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Experiment for sorting out garbage and recycling in Jordan, Amman

Jordan

Best Practice

New for 2002

Categories: Production and Consumption Patterns:
- consumer awareness
-waste reuse and recycling

Poverty Eradication:
- income generation

Environmental Management:
- environmental health
-environmental remediation
-pollution reduction

Level of Activity: Metropolitan

Ecosystem: Mountain

Summary

The recent population increase experienced by Amman City (capital) has resulted in a number of economic, social and environmental problems.
The most important of these problems is related to solid waste, which is becoming a threat to the environment in different parts of the capital. Where the mechanism of disposing off such garbage has become a problem in itself, particularly with the decreasing capacity of dumps.

An empirical plan has therefore been made to sort out and recycle garbage. In this connection, one of the most important accomplishments achieved has been the emergence of great interest by the Jordanian public in dealing seriously with this issue.
The objectives of the experiment can be achieved through awareness campaigns, together with the government sector and non-government organizations in case this project is adopted at the level of the Kingdom's provinces, noting that through this experiment we have got around 700 people ready to repeat the experiment and help persuade their friends to take part in such constructive programmes.

We can mention in this connection the private sector's continuous efforts to collect used paper and plastic and contact the coalition management to take them or otherwise try to hand those materials over to the four garbage collection centers belonging to the Recycling Coalition located in four non-government societies and distributed on four areas in the capital Amman.

Narrative

The status before the initiative:
Solid garbage in Jordan is considered a major cause to environmental problems. The Al Rusaifa

Dump, the biggest dump in the kingdom occupying an area of 700,000 square metres, serves around 2.25 million people. The dump receives around 2,300 tonnes of garbage per day while an individual in Jordan produces 850 grams.
Most of the garbage is recyclable. It includes 23 per cent paper, 11 per cent plastic, two per cent metals, two per cent glass and around 52 per cent organic garbage, which can be used for producing vital gas and compost.
Besides, recycling factories need raw materials to manufacture some of their products.

Determining priorities:
After the problem had been identified, a meeting was held by the agents of the Amman Grand Municipality, the only authority responsible for the collection and disposal of garbage in the capital Amman, the directors of the municipality's 20 zones and the Recycling Coalition (non-government societies) to locate the area chosen for the experiment to be carried out. They selected Al Shumaisani District as a start for carrying out the experiment and determined the number of units to take part in it. They also outlined the mechanism of work with the inhabitants of the district,
the beginning of work and the methods of collecting and sorting out garbage and providing awareness by the co-operating parties.

An environmental bag made of cloth was produced instead of the plastic bag for sorting out and collecting garbage.Also two posters and a leaflet printed on Jordanian recycled paper were also produced to explain and demonstrate the work to the inhabitants of the area.

Objectives and strategies:
The experiment is aimed at developing a programme for environmental management of solid garbage to guarantee protection of natural resources from depletion, to minimize the percentage of garbage coming out of houses and reduce the pressure over dumps, whose capacity has begun to decrease with the constant increase in the number of population.
The experiment also aims at minimizing gas emission, particularly carbon dioxide and methane, which contribute to the climate change, as well as stress the importance of local societies to be aware of the integrated management of solid garbage and applying the idea of sorting out garbage from the source for recycling.

Other aims include; encouraging nationals to take part in keeping the environment clean and safe and to change their consumption behaviour, producing and using environment friendly materials and creating new job opportunities.

Gathering sources:
The experiment started as an idea from a group of young men and women who volunteered to be in the service of the environment after they had noticed the substantial detriments caused to the environment by the solid garbage and waste coming out of houses, establishments, factories and trading shops as well as the poisonous gases emitted by such garbage.

Under the umbrella of the Jordanian Environment Society, those volunteers selected two locations to execute their idea of sorting out and collecting garbage that can be recycled.
After the volunteers had watched the mechanism of sorting out and collecting garbage in these two locations for six months and studied all related problems and obstacles, they found that there was need for an awareness campaign on the mechanism of sorting out garbage and that a lot of factories needed such garbage for use as raw materials in their industry.

They also found that there was need for financial resources for such campaigns, to have an experiment to sort out garbage from houses and serve individuals.
Therefore, the volunteers held interviews and meetings with a number of authorities and organizations concerned with environmental matters, which wanted to support this initiative financially, technically and/or provide manpower.
These authorities and organizations included the World Environment Utility / United Nations Programme, Canadian Fund, Jordanian TV, official newspapers, Amman Grand Municipality and

some banks and private companies.

