and Administration activities for the year 2004**

1. Complete the office automation application system
2. Developing full administration system for ARIJ.
3. Change the file sharing servers from Novell to Redhat
4. Develop a database application for all ARIJ archives, ( For ease of searching for pictures using description and categories)
5. Fund raising for finalizing constructing the new ARIJ's Building

### **b. ARIJ Evaluation**

A comprehensive evaluation will be conducted in 2004 for ARIJ program and activities. The services of a Swiss consultant will be sought in cooperation with a local consultant to do the following:

1. Review all relevant documents related to the activities of ARIJ including annual reports, newsletters, publications etc.
2. Review personnel, administrative and financial policies in the institute.
3. Hold discussions and meetings with board members, administration and staff to identify their roles and outline areas of strength and weaknesses in the overall performance of ARIJ.

4. Hold discussions and meetings with donors, beneficiaries and other stakeholders associated with ARIJ to assess the type of relations that exist and identify ways of strengthening cooperation, collaboration and coordination.
5. Identify major obstacles and reasons that may have lead to failure in achieving some or any of ARIJ's objectives outlining general constraints and problems, threats, and lessons learned.
6. Analyse the modes of operation in ARIJ and the development of research project cycles to assess the relevance and significance of research priorities and identify potential new areas of research.
7. Assess the impact of ARIJ's work on the Palestinian community.
8. Examine the sustainability measures that were introduced by ARIJ and their efficiency.
9. In light of above findings and lessons learned, suggest steps to be undertaken to promote the development of ARIJ and its sustainability and recommend a frame and guidelines that support the institutional capacity at ARIJ.
10. Discuss preliminary findings with the board of ARIJ prior to departure and submit a mission report within 10 days after departure.

**c. Estimated Budget for Year 2004**

Item	Year 2004 (US \$)
Salaries	367,500
Office Rental	15,600
Car and transportation	12,000
Satellite images	50,000
Travel	18,000
Utilities	8,000
Communications	16,000
Sundries	7,000
Furniture and Office Supplies	7,000
Publications	20,000
Software	12,000
Workshops	8,000
Auditing	7,000
Computers upgrade	10,000
Miscellaneous	14,000
<b>Total</b>	<b>572,100</b>