



## 5.4 Assessment of perspectives and challenges on sustainability in Palestine

H. Arman<sup>1</sup>, A. Ramahi<sup>2</sup>, F. Abubasha<sup>2</sup>, N. Al Othman<sup>2</sup>, H. Safadi<sup>2</sup>, M. Kmail<sup>2</sup>

<sup>1</sup> Kuwait Institute for Scientific Research, Kuwait, Kuwait

<sup>2</sup> An-Najah National University, Nablus, Palestine

### Abstract

Sustainability has rapidly become imperative at a global level. Collaborative work is required to address the global challenges. However, the effort towards sustainability varies between developing and developed countries. Assessing sustainability in Palestine with its unique context can exemplify the awareness and understanding of sustainability in developing countries. The objective of this paper is to assess the awareness of sustainability from different perspectives of government, industry, and academia. The significant of this study is how to promote sustainability in a country with limited resources and special conditions. The primary data was collected through conducting semi-structured and in-depth interviews with CEOs and decision makers of the major stakeholders in government, industry, and academia. In addition, secondary data were used, which included literature review of current practices documented in government and NGOs reports.

### Keywords:

Assessment ; Awareness ; Palestine; Sustainability

## 1 INTRODUCTION

Nowadays, global society is facing scarce water, material, and energy resources. This raised the concerns with regard future generations and their ability to survive in the modern world. As a result, new initiatives and hence concepts were proposed to address the above challenges. Sustainability was one of the main hot topics driving a global trend.

The western industrial revolution increased the environmental effects since manufacturing industry grew very rapidly and therefore more natural resources were depleted and caused larger amount of emissions and pollution. Moreover, the recent new wave of Chinese industrial "revolution" drew the attention of the global community and the necessity to act as soon as possible in order to protect our planet and alleviate the harm.

The concept of sustainable development appeared initially in the early 1980s [1], it then popularized in the publication of the Brundtland report, Our Common Future [2]. The principle of sustainable development has gained general acceptance. This acceptance illustrates the growing awareness of the inherent fragility of the world's ecosystems. Consistent with the UN definition, Brundtland report defined sustainable development as "... meeting the requirements of present generations without undermining the natural resource base, which would compromise the ability of future generations to use these resources" [3].

The contribution of the developing countries perhaps minimal when compared to the industrial ones, yet they are in the same boat. Therefore, cumulative endeavor is required to handle this global issue. Although, the case presented in this paper may not be ideal in this context, it recognizes a sample perspective of how sustainability perceived in situation with special conditions such as Palestine.

## 2 LITERATURE REVIEW

Government, businesses and academia have expressed a desire to contribute to sustainability by reducing environmental harms, improving social and economic situation for people. However, they are still struggling to identify the best set of alternative solutions. This is due to the lack of collective vision that can embrace a holistic perspective. According to Cowan et al [4], although more than 20 years have passed since the emergence of sustainability, there are still no uniform set of federal rules, regulations, or guidelines to lead the industry in the United States. This example is alarming, since US is considered a major contributor for setting up regulations and long term guidance in various fields and it fails here to address the challenge facing the international community. The view of businesses showed positive attitude towards sustainability in several empirical studies. For example a study conducted by Accenture [5] targeted hundreds of CEOs from companies around the world found that 93% of the companies considered sustainability to be important to their company's future success. Moreover, some companies develop their own sustainability programs because they believe that good environmental practices will increase their profits more effectively than most other business practices [6]. Many firms have experienced that environmentally sustainable practices can create value for a business by increasing revenue and reducing operating costs, so sustainability is now seen as a business opportunity as well [7]. Companies generally agree that sustainability has led to innovation and increased competitiveness by lowering costs and increasing revenues [8].

While many companies recognize the value of a sustainability strategy, most have not yet incorporated sustainability into their overall business strategy [9]. The fact that the concept is comparatively young and complex may have delayed

approving logical and efficient framework to manage business operations with alignment of sustainability strategy.

An awareness study was conducted in 2011, for staff and students in the St. Francis Xavier University (StFX) campus to measure the awareness level for environmental sustainability of the campus and region. The dimensions of sustainability included environment, economy, society and cultural sustainability. The survey showed that sustainability issues are important on the personal level for people at StFX [10].

The role of academia and research bodies is important here. A multidisciplinary effort is required from the economists, social scientist, and environmentalists to put together a framework that address the various, sometime conflicting, missions and objectives to address the sustainability challenges.