After receiving the necessary support, three employees were appointed in the Recycling Coalition and three others from the Amman Grand Municipality were delegated to join the working team. An advertisement campaign was also launched on TV, radio and in the newspapers to publicize the experiment and mechanism of work and determine the authorities in charge.

Initiative:
After conducting a field survey of Al Shumaisani District / Al Abdali area in the center of Amman City to locate the number of houses on the organizational plans, which showed the separation of buildings from villas and on what street they were located and consequently determine the area in which work is required to be done and provide such plans to the working team, some 300 residential units (houses and apartments) from the chosen area were selected while the streets in which work was to be done were given numbers from 1-9.
This was aimed at clarifying the method of work and ensuring easy movement when studing the possibility of sorting out garbage and the quantity of garbage that was taken away daily from the house by each individual and that could be recycled (manufactured) so that such study would be applied to a number of provinces in the kingdom in future. In addition, some trade centers (companies, banks) were selected.

During this stage, 206 units were actually covered between 01/08/1998 and 01/08/2000 at a rate of 108 units every Thursday and 98 units every Monday. Such figures were attributed to the existence of some obstacles including the fact that the house owners were not available in their houses during the time of the working team's field visit because they were on duty, traveling or not interested in participating considering that such work was voluntary and not obligatory.

To overcome this problem, the working team sometimes visited the house owners on their official holidays including Fridays to persuade them to participate. Some participated while others refused to take part.

Direct contact was the main job of the working team, which consisted of three female and three male employees. Each male and female employees used to cover a street and meet with the residents of those residential units, particularly housewives, whether individually or as a group to familiarize them with and explain the importance of the experiment.
Women showed a superb response to the programme and many times a female participant expressed her interest in persuading her neighbours and meet with them in her house to familiarize them with the idea of the initiative and clarify it to them.
The participant's name and address as well as the numbers of the residential unit and street in which the participant lived were registered in a special list, which was distributed to the garbage collectors.

A small size sticker was placed on the apartment door and a large size one on the external door of the building or villa for awareness purposes and for announcing the experiment to the other inhabitants of the area and locating the participating houses.
Each participant (residential unit) used to be provided with a bag made of cloth instead of plastic which was written "Collect paper, plastic and metals clean" and the full bag used to be taken back one week later. The garbage collection process used to take place between 8am and 10am on Mondays and Thursdays.

There was an obstacle in the garbage collection process wherre garbage searchers used to tear the bags available in front of buildings or villas and take everything inside.This obstacle, which was considered a financial loss, was overcome by agreeing with the watchmen of buildings and villas that waste bags should be put on the stairs of buildings or villas and taken out as soon as garbage collectors came on the agreed time.

The results of the experiment:
The results of the experiment included minimizing the number of times garbage was generally

collected from the garbage containers available in the streets involved in the experiment by Amman Grand Municipality's garbage trucks.This helped minimize the collection time, save the fuel used by such trucks and enhance the effectiveness of garbage collection in other streets. This also helped garbage not to be stacked in garbage containers, thus causing the spread of health calamities.
The experiment also led the behaviour of some participants to change for the better by feeling responsible towards themselves.

Besides, the experiment showed the real role of government and non-government organizations and individuals of the society and how far the government and non-government sectors were in harmony and able to co-ordinate for carrying out joint works and seeking prompt solutions to the problems they faced while working as one team.
It is clear from the results that appeared during and after the experiment that investors were encouraged to set up private companies to collect and recycle used materials and that there were more investors involved in such activities.
This helped create new job opportunities for both sexes in the kingdom and improved their social and economic conditions.

It also led to competition among those companies and factories. The prices of environment friendly products to drop while the prices of used materials were stable and did not fall.
This also led to an increasing demand for environment friendly products as a result of (1) the attention paid by some official authorities to the necessity for teaching nationals and drawing their attention to the importance of supporting national industries, particularly recycling, and (2) the belief of Amman Grand Municipality that it was necessary to apply the experiment to a larger number of residential units, considering that the experiment contributed to solving the problems of damps.

To this effect, official channels of co-operation between Amman Grand Municipality and non-government organizations were opened through signing a memorandum of understanding between both parties so that garbage would be sorted out on a compulsory basis in some areas at several stages and access would be gained to 1,000 residential units and 168 trade centers to cover the expenses of the subsequent stages over the two coming years.

Sustainability:
After carrying out the experiment, 50 per cent of the experiment expenses were recovered through selling the accumulated used materials to the recycling factories in Jordan.
Efforts were put in to employ male and female workforce from the different cultural levels and improve their income and social status by giving them financial and moral incentives, taking into consideration the habits and traditions prevailing in the area including the women's work in the garbage-sorting centers and their interest in the presence of no male workers inside such centres owing to the social life and the prevailing habits and traditions and the bigoted environment of their families.

