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IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

Work Plan to Implement a Labeling Program for Water Efficient
Products

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Efficient Products

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Work Plan to Implement a Labeling Program for Water Efficient Products

IDARA Instituting Water Demand Management in Jordan

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List of Acronyms

1. AGWA	Amman Governorate Water Authority
2. ASEZA	Aqaba Special Economic Zone
3. ACC	Amman Chamber of Commerce
4. ACI	Amman Chamber of Industry
5. DAI	Development Alternative Inc.
6. DOSM	Department of Statistics and Measurement
7. DSM	Demand Side Management
8. FTA	Free Trade Agreements
9. GAM	Greater Amman Municipality
10. GDP	Gross Domestic Product
11. IDARA	Instituting Water Demand Management in Jordan
12. JISM	Jordan Institute of Standards and Metrology
13. JEA	Jordan Engineers Association
14. JQM	Jordan Quality Mark
15. JUST	Jordan University of Science and Technology
16. JVA	Jordan Valley Authority
17. MEMR	Ministry of Energy and Mineral Resources
18. MOU	Memorandum of Understanding
19. MWI	Ministry of Water and Irrigation
20. NERC	National Energy Research Council
21. QIZ	Qualified Industrial Zones
22. RSS	Royal Scientific Society
23. TDS	Total Dissolved Solids
24. USAID	United States Agency for International Development
25. WAJ	Water Authority of Jordan
26. WDM	Water Demand Management
27. WEPIA	Water Efficiency and Public Information for Action
28. WSD	Water Saving Devices
29. WTO	World Trade Organization

Executive Summary

Implementing a labeling program for water efficient products can be an effective method to improve water efficiency. Jordan is one of the most water scarce countries in the world, where meeting potable water demand by an increasing population is an ongoing challenge. Current water uses already exceed the renewable freshwater resources by more than 20% through the depletion of nonrenewable groundwater resources. Therefore, Jordan needs to make use of all the available programs and policies to reduce the increase in water consumption in Jordan.

Jordan's economic growth and the increasing amount of consumers' expenditure have fuelled the market with durable and disposable consumer goods of all kinds. The economic reforms that empowered and engaged the private sector have spurred small businesses and large businesses alike, and propelled Jordan's rapid integration into the world economy as witnessed by Jordan's accession to the World Trade Organization (WTO), its signing of the Free Trade Agreement (FTA) with the United States, its newly integrated Qualifying Industrial Zones (QIZ), its partnership agreement with the European Union, its Arab Free Trade Agreement and more recently, its Free Trade Agreement with Singapore.

The result of this "open door to trade" Jordan's marketplace have created a marketplace both blessed and burdened with commodities of different origins and various qualities. Blessed, in the sense of consumer choice and price; burdened in respect to the difficulty in maintaining water efficiency standards and good quality products.

The Water Efficiency and Public Information for Action Program (WEPIA), funded by USAID from 2000-2005 carried out a number of water efficiency activities including the establishment of the Water Demand Management (WDM) Unit in the Ministry of Water and Irrigation (MWI) in 2002. One of the programs investigated by WEPIA and turned out to have the potential to improve water efficiency is a water efficient product labeling program.

It is important to note that there are two types of labeling; the first identifies those products that meet minimum water efficiency standards that are included in national or international standards. While, the second type labels products that meet water efficiency standards and exceed the minimum water efficiency requirements.

Since the Jordan Institute for Standards and Metrology already requires labels for products for which there are Jordanian standards, the focus of this report is on a voluntary water efficiency labeling program for products that exceed the Jordan water efficiency standard or for which there is no efficiency standard.

JISM is currently in the process of updating standards for water using appliances and products so when the new standards are adopted, these standards can serve as a baseline. The voluntary program envisioned in the work plan will develop criteria for each product that exceeds the baseline and can serve as the baseline for products.

The key concept for a voluntary labeling program is "market transformation" which can be defined as making water efficient products the preferred choice among consumers and businesses of all types. The program would address both the quality of products and provide customers with information about the water efficiency of

these products resulting in the eventual behavior change of customers to select products that have an increased level of water efficiency.

The work plan proposed in this report proposes a minimum of five years funding commitment to initially implement the program and recommends that 10 years timeframe to be recognized as necessary to gain traction for the labeling program.

To be successful, the labeling program would have to be a coordinated effort among manufacturers, retailers, government ministries, NGOs and other interested parties. The Government of Jordan would need to recognize the value of the labeling program and make it a national priority. All parties would have to agree on the benefits of the labeling program and be willing to put a substantial effort into making the program succeed.

There are many labeling programs for energy efficient products implemented throughout the world. Jordan like many countries of the world are facing rising energy costs and has recognized that it needs to reduce demand through efficiency programs, to address the need for energy efficiency and climate change, Jordan is currently considering the implementation of a labeling program for energy efficient products. Since energy and water efficiency labeling programs have many similarities, establishing a combined water and energy efficiency labeling program for Jordan would have many synergies and should be considered.

1. Introduction

This work plan was developed to provide a road map to implement, in Jordan, a voluntary labeling program for water using products including clothes washing machines, dishwashers, toilets, faucets, showerheads, and aerators. The program aims at identifying the most water efficient products that comply with satisfactory performance standards.

For a Jordanian labeling program to be successful, it will require a minimum of a 10 year funding commitment in order to firmly establish the program, set efficiency and performance levels for each product, test products to assure compliance, encourage manufacturers to join the program, market the label so consumers will recognize and utilize the label, and to have an ongoing outreach program to sustain interest in the label by manufacturers and the public.

The draft of the work plan was presented to the Water Efficient Products Labeling Task Force at a meeting on August 20, 2008. The members who attended the meeting were the following:

1. Rania Abdel Kahleq, MWI
2. Bar'ah Al-Hiary, JISM
3. Moa'wiah Faide, MEMR.
4. Nizar Qaqish, RSS
5. Mohamad Abu Taha, JEA
6. Sabri Alkhassib, ACC
7. Rose Smadi, ACI
8. Mohamad Omar, NGO

The comments of the task force were discussed and have been incorporated into the final draft of the report.

2. International and National Labeling Programs

There have been a number of international and Jordanian programs that involved labeling of products. Several of these programs involved labeling of water and energy using equipment. The lessons learned from these programs can be applied to a water efficiency product labeling program for Jordan. There are also many barriers to the implementation of a labeling program.

This section includes a brief summary of each of these programs, the lessons that Jordan can learn from to build a successful labeling program and a discussion of the barriers that should be recognized and will need to be overcome to implement a labeling program.

2.1 International Labeling Programs

2.1.1 Australia's National Water Conservation Labeling Scheme (NWCL)

The Water Services Association of Australia (WSAA) conducted a National Water Conservation Labeling Scheme to provide consumers with information on the relative water efficiency of products. Unlike the energy labeling scheme implemented in Australia, this program was voluntary¹. This program was a low cost program since it had only one staff position, few promotional partners, no systematic outreach program and no contractor support budget. It was not very effective due to the low funding levels and was replaced by the WELS scheme described in the next section².