Very few studies were conducted in Palestine with regard sustainability. However, some data is available on issues related to environment. In spite of this, promising practices is advanced with regard using a viable renewable energy alternative. In July 2011, 66% of households in the Palestinian Territory had solar energy heaters [11]. In 2008, the total imported energy to the Palestinian territories was 43,147 Terra joules, where diesel percentage where 44% (18,920 Terra Joules) of the total imported energy. The electrical energy percentage was 32% (13,913 Terra Joules) of the total imported energy [12]. The drive of such practices was purely financial due to the expensive tariff of electricity. People learned how to utilize the technology in small workshops out of desperation.

This study, at the time of writing this paper, is the first sustainability awareness assessment study in Palestine. It is explorative in its nature, since a generic overview is required at this stage and further systematic examination and assessment should follow based on the initial results.

### 3 METHODOLOGY

The purpose of this study is to assess the level of awareness of sustainability from different perspectives of government, industry, and academia. To conduct this investigation, mainly a qualitative research approach was used. Moreover, a questionnaire was used as an additional tool to provide further information to the primary approach. Figure 1 depicts the methodology that was followed in this research.

The formulation of the objective of this research was developed after conducting a collaborative project as part of TEMPUS program. Literature review was used to further understand the concept of sustainability and help to design the research method. Qualitative and quantitative approach was used where semi-structured interviews were conducted and a straightforward questionnaire. The interviews targeted three key stakeholders; government, industry, and academia. The participants were selected carefully in order to reflect rigid and considerable view. For example CEOs were interviewed for large firms, University Presidents Assistant for academic affairs, and senior government representatives in the relevant bodies.

The questions of the semi-structured interviews focused on five themes where set of questions would address each theme after asking general questions about sustainability

practices. Each interview took approximately 45-60 minutes to complete. The selected themes were water, energy, materials, pollution and environment. These are the major themes and believed the most relevant and urgent in Palestine.

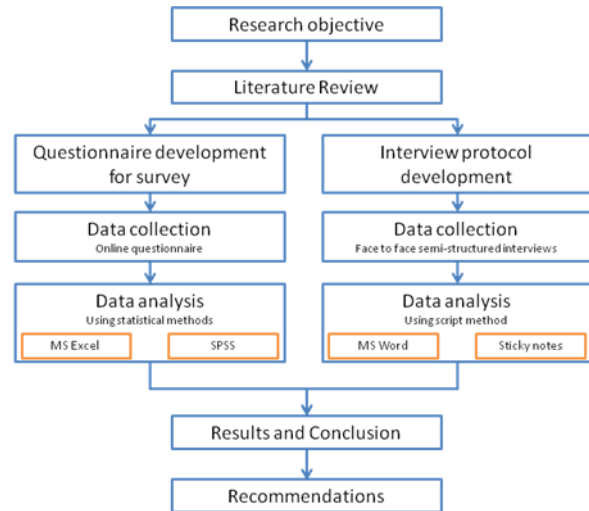


Figure 1: Research Methodology.

A survey was designed to enhance the study by including another side perspective which was represented by a sample of students from An-Najah National University in Nablus, Palestine. The questionnaire was available online for 10 days. The link to the questionnaire was distributed by e-mail and on students' pages on Facebook

The questionnaire took approximately five minutes to complete. The purpose of the first set of questions was to gather general personal information and assess the awareness of sustainability in general. The next set of questions addressed the same five themes followed in the interview (water, energy, materials, pollution and environment). A total of 377 participants completed all questions in the survey from all the faculties in the university.

### 4 ANALYSIS AND RESULTS: SUSTAINABILITY AWARENESS

#### 4.1 Government

The interviews transcripts were analyzed to examine the common issues perceived for each theme from the three different perspectives. The general view of government was positive towards acting upon sustainability matter and they showed general awareness with this regard in terms of understanding its importance. However, it failed to initiate laws to regulate the various sustainability related activities. Moreover, few awareness activities were organized in the past and very few are planned for this matter. This indicates that lack of awareness in specific areas which means no real actions has been taken to improve the situation and make progress.

The various interviewed bodies in the government showed lack of coordination between them with regard the activities designed to support the effort towards increasing the

awareness of sustainability in the community. Moreover, the lack of physical and specialized human resources prevents the governmental authorities to enforce the current outdated regulations.

**4.2 Industry**

The awareness in the industry showed varied results as some firms had already took actions towards this issue while others seemed to be almost ignorant. Part of this would be an indication of the lack of awareness and the absence of laws that force businesses to be sustainable. In spite of this, the competent firms were only interested in the area where significant savings can be achieved in applying sustainable concepts and would reflect positive financial results. Moreover, the lack of resources encouraged firms to look at more sustainable approaches in their processes as was the case of some manufacturing firms in the south of Palestine where water is very scarce.