Female workers were trained by the Recycling Coalition's female employees in a bid to improve the efficiency of work with respect to how sorted out materials would be packed and sent in a well-organized way to the recycling factories so as to avoid rejection of the materials due to the existence of unwanted materials such as white paper mixed with cardboard, newspapers or plastic.

Some non-government women societies were allowed the chance to give such female workers lectures about how to take part in the local society and eradicate the "I-can-not-do-this-job" culture.
Other lectures focused on birth control, family planning and participation in taking decisions with the female workers' husbands, brothers and fathers and how to develop them from the cultural and social viewpoints and protect their health from pollution whether it is air, soil or water pollution.

Efforts were put in to use environmental solutions and spread them among the workers' family members to encourage them to use environment friendly products such as integrated fighting products and among their relatives who owned agricultural lands to plant instead of leaving them as wastes.

They were also encouraged to produce natural fertilizers from leftovers and animal excrements instead

of using chemical products, which were detrimental to agricultural lands and the creatures around them. They were also encouraged to take advantage of organic fertilizers for producing restrained and unrestrained crops.
On the other hand, this work is considered among the economic activities of the government through producing energy from organic materials (leftovers) and minimizing the use of water.

To give an example, by recycling one tonne of paper, we save water at 85 per cent and energy at 15 per cent and protect 20 trees of no less than 20 years of age from being cut to produce one tonne of white paper.

Benefit was derived from some international and regional experiences after obtaining some of the needed information from friends and experts or through field visits to those countries, which worked out such programmes, particularly Lebanon, Tunisia, Egypt, Canada, Germany, Sweden, Britain and the US in addition to other countries with which correspondence was exchanged.
The Internet was also used to derive benefit from the information and experiences available there.
We are in continuous contact with everything new and useful for improving work and boosting the environmental level through seeking the consultation of specialists who are more than 30 years ahead of us in this field such as those from foreign countries.
To this effect, we adopted the Canadian experience with respect to the selection of the environment friendly bag, the process of counting participants, the way of collecting waste and the making of direct contacts.

We benefited from the Canadian experience in implementing our programme because Canadians gave us sufficient information on the process applicable in Montreal and provided us with the financial support necessary to implement such experience.
We also benefited from the Canadian experience in implementing the coming stage where a raffia bag is used instead of a cloth bag because it lasted more and was cost-effective.
The Canadian experience took into consideration the habits and traditions available in our country with respect to how to contact individuals of the society, how to benefit through trial and error from the design of the garbage containers to be placed in trade centres by the employees of the Amman Grand Municipality and the Recycling Coalition available in the work-site and consequently how to give advice and guidance to administrative staff.
As a result of the initiative we took during the past two years, the points of strength and weakness were identified and this helped lay down the policies, procedures and strategies for the coming stage and a medium-term plan for implementation with the participation of as many inhabitants of the different regions as possible through providing more means of transportation and ensuring that the employees working on such means of transportation were working full time for this purpose.

In this connection, attempts were made to offer financial exemptions to the traders at trade centres in a bid to encourage them to take part in the coming stage by contributing to covering the future costs of applying the process of sorting out garbage from the source without any additional expenses being borne by any participants interested in taking part.
This will help work succeed in future and provide the liquidity required for this purpose, noting that fines will be imposed on those who are not interested in taking part and that special centres for the direct awareness process will be designated.

Communicability:
Many internal authorities, particularly the Jordanian universities and schools, have benefited from our experiment.
As many as 250 government and non-government authorities are now applying the garbage-sorting operation and were provided with the suitable awareness.

Our experiment helped what were termed recycling committees emerge inside those authorities in many provinces. It also helped several authorities emerge and launch cleanliness campaigns including garbage-sorting campaigns, which had not existed before.
We also supplied consultation to many authorities with respect to how to start such experiment. These

authorities applied the experiment in their surroundings and we offered and are still offering assistance to them through motivating them to set up centres for collecting paper, plastic and metals. We also gave them special truck to them to minimize the financial burden incurred and to encourage them to keep going forward. They are also provided with in-kind incentives in which the Jordanian re-cycled paper is used including agendas and certificates of recognition.

We shall start in the near future carrying out the next stage after signing a memorandum of understanding between Amman Grand Municipality and the Recycling Coalition, which includes three non-government societies, namely the Jordanian Environment Society, Royal Society for Protecting Nature and Arab Women Organization.
The memorandum stipulates that the number of residential units should be increased to 1,000 plus 168 trade centres. There will be four male and female employees from both parties together with a pick-up and garbage collectors from Amman Grand Municipality who will work from 8am till 3pm.

The operation will be somewhat different to avoid garbage searchers, and work will be carried out speedily through giving each participant a special raffia bag for sorting out garbage, in which paper, plastic and metals will be put.
The bag will be directly emptied by the participant in a 240 litre green garbage container available at the building garage before 8am daily.
For the participating villas, the bag will be emptied in a 40 litre box given daily to the garbage collectors at the times fixed for collection. The used materials will be sent to the garbage-sorting center.

The operation will be completed through the awareness team paying field visits to the participants and giving them a leaflet containing all the information including the time of collection, the materials that are collected etc.
A one cubic metre garbage container will be distributed to each three trading shops, noting that garbage will be collected on a daily basis.

Key Dates

15/04/1998: The establishment of the Recycling Coalition, which included the Jordanian Environment Society, the Royal Society for Protecting Nature and the Arab Women Organization.

01/08/1998: The launch of the experiment and study of the municipality and societies to sort out house garbage as the first experiment of its kind in Jordan and the neighbouring countries.

19/08/2000: The announcement of the results of the study, and meeting with the inhabitants of the area to evaluate the experiment and see its pros and cons.

13/06/2001: The signing of a memorandum of understanding between the Amman Grand Municipality and the Recycling Coalition

References

Title of Article	Name of Author	Name of Printed Material / Volume	No.	Date	Page No.
Signing the agreement among non-government societies	Abdul Hafidh Abu Qaoud	Al Rai newspaper â€“ Petra		15/04/1998	
Hammering the nail â€¦ empty eyes	Ahmed Abu Khalil	Al Arab Al Yawm newspaper		19/11/1998	
Collect with us		Arab Al Yawm newspaper		20/04/2000	

A letter to the inhabitants of the area participating in the experiment to attend the assessment and to the news manager	Project manager	Inter-office memorandum		10/08/2000	
Open dialogue about the garbage-sorting experiment		Al Rai newspaper		15/08/2000	
Open meeting about recycling of garbage		Al Rai newspaper		18/08/2000	
Evaluation of experiment		Al Dustoor newspaper		20/08/2000	
Empirical campaign by Amman Grand Municipality for fixing the garbage-collecting period		Al Rai newspaper		21/10/2000	

Contact

Haitham Wahdan
Amman, Jordan
P. O. Box 840796 Amman 11184 â€“ Jordan
Telephone: 5699844
Fax: 5695857
E-mail: hwahdan12@hotmail.com.jo
Type of Organization: Non-governmental organisation (NGO)

Nominating Organization

Amman Grand Municipality
Waleed Al Masri
Ali Bin Abi Taleb Street
Tel-4621179
Fax: 4649420
Amman
Jordan
Type of Organization: Central Government

Partners

Jordanian Environment Society.
HE Ahmed Obaidat / Chairman of the Administrative Body
Al Shumaisani District/ Abdul Hamid Badees Street
P. O. Box: 922821 Amman â€“1192 Jordan
Tel-5699844
Fax: 5695857
E-mail: jes@go.com.jo
Type of Organization: Non-governmental organisation (NGO)
Type of Partner Support: Administrative Support

Royal Society for Protecting Nature.

Laila Sharaf / Chairwoman of the Administrative Body
Municipality Street / Al Jubaiha
P. O. Box: 1215 Amman-11941-Jordan
Tel-5337931
Fax: 5347411
E-mail: adninrsen@rsen.org.jo
Type of Organization: Non-governmental organisation (NGO)
Type of Partner Support: Administrative Support

Arab Women Organization.
Mrs. Stella Halsa / Chairwoman of the Administrative Body
Wadi Abdoun / Al Qaisiya District
Amman
Jordan
Telefax: 4385478
E-mail: awo@net.com.jo
Type of Organization: Non-governmental organisation (NGO)
Type of Partner Support: Administrative Support

Financial Profile

Year	Total budget	Jordanian Environment Society	Royal Society for Protecting Nature	Arab Women Organization	World Environment Utility	Canadian Fund	Amman Grand Municip.	Voluntary work
98	29,500	2,000	500	1,000	10,000	5,000	10,000	1,000
99	20,500	2,000	500	1,000	10,000	1,000	5,000	1,000
2000	18,500	2,000	500	1,000	9,000	-	5,000	1,000
	68,500	8.75 %	2.2 %	4.37 %	42.3 %	8.76 %	29.19 %	4.37 %

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