The NWCL scheme covered washing machines, dishwashers, showerheads, toilet suites, taps and commercial urinals. Labels were displayed on merchandise in the form of a 'rating label' as shown here. Products were required to conform to the appropriate Australian standard for performance, such as Australian Standard AS/NZS 3662 for showerheads.

For example, a showerhead with a water flow of less than 9 liters per minute was 'AAA' rated. One that uses 9 to 12 liters per minute had an 'AA' rating. A 12-15 liter per minute showerhead had an 'A' rating. Those using more than 15 liters per minute do not comply with this scheme. Currently the most efficient showers, taps and toilets are AAA rated, but there are AAAA clothes and dish washers available.

The Australian labeling for water efficiency was as follows:

RATING	WATER EFFICIENCY
AAAAA	Excellent
AAAA	Very high
AAA	High
AA	Good
A	Moderate

Figure 1: Australian Ratings

¹ <http://www.greenhouse.gov.au/yourhome/technical/fs21.htm>

² Voluntary Product Labeling Programs: What Have We Learned

Guidance Useful to Jordan

WSAA, as a voluntary program, was a low cost program and as such could be one alternative considered by Jordan. On the downside, after 13 years, due to inadequate funding the program was not very effective and has been replaced by the mandatory WELS scheme described below.

2.1.2 Water Efficiency Labeling and Standards (WELS) Scheme

In 2005, Australia passed the Water Efficiency Labeling and Standards Determination Act that replaced the voluntary WSAA Program into a mandatory product registration and labeling program. The WELS Program includes the following products:

- Plumbing Products.
- Showerheads.
- Faucet or faucet aerators.
- Flow controllers (voluntary).
- Toilets suites, pans, cisterns, flushing devices and combinations of these products.
- Urinal Equipment.
- Appliances (White Goods).
- Clothes Washers.
- Dishwashers.

Other products are being considered for future inclusion in the WELS Program.

Guidance Useful to Jordan

The WELS scheme is relatively new so it is too early to draw conclusions about its effectiveness. Since it is a mandatory program, effective enforcement will be a key to its success. Since enforcement in Jordan is spotty at best, a similar scheme would only be effective if enforcement was substantially improved and supported at all levels of the government.

2.1.3 United States Energy Policy Act Required Labeling

In 1992 the United States Congress passed the Energy Policy Act, which established uniform water efficiency standards for virtually all toilets, urinals, showerheads, and faucets manufactured after January 1994.³ The requirements are administered and regulated by the U.S. Department of Energy through its Office of Building Technologies.

The Energy Policy Act also mandated that all plumbing fixtures to be clearly labeled so that suppliers and consumers can see that the products comply with the new federal standards. As a result of the Energy Policy Act, policymakers predict that by

³ The maximum water use allowed for any showerhead manufactured after January 1994 is 2.5 gallons per minute when measured at a flowing water pressure of add bars 80 pounds per square inch. Maximum water use allowed for lavatory faucets, lavatory replacement aerators, and kitchen faucets is also 2.5 gallons per minute. Metering faucets must be 0.25 gallon per cycle. All gravity tank-type toilets, flushometer tank toilets, and electromechanical hydraulic toilets manufactured after 1994 must be 1.6 gallons per flush, urinals must be 1.0 gallon per flush, and blowout toilets must be 3.6 gallons per flush.

the year 2026 indoor water consumption for an average American family will be reduced by half, as the plumbing fixtures manufactured before 1994 are being replaced by the mandated water-efficient fixtures.

In addition to mandating labeling requirements and maximum water use standards for plumbing fixtures, the Energy Policy Act also recommended incentive programs for state and local governments to accelerate voluntary fixture replacement of old inefficient fixtures in buildings that were constructed prior to 1994.

Guidance Useful to Jordan

The Federal standards were very important in establishing a solid ground for water efficient plumbing products in the US; however, the standards have not been updated in 15 years. The institutional barriers to updating these national standards were one of the motivations for establishing the WaterSense Program.

2.1.4 United States Water Using Product Incentive Programs

In a number of cities across the United States that recognize that water efficiency can reduce the need for future water supply projects, local governments have implemented various incentive programs for efficient water using products with a great degree of success. These programs include: offering rebates on the purchase of low-flush toilets, distributing and installing free (or subsidized) water efficient products including toilets, showerheads and kitchen and bathroom faucet aerators, and implementing leak detection and repair programs. These programs were implemented since local governments realized the necessity of sustainable solutions for the reduction of water consumption. These solutions will have positive long-term environmental and economic returns which outweigh the cost of their implementation.

One illustrative example of these incentive programs is the ultra-low flush (ULF) toilet rebate program in Santa Monica, California. Santa Monica provided two financial incentives for ULF retrofitting—offering a rebate to cover most of the costs of ULF toilets and installing low-flow showerheads free of charge and imposing a surcharge on the water bill of customers who do not retrofit. After conducting a feasibility study and changing city ordinances to allow the city’s utilities division to pay rebates and charge fees, the city conducted a public education campaign to publicize the new program.

Other US cities such as San Diego, California passed laws requiring the replacement of inefficient toilets upon sale of a house.

Guidance Useful to Jordan

Incentive programs greatly accelerate the removal of inefficient plumbing products and appliances from existing buildings.

2.1.5 United States ENERGY STAR Program

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices. Over 50 percent of the American public recognizes the ENERGY STAR label. The ENERGY STAR program has 60 full time staff persons, over 8000 partners and an annual contractor budget of 50 million USD.

Guidance Useful to Jordan

A well funded and staffed labeling program can achieve significant consumer recognition and increased sales of efficient products in a relatively short time.

2.1.6 United States WaterSense Program

WaterSense is a public-private partnership program sponsored by the U.S. Environmental Protection Agency (EPA) created in 2007 to protect the nation's water supply by promoting and enhancing the market for water-efficient products and programs. The program's goal is to conserve water resources for future generations and reduce water and wastewater infrastructure cost.

WaterSense seeks to provide credible information on water-efficient products and practices, raise awareness about the importance of water efficiency, ensure water-efficient product performance, help consumers differentiate products and programs that use less water, promote innovation in product development, and support state and local water efficiency efforts.

WaterSense was established by legislative authority found in Sections 104(a) and (b) of the United States Clean Water Act (CWA) broadly authorize the U.S. Environmental Protection Agency (EPA) Administrator to "establish national programs" for the reduction of pollution, which may include cooperation with, encouragement of, and assistance for public and private efforts to prevent, reduce, and eliminate pollution.

Additionally, Section 104(o) of the CWA authorizes the EPA Administrator to conduct research on methods of reducing the total flow of sewage, including unnecessary water consumption⁴. Sections 1442(a) (1) and (2) of the Safe Drinking Water Act (SDWA) authorize the EPA Administrator to provide demonstrations related to the provision of a dependably safe supply of drinking water.