**4.3 Academia**

The third investigated perspective was the role of academic institution and their awareness through looking at the programs and curriculums, research programs, and various related activities such as conferences, workshops and seminars. The results showed that the top universities in the country have already taken some initiatives in collaboration with European universities to develop academic programs in sustainability. However, most of the current programs have very few topics in the courses that cover any of the sustainability topics.

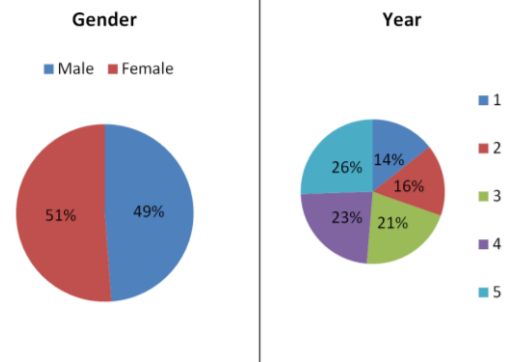


Figure 2: The distribution of the participants in the survey according to gender, faculty, and year of study.

The analysis of the questions related to students practices and observation at the University is summarized in details in Figure 3. The general portrait shows low awareness in most of the issues they were asked to respond except the issue regarding the reuse of some of the consumable products (point 2) which is a practice that may be attributed to the lack of physical resources and its associated costs. The other exception was related to ethical behavior to do with culture (point 7) as people are trying to save money and reuse whatever they can.



Figure 3: Results of each question in the students' survey

An online questionnaire was used to collect university students' views about sustainability in general and of the university role. The distribution of the respondents with regard gender and year of study is shown in Figure 2.

However, all the other issues such as projects, courses, policies, awareness activities in sustainability seem to be lacking and have not been a priority or areas of concern for the decision makers in the universities according to the students' perspective. This support the results obtained from

the interview with the academic top management in the universities.

## 5 CONCLUSIONS

The results of this initial study with regard the sustainability awareness level was not as poor as it was expected considering the very special political conditions of Palestine and being one of the very developed countries. The level of awareness can be qualitatively considered low as the practical activities (i.e. sustainability laws, projects, initiatives, etc) considered very limited when compared to other countries in the region. The sample of the young educated community, represented by the university students, showed passive perceptions towards sustainability and lack of awareness as well. However, the special condition and difficult challenges in Palestine can be a source of innovative sustainability solution to compensate for resource scarcity especially in the situation where advanced technology is not necessarily required. The culture of reuse ideas was a good example. These solutions can be publicized globally where appropriate since normal environment as the case in developed countries may not ignite the same level of creativity in finding new sustainable solutions.

## 6 REFERENCES

- [1] IUCN (1980). World conservation strategy: living resource conservation for sustainable development, UICN/PNUE/WWF, Gland
- [2] WCED (1987). Our Common Future: Report of the World Commission on Environment and Development, UN General Assembly, doc. A/42/427
- [3] Wiersum, K. F. (1995). 200 years of sustainability in forestry: Lessons from history, *Environmental Management*, 19(3) pp 321-329
- [4] Cowan, D. M., Dopart, P., Ferracini, T., Sahmel, J., Merryman, K., Gaffney, S., Paustenbach, D (2010). A cross-sectional analysis of reported corporate environmental sustainability practices. *Regulatory Toxicology and Pharmacology* 58 (3) pp 524–538.
- [5] Accenture and United Nations Global Compact (2010). A New Era of Sustainability: UN Global Compact—Accenture CEO Study 2010.
- [6] Epstein, M., Elkington , J., Leonard, H. (2008). *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic*. Berrett-Koehler Publishers.
- [7] Satterfield, M B, Kolb, C E, Peoples, R, Adams, G L, Schuster, D S, Ramsey, H C,
- [8] Stechel, E, Wood-Black, F, Garant, R J and Abraham, M A, 2009 (2009). Overcoming nontechnical barriers to the implementation of sustainable solutions in industry. *Environmental Science and Technology*, 43 (12), pp 4221–4226
- [9] Nidumolu, R., Prahalad, C. K., and Rangaswami, M. R. 2009. Why sustainability is now the key driver of innovation. *Harvard Business Review* 87(9): 57-64
- [10] Richard M. & Kashmanian, R. P. (2011). *Corporate Environmental Sustainability Strategy*. Greenleaf Publishing.
- [11] Palestinian Central Bureau of Statistics (PCBS) (2012). Press Release on World Environment Day.
- [12] Palestinian Central Bureau of Statistics (PCBS) (2008). Balance of power in the Palestinian Territories.