WaterSense adopted an overarching program philosophy to guide EPA in selecting products for evaluation, development of product specifications, and determination of label use, partner status, recognition, and marketing efforts.

The WaterSense criteria for labeled products is that the products:

- Will realize water savings on a national basis.
- Perform as well as or better than their less efficient counterparts.
- Will be easy to use and find, requiring no consumer sacrifice in convenience, comfort, hygiene, health, safety, or availability.
- Achieve water efficiency through several technology options, at least one of which is non-proprietary.
- Will effectively be differentiated by a label that is visible for purchasers.
- Typically, be 20 percent more efficient than their less efficient counterparts.
- Are independently certified by a third party to confirm that the product meets EPA criteria for efficiency and performance
- Provide measurable and quantifiable results in terms of water saving while maintaining an adequate level of performance.

⁴ A recognition by Congress that sewage flow is directly related to water consumption thus to potential water pollution.

The products that will be considered for WaterSense Program include all water using products with the exception of hot water using products like clothes washers and dishwashers that are already included in the U.S. ENERGY STAR program. Since there is no current energy labeling program in Jordan, a water efficiency labeling initiative should include both cold water and hot water using products.

To achieve the mission of the WaterSense program, EPA is establishing partnerships with interested stakeholders, such as product manufacturers, retailers, and water utilities. EPA provides and maintains the WaterSense brand and develops national specifications for water-efficient products and programs. Partners develop products and programs meeting the specifications and promote and distribute them to customers. Partners also assist EPA in promoting water efficiency, in general, as well as the WaterSense brand, specifically.

The required attributes of products allowed to bear the WaterSense label are described in product specifications developed by EPA. Specifications will generally describe both water use and product performance attributes and will be developed with stakeholder input. EPA will typically prepare draft specifications based on market research and informal discussions with industry.

Once a draft specification is available, EPA makes it public via the program's Web site and requests comment through conference calls and public meetings. The draft specifications will be refined based on these comments and feedback and then released again in either draft or final form. EPA has the ultimate authority in setting specification requirements, after carefully considering all stakeholder input.

The WaterSense label was created to differentiate products in the marketplace that meet EPA criteria for efficiency and performance. There are several prerequisites/limitations for use of the label. The WaterSense label can be suspended or withdrawn from a product if it is found not to conform to the relevant WaterSense specification and/or label use guidelines. Such WaterSense label withdrawal also can trigger termination of the partnership agreement by EPA. Products with a withdrawn WaterSense label will not be reinstated into the program. Proper use of the WaterSense label on products and product packaging is monitored and enforced by EPA and/or the product certification bodies that certify WaterSense products.

The types of organizations that are eligible to become partners in the WaterSense program are Professional Certifying Organizations, Promotional Partners, Manufacturers, Retailers/Distributors, and Certified Professionals. WaterSense plans to add additional categories of partners, including home builders, contractors (e.g., plumbers and remodelers), and other businesses and institutions that use water as the program develops. EPA has committed to all partners that it will provide WaterSense partners with public recognition for their involvement in the program and role in protecting the environment through online listing of partners, special awards, and other efforts. EPA will rely on partners to provide much of the data. Specifically, WaterSense will request selected partners to submit the product data on an annual basis. EPA will also request data of professional certifying organizations and certified professionals to determine implementation status of the WaterSense labeled professional certification programs.

On October 27, 2007, EPA issued a proposed Water Sense certification scheme for comments⁵. In the interim, until the full WaterSense accreditation requirements are

⁵ The draft certification scheme had not been finalized as of November 4, 2008

adopted, WaterSense will rely on current ANSI accredited product certification bodies to certify products in accordance with their existing certification schemes and authorize the use of the Water Sense label on an interim basis.

Each product certification body that is approved by EPA during the interim period or ultimately fully accredited by ANSI to the WaterSense certification scheme will certify conforming products and authorize the use of the WaterSense label. EPA has adopted final product specifications for toilets and faucets, and lists of products meeting these specifications are available on the Water Sense web site.

Figure 2 portrays the key elements of the product certification process and the relationships between EPA, the product certification body, and the manufacturer partner.

Guidance Useful to Jordan

The WaterSense program is among the few robust, transparent and full functional programs in the world for water using products. Part of its success can be attributed to its use of the ENERGY STAR model for program development. The coordination of the WaterSense program with its partners, that is considered key to the program's long-term success, is exceptional. Additionally, the benefits of labeling a product or program as WaterSense, is considered a mark of excellence that both increases product sales and encourages widespread program participation. The institutional structure of the program, as seen in Figure 2, may be useful to the Jordan labeling program.

The WaterSense effort required significant human and financial resources to launch the program and will require additional long term funding from EPA to be successful. Even though Jordan is a much smaller country than the US, all the same processes will have to be established to have a successful labeling program in Jordan.

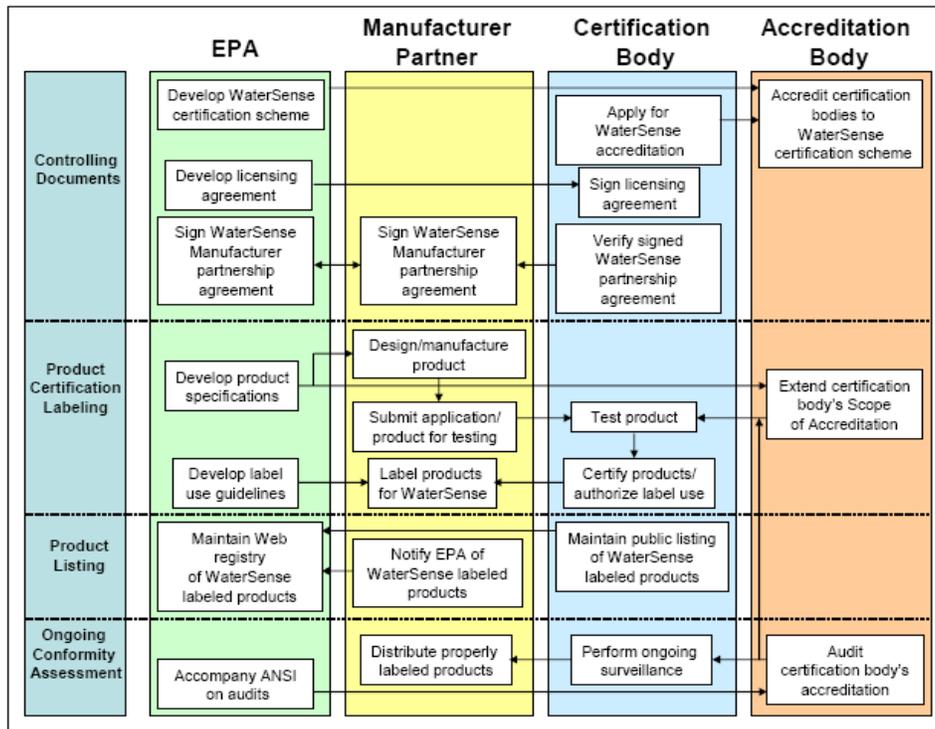


Figure 2: US EPA WaterSense Program

2.1.7 European Labeling Program

As in the US, the European Union set ambitious objectives for energy efficiency and environmental stewardship, including efficient use of water resources. The EU energy labeling policy, implemented with EU Directives for the last ten years, has been successful. Consumers have responded positively to this mandatory information scheme enabling comparison of respective energy-efficiency of various models in the same appliances family.

The EU Labeling Scheme also provides performance rating, allowing consumers to assess the necessary balance between energy consumption (and water use) and functional performance of an appliance. The data declarations on the energy label are based on official EN standards which provide for real use testing in laboratories. An example of EU label is seen in Figure 3.

Labeling products will actively contribute to the reduction of the environmental impact of household appliances. All efforts to reduce their environmental impact aim at linking environmental measures with the manufacturing strategy, the market realities and the service to the consumer. Providing solutions to these partly conflicting interests, regarding the profitability of industry is the target of the manufacturers in Europe.

All appliances carry EU labels which rate their energy consumption. Most are labeled from A to G, with A being the most efficient. Refrigerators are the exception as they carry even higher energy efficiency ratings and savings. Other information on the label varies slightly depending on the type of appliance.

The ratings now go up to A+ and even A++, on refrigeration products. These use the least electricity and are the cheapest to run. The label states the typical energy kWh (kilowatt hour) per year under standard conditions.

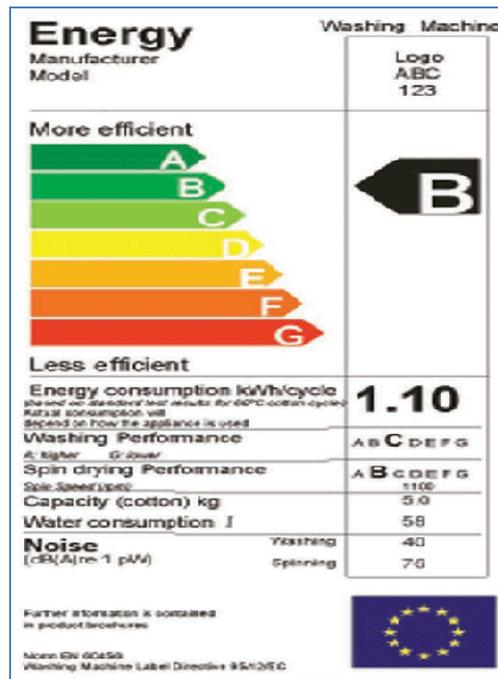


Figure 3: European Energy Label for Clothes Washing Machines

Labels on laundry and dishwashing products also have similar A - G ratings for washing, spin and/or drying performance. The most energy efficient washing machines are currently labeled AAA. However, there is now an A+ rating on some manufacturers' marketing material for newer models.

Another entity, the Energy Saving Trust is an independent, non-profit organization promoting sustainable use of energy. They have local advice centers that provide free, impartial advice, including a free Home Energy Check. They also provide labeling for products. The Energy Saving Recommended logo that can be found on a range of products including fridge freezers and washing machines. The Energy Saving Recommended scheme was established in 2000. The ESR products are best-in-class for energy efficiency - meeting or exceeding specified energy efficiency requirements set by an independent panel and reviewed annually. The Energy Saving Trust tests a percentage of products to ensure they use less energy and help the environment. Figure 4 illustrates that mark.



Figure 4: Energy Saving Mark

Guidance Useful to Jordan

The EU recognizes that it becomes more difficult to develop restrictive legislative measures in a command-and-control fashion and the *static* character of such an approach, not to mention the considerable outlay of resources and significant market distortions that caused adoption of this voluntary program. Recent information indicates disenchantment with this approach since there is no independent testing and there is apparently widespread cheating on the labeling of these products.

Industry commitment is seen as the best way forward to both encourage companies to act, exploit the impact on the market, and maintain flexibility--which is required by the continuous evolution of the program's framework. There is a feeling that these commitments push enterprises to enhance the performances of their products, opening new possibilities in the market competition, which lead to added benefits for the consumers.

Recent information from the EU indicates problems since there is no independent testing and there are claims of widespread cheating on the labeling of these products.

2.1.8 Lawrence Berkeley National Laboratory

LBNL's Environmental Energy Technologies Division hosted an official delegation of Jordanian energy leaders at the request of the State Department in April, 2007. A four-person Jordanian delegation met with researchers to discuss energy efficiency standards and labeling programs, water, demand response, cool color roof technology, and industrial energy efficiency. Jordanian delegates toured the Advanced Windows Test Facility and the Advanced Light Source. LBNL Division Director Mark Levine signed a Memorandum of Understanding with Malek Kabariti, president of Jordan's National Energy Research Center, to explore cooperative research and training programs in energy and water efficiency.

The Water and Energy Technology Team (WETT) at Lawrence Berkeley National Laboratory has investigated topics ranging from options for distributing residential hot water to the economic effects of efficiency standards for clothes washers. Their goal is to save both water and energy through innovative engineering designs, rigorous testing procedures, and information dissemination. There are no plans for programs in water efficiency in Jordan through LBNL, as reported in conversations with LBNL staff.

2.2 Jordanian Labeling Programs

2.2.1 Daman Program

In 2003, JISM initiated the implementation of an International Product Conformity Certification Program (IPCCP). The program was intended to ensure that certain products available in the Jordanian market conform to Jordanian or internationally recognized standards. Locally manufactured products were tested and certified on-site of manufacture, while imported goods were inspected in the country of origin.

IPCCP was implemented by Bureau Veritas, a global company specialized in QHSE management (Quality, Health, Safety, and Environment), which issued, on behalf of JISM, conformity certificates attesting that goods/products were in accordance with relevant Jordanian or internationally-recognized standards.

IPCCP targeted the following products:

- Toys,
- Electrical and electronic products,
- Vehicles, and
- Personal safety devices

To ensure accuracy and transparency of results, inspection of products was carried out according to the following steps that were conducted in the country of supply and Jordan:

- **Jordan**
 - **Country of Supply**
- ↓ Importers contact Bureau Veritas (BV) Liaison Office in Amman.
- ↓ Exporter contacts BV Office in his country, and provide them with technical details, and the available quality documentary evidence, such as:
1. Conformity certification to an internationally recognized standard
 2. Manufacturer's quality process certification
 3. Certificate of analysis
 4. In-house testing certificates
 5. Certificate of origin
- ↓ Documentary check: an evaluation of all information provided by the exporter to verify compliance of products to the relevant Jordanian standards and regulations that will be carried out. Where insufficient information is available, the seller is requested to submit a sample for testing by a laboratory accredited by JISM.
- ↓ Physical inspection: is carried out when there are doubts related to the investigated product. In case of discrepancies, the seller is requested to correct them prior to issuance of certificates. If irregularities are not corrected, a discrepancy report will be issued and the importer will be informed accordingly.
- ↓ Compliance certification: Upon issuance of satisfactory inspection report, a certificate of conformity will be issued by Bureau Veritas office in the country of supply.



- **Jordan** Certificate delivery: when the Liaison Office in Amman receives the certificate data, the office will deliver the Certificate of Conformity to the importer. The certificate identifies the goods and the applicable Jordanian Standard.

The program succeeded in meeting the following objectives:

- Building the capacity of around 250 employees in JISM and concerned institutions.
- Developing equipped laboratories for testing of products.
- Minimizing the risk of re-exporting products due to their incompliance with local and international standards. This is achieved by testing the imported products by laboratories accredited by JISM in the country of supply.

However, implementation of the program faced certain challenges due to the following:

- There was no strict monitoring of the testing process,
- The local cadre responsible for conducting on-site inspection were not qualified and well-trained on testing,
- There was no focus on writing the country of origin in the label, which will to a certain extent give the customer an indication on product quality.
- There was no proper inspection of trademark infringement.

Daman program ended with the end of the contract with Bureau Veritas in August 2007. JISM has then implemented a sustainable internal system to monitor product standards through post-market surveillance and other means that do not pose technical barriers on trade. JISM is now responsible for inspecting all the products that were included in Daman Program except the vehicles, which are monitored by the Traffic Department in Jordan.

It is worth mentioning here that in 2005, Bureau Veritas and the Royal Scientific Society established the Middle East Laboratory Testing & Technical Services (MELTTS) that provides electrical and electronic testing services, training and technical studies for factories in Jordan and the region. The company's laboratories are the successor of the testing and quality control laboratory in the Electronic Services and Training Center, which was established in 1981.

The Centre is accredited by JISM according to ISO/IEC 17025: 2005. However, the Centre is only equipped with machines and tools for testing the safety measures of products that fall within the following categories: household appliances, IT equipment, audio and video equipment, toys, luminaries and electrical components and accessories. The Centre provides studies in design and establishment of new electrical testing laboratories, in addition to pre-purchase and technical evaluation and tendering of electrical test equipment.

Guidance Useful to Jordan

The Daman program demonstrated that a certification program could be implemented in Jordan with donor support. However, more focus should be given to products inspection in order to overcome the challenges faced during the implementation of Daman. This includes qualifying the local cadre that is responsible for inspection and monitoring of the process, in addition to paying more attention to trademark protection.

2.2.2 Jordan Quality Mark

The Jordan Quality Mark (JQM) certificate is granted by the certification department (CT), which is one of the technical departments in Jordan Institution for Standards and Metrology (JISM). CT carries out its activities according to the requirements of ISO/IEC Guide 65:1996 (EN 45011) which states the general requirements for bodies operating product certification systems. CT was recently accredited by the German accreditation body DAP.

CT activities:

- Participating with the Royal Court -through the technical and administrative committee- in permitting the affixation of the Royal Crown Logo,
- Granting Jordan Quality Mark (JQM),
- Issuing conformity certificates for Jordanian and non-Jordanian products,

Objectives of granting JQM:

- Achieving one of the main goals of JISM which is "Competent Jordanian Products" by increasing the competitiveness of the local products in addition to enhancing confidence in industrial organization authorized to use JQM.
- Implementing the quality management systems and supporting the "customer satisfaction" principle.
- Reducing technical barriers facing international trade by mutual recognition of the quality mark.
- Supporting local industry by limiting the existence of low quality products through distinguishing the products complying with the international quality.
- Protecting the consumer by guiding him to the high-quality products through labeling products with JQM logo.

The organization seeking the JQM certification must fulfill the following requirements:

1. The product should comply with the JQM technical requirements, which are prepared by specialized technical committees. The CT relies on approved testing laboratories in all test scopes to perform tests and show product conformity.
2. The management system of the organization should conform to the requirements of the following standards: ISO 9001 for all organizations, ISO 22000 for food organizations or JS 1407 for fruit and vegetables farms.
3. It is not a requirement for the organization to be certified for the management system, but a certificate issued by an accredited body will be enough for fulfilling this requirement.
4. The organization should successfully pass the onsite technical assessment.
5. The organization should continually control the product quality by having a test laboratory or contracting with a test laboratory approved by JISM.
6. Pay the test fees in addition to JQM granting fees.

Steps for granting JQM:

1. Application.
2. Assessment.
3. Product testing.
4. Paying fees.
5. Issuing certificate.
6. Surveillance.



Figure 5: Jordan Quality Mark

JQM Certificate renewal:

The organization can apply for JQM certificate renewal before certificate expiration and according to the regulations.

Guidance Useful to Jordan

The JQM is a good example of a rather complex certification program implemented in Jordan. A total of 70 products divided on 36 companies have been granted the JQM. Demand of other companies on JQM is increasing due to its positive impact on customers. According to JISM, JQM increases the level of customers trust in products, which in turn creates a sense of competitiveness among companies to apply, renew and expand their quality mark certificate.

Strength of the program and lessons learned

- Since the JQM is not mandatory and implies charges and fees, companies were given privileges and incentives as a result of getting the JQM. This includes facilitating the import of raw material and export of products. They also get privileges and incentives from the Tenders Department.
- The program should be accompanied with a comprehensive marketing strategy to raise public awareness on the privileges associated with implementation.

2.2.3 Proposal for Energy Efficiency Standard and Labeling in Jordan

A proposal was prepared by National Energy Research Center (NERC) to the United National Development Program (UNDP) in December 2006 to establish an energy efficiency and standard labeling program for Jordan. The proposal was based on the 2004 Jordan National Energy Efficiency Strategy which stated that minimum standards and labels for energy efficiency of imported and locally manufactured equipment should be adopted in Jordan.

The proposal was granted approval in January 2009 and is currently in the signing process which is expected to take place in May or June 2009 after the update and finalization of technical proposal. It is currently managed by the Environment Division at the UNDP.

Project Approach

The main objective of this project is to establish an energy labeling system and set a Minimum Energy Performance Standards (MEPS) program for household appliances in Jordan with the initial focus on air conditioners, refrigerators, freezers and washing machines. These appliances have been selected because they combine large national market with a high penetration in household, high energy saving potential, and the presence of a regional market for them.

The project will be implemented on a 3-year period, with a total budget of \$1,100,000 provided from the UNDP in addition to in-kind contribution from the Government of Jordan.

The main strategic approach of the project is to:

- Provide the government ministries with technical assistance and support for the introduction of the first set of appliances standard and labeling regulation as well as support for the design and implementation of support programs.
- Provide tools and methods to the ministries responsible for enforcement so they can ensure that the new regulation is applied consistently.
- Transform the appliance market in Jordan towards more energy efficient technologies by the introduction of energy performance label and a set of minimum energy performance standards.
- Educate the customers on the importance of selecting a high efficiency appliance to avoid medium and long term operating costs.
- Encourage retailers to offer more efficient products in Jordan and to educate customers on the importance of energy efficiency.
- Stimulate the introduction of cost-effective, energy efficient technology.

The expected outcomes of this project are:

- Enhance capacities in government and energy agency units for appliance energy efficiency (EE) policy development, implementation and market surveillance.
- Structural verification & enforcement of appliance EE labels and standards.
- Increase consumer and retailer awareness and improve the marketing of appliance EE standards and labels.
- Support programs for manufacturers.

Successful implementation of this project for air conditioners, refrigerators, freezers and washing machines will serve as a model for scaling-up to other priority consumer appliances such as lighting products, dishwashers, dryers, heat-pumps, pumps, hot water systems, electric iron, televisions, computers, etc. However, to support the replication of the present project, a comprehensive monitoring and evaluation system will be set-up to identify program elements that work, the ones that do not and the reasons for the same. Lessons learnt from the past experience shall be incorporated and used during replication.

2.2.4 GTZ IPM Certification Program

GTZ implemented an Integrated Pest Management Certification (IPM) and consumer labeling program from 1998 to 2000. The IPM Program assisted farmers in the Jordan valley in establishing their own organization that was intended to certify that crops grown were using IPM standards. Those products that were certified as being grown using IPM standards were then wrapped in plastic bags for retail sale that identified that these products had been certified, with a label "GTZ IPM".

The program was initially successful until one of the farmers decided that he would certify himself rather than follow the certification procedures of the organization. After that the other farmers starting self certifying themselves, the certification process lost its credibility and the program became ineffective. In addition, the company that produced the labeled plastic bags sold them to other farmers as well who were not certified. Customers never gained confidence in the quality of the products and were not willing to pay the higher price of the labeled products.

Guidance Useful to Jordan

One lesson of this program was that certification body needed to be an organization independent from the farmers, either a government agency like the Jordan Food and Drug Agency or an independent company or NGO. A second lesson was that the certification process should generate the income necessary to sustain the certifying organization without donor support⁶.

It is still thought that a milder form of certification which ensures a reduction of fertilizer and keeps pesticide application to the minimum could be successful. The certified product should be able to convince the consumer by superior taste.

2.3 Barriers and Challenges for a Jordan Labeling Programs

There are a numbers of barriers that will need to be addressed and overcome to implement a labeling program.

2.3.1 Institutional Barriers

- The Jordan Institute for Standards and Metrology (JSIM), the institution in charge of enforcing current standards and labelling regulations does not have a comprehensive and effective enforcement program for current standards and labelling requirements unless the technical standards are issues as technical regulations.
- The value of market transformation to water efficient products is not currently recognized as a high priority by the Government of Jordan
- The water and energy sectors in Jordan have not yet begun to coordinate efforts on efficiency as such sectors are taking place in other countries

⁶ Communication with Jochen Regner, July 19.2008, GTZ, Jordan

2.3.2 Retail Barriers, Beliefs, and Biases

- Most of the plumbing products sold in Jordan have no label indicating water use^{7 8}
- Water use and efficiency labels in the market are not on the product, rarely on the box (or in the catalogue) and often no information on water use is available from any source, (See Figure 7).
- Salespersons that are aware of water efficient products do not have the opportunity to sell those products in their stores since the owner may not be educated about the product.
- Some traders import inefficient water using products that are inappropriate considering Jordan's water situation^{9 10}
- There is a lack of comprehensive records on quantities and brands of products in the market.



Figure 6: Label for clothes washers exported to Egypt



Figure 7: Unclear Label

⁷ According to recent IDARA Survey

⁸ The IDARA Project has a separate task to work with JISM to include labeling as part of the technical specifications for water using appliance and plumbing products.

⁹ Due to differences in water pressure between country of origin and Jordan.

¹⁰ IDARA Project has separate tasks to work with JISM to include labeling as part of the technical specifications for water using appliance and plumbing products and to develop an enforcement program to prevent importation of products that do not meet technical specifications.

2.3.3 Consumer Barriers, Beliefs, and Biases

- The cost of water is very low compared to the budget allocated by households for water, electricity and heating. For the major population areas in Jordan, water costs are 12-15% of total water, electrical and heating costs; and less than 1% of total household related expenses¹¹.
- There is no tangible consumer demand for water efficient products since the benefits are not understood.
- Some water sector decision makers also appear unaware of water efficiency benefits of labelled products since it is often stated that consumers are saving as much water as they can and that additional supply is the only option.
- Consumers may not fully comprehend the water situation in Jordan.
- Consumers feel water is a political issue and therefore a government-sector responsibility.
- Consumers may be willing to conserve but feel like it will not make much of a difference for Jordan since many other people are not conserving.¹²
- In purchasing appliances, water use may only be a minor consideration compared to brand, price and operating features.
- Consumers may feel that water efficient appliances do not perform as well since they use less water.

2.3.4 Manufacturer Barriers

- Local manufacturers may not find it financially beneficial to convert to manufacturing of water efficient toilets, due to the conversion costs and small scale of production in Jordan.
- Manufacturers might not understand the value of publicity or co-advertising.

2.3.5 Regulatory Barriers

- Market surveillance capacity to ensure that products meet standards is still being developed in Jordan.
- Legislation does not provide a clear definition of water conservation.

2.3.6 Testing Barriers

- There is no requirement in Jordan to test products to determine if water using products comply with flow rates, quality, and suitability for Jordan (For example, the RSS tests only toilets for porcelain quality as specified by JISM).
- The country's main testing centre is only equipped for testing the safety measures and durability of products.
- There are no specialized labs¹³ for testing sanitary fixtures' technical performance.

¹¹ Jordan Department of Statistics, Household Expenditure and Income Survey, pages 180-181, 2006

¹² USEPA Focus Group Findings

¹³ In either JISM or the RSS

2.3.7 Enforcement Barriers

- Legislation does not provide directives for enforcing standards for water using products.
- Some local manufacturers have labelled products for export but not for Jordan¹⁴ due to lack of enforcement.
- There is a lack of adequate market surveillance on the existing products¹⁵
- JISM does not have legal enforcement to ensure the products meet the standards.
- JISM's role at Customs lacks a "trigger" to ensure some products are prevented from entering the market.

2.3.8 Long term commitment of resources is required.

To be successful a labeling program requires a long term commitment of resources including an oncoming outreach program. Without a long term commitment of resources, the program should not be launched.

2.3.9 Address practices as well as products.

To be successful, a labeling program should also address practices as well as products. For example, a dishwasher uses less water than washing dishes in a sink; however, if consumers prewash all dishes before putting them in a dishwasher, more water be consumed.

2.3.10 Partner with energy labeling program.

Since there is overlap between certain products such as dishwashers, clothes' washers, showerheads, and faucets that can save water and energy (through reductions in hot water) as well as similarities in program promotion, water and energy labeling programs should either be combined or at least work closely together.

2.3.11 Coordinate with regional and international labeling programs.

Synergies should be explored with regional and international programs especially when products from these programs are sold in the local market.

2.3.12 Provide sufficient lead time for manufactures and retailers.

The program must be developed over a timeframe that provides sufficient time for manufacturers to participate and buy in to the need for a labeling program. In addition, each product will need a grace period that allows sufficient time after agreement on labeling criteria is reached before the program goes into effect for that product. The grace period will allow local manufactures time to retool, if necessary, test and certify the products, and then add the label to their manufacturing process. This period will depend on the product, but would likely be a minimum of one year.

¹⁴ Some local manufacturers issue two types of energy and water use labels. One is for use in the local market and does not include descriptive information. The other labels are placed on exported products (e.g., exports to Egypt) and are informative and compliant with the Jordanian standards. Manufacturers claim this "duality" in labels is due to the strict enforcement of the Egyptian labelling program.

¹⁵ The only entity to handle inspection of products is JISM by testing randomly selected samples of products which are placed in the market or produced by local manufacturers. And JISM is non-governmental.

3. Approach

A labeling program that promotes water efficiency fixtures has to start by addressing whether the program will be voluntary or mandatory. This decision should be guided by the current state of water using product technical standards and specifications; and the enforcement of those technical specifications in Jordan.

The USAID Funded Water Demand Management Project (IDARA) currently has as one of its tasks to work with the Jordan Institute of Standards and Metrology (JISM) on new technical standards for water using products which are out of date compared to international water efficiency standards. While this process is underway, it may take one or more years before all of the water using products standards are updated. Even after the standards are approved, these standards must be issued as technical regulations in order to be enforced at Customs and through market surveillance by JISM. It is this uncertainty over the adoption of new standards as well as enforcement that provides the need for a labeling program at this time.

When new standards are negotiated for adoption, it is rare that the standards will be set as high as the most efficient products on the market. It follows that when and if new standards are adopted and enforced as technical specifications, there will be a selection of products in the market that exceed these standards. The value of a labeling program would be to provide consumers with the choice of products that exceed the technical standards.

There is also an interest in Jordan in implementing a labeling program for energy efficient fixtures and appliances to reduce both the growth in energy use and the amount of greenhouse gases (GHG) put into the atmosphere. Since labeling of both water and energy products would follow almost identical program implementation procedures, it is highly desirable for Jordan to implement a combined water and energy labeling program. Several products notably clothes washers and dishwashers use both energy and water so a combined program would also be an advantage for these products. Hot water used in faucets and showerheads also has an energy component. In addition, the water produced and distributed in Jordan especially the water coming from the Zara Mayen plant near the Dead Sea has one of the highest energy cost components of any water in the world, 6 kWh per m³, due to the energy needed for treatment and pumping uphill 1500 meters in elevation to Amman. So from a GHG perspective, reducing water use also contributes to a substantial reduction in GHG.

4. Market Assessment for Labeling of Products

As part of this task, IDARA conducted a market assessment of water using products sold in Jordan that could be considered for water efficient labeling.

Inferences that may be drawn strictly from data drawn during this Survey (and which may guide the labeling program in subsequent phases) include:

- Jordan can definitely benefit from a program to label water efficient products to transform the current market which contains many types of inefficient products to a market where only water efficient products are available.
- It would be efficient to coordinate with the energy labeling program that will be implemented by the UNDP, as many of the elements of energy and water labeling programs are similar, and four of the five products proposed for water labeling use hot water, so there is both water and energy savings when hot water usage is reduced. These products are clothes washing machines, dishwashers, showerheads and faucets.
- Informational campaigns of labeled products stand an excellent chance of targeting motivated stakeholders.
- Increasing the consumer's personal experience with labeled products is likely to impact product sales.
- Stores selling clothes washers and dishwashers are a promising distribution points for labeled products.
- In stores selling water efficient products, training salespersons on label-use and usefulness will propel sales of labeled products.
- Labels should be placed prominently on the front or top of products for best consumer interest.
- Label design should include Arabic and English (for the expat community), use graphical information, and be understood in a minute or less.
- A manual ought to be prepared as an easy-reference for salespersons and for use in training sessions.
- Salespersons will need to be incentivized to sell, promote, and explain labeled products to consumers.
- To generate a market pull, consumer awareness on WSDs must be increased, demand stimulated, beliefs about their responsibility for water use changed, bias on failed WSDs overcome, confidence in WSDs products restored, incentives to use WSDs designed, and disincentives to the purchase of WSDs overcome.
- Manufacturers must find it financially beneficial to manufacture WSDs, quality and efficiency of locally-made plumbing fixtures improved, their role and status elevated, comprehensive records on quantities and brands of products in the market kept, and their catalogues updated to include water consumption and flow rates.

5. Elements of the Labeling Program

Elements for a labeling program are:

- Select program name.
- Design and test the label.
- Select products to be labeled.
- Determine the Product's Criteria;
 - Determine efficiency and performance criteria.
 - Agree on testing protocols.
 - Establish certification procedures for test labs.
- Solicit Manufacturing and Promotional Partners
- Market and Promotion the Labeling Program
- Manufactures submit products for Labeling
- Monitor and assure Compliance with the Label

5.1 Select Program Name

Though stakeholder meetings, identify possible program names. Hold focus groups to test the name with consumers.

Add list of potential names that translate well into Arabic, water sense, water star, water smart.

5.2 Design and Test the Label

During the label design process, these are some of the characteristics that must be taken into consideration.

It is important for the designer to take into account some important aspects:

- who his client is,
- the main characteristics of the company to whom he will work,
- And the existing specific relationship between the company and consumers.

Appropriate label design does not mean beautiful design. It means the most representative design of the intended concept. Apart from the visual design of the label, it is also important to add the necessary information about the product and the legal data of the company.

A stakeholder workshop was held at which each group developed a concept for a label (Figures 8 & 9). These conceptual designs can be a starting point for a graphic designer to further develop a label concept.

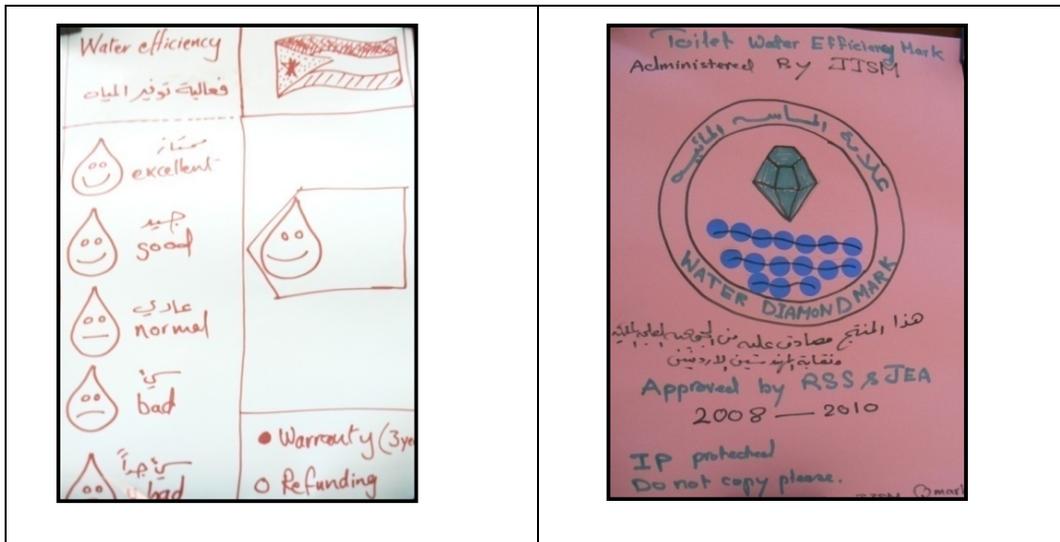


Figure 8: Proposed label designs

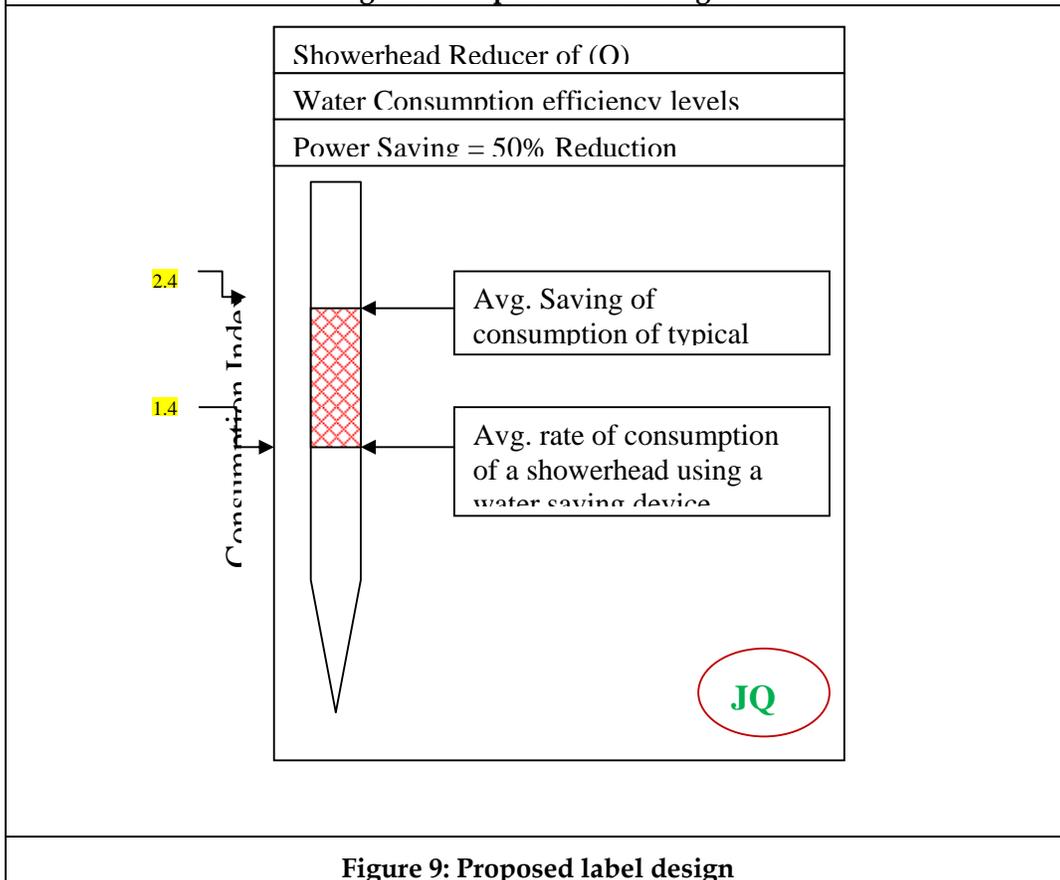


Figure 9: Proposed label design

The following table shows how variations of the label would be used to promote the program. For this example we used the name WaterMark and used the drop logo from the US WaterSense Program. JISM is listed as the certifying body.

Table 1: Proposed Logo

<p>Promotional label</p>		<p>Used by GOJ and all partners to generally promote WaterMark, in the context of "ask about" or "look for" WaterMark and by retailer or distributor partners in the context of "we sell" WaterMark labeled products.</p>
<p>Label</p>		<p>Used by manufacturer partners on products and packaging to indicate which products have been independently certified to meet WaterMark criteria. This assumes that JISM is the certifying agency.</p>
<p>Partner logo</p>		<p>Used by WaterMark partners to signify their commitment to the program and water efficiency on all materials not associated directly with a product.</p>
<p>Program logo</p>		<p>Used by GOJ, media, and WaterMark promotional partners to generally promote WaterMark (e.g., letterhead, business cards, Web sites, program brochures).</p>

5.3 Select Products to be labeled

The table below indicates the factors that should be considered when deciding on what product to be selected for labeling and the priority of a particular product over another.

Table 2: Products Selection Criteria

FACTORS CONSIDERED	PRODUCT SELECTION CRITERIA				
	CLOTHES WASHERS	DISH WASHERS	FAUCETS	SHOWER HEADS	TOILETS
Is there a national or international water efficiency standard for this product?	US	US	US/EU/Jordan	US	US/EU/Jordan
Is the product already labeled for water use in Jordan?	Occasionally with EU label	No	No	No	No
Is the product line to be labeled manufactured locally?	yes	No	No	No	yes
Is the product imported?	yes	yes	yes	yes	yes
Have the manufacturers been contact and are they generally supportive.					
Potential amount of saving for Jordan	Medium	Further study needed	Medium	Further study needed	High
Is there a range of efficiency levels where consumers could benefit from the information that designates the highest efficiency of the available products?	yes	yes	yes	yes	Yes
Will consumers be able to recover any additional cost of the highest efficiency product in a reasonable time period?	yes	yes	yes	yes	Yes
Is the product suitable for affixing a label or engraving product information that would differentiate the products and would be visible to consumers?	yes	yes	yes	yes	Yes
Use technology which is acceptable to the consumers	yes	yes	yes	yes	Yes

Based on the criteria in this table and information that has been obtained through this task, toilets and clothes washers are considered first priority products for labeling with showerheads, faucets and dishwashers to be second priority products.

5.4 Product Criteria for Each Product to be Labeled

- Research the market and determine efficiency level for the labeled product and performance criteria.
- Determine testing protocols.
- Establish Certification Procedures for Test Labs for the Product.

5.5 Solicit Manufacturing and Promotional Partners

By this point in the implementation process, it will become clear which manufacturers are interested in having their labeled products and which utilities, NGOs and other organizations that are interested in becoming promotional partners. A process will be implemented to engage manufactures and promotional partners through a formal partnership agreement.

5.6 Marketing and Promotion of Program

At each step forward in the program, there should be press events and other outreach activities to brand the program. In addition, a marketing plan will be developed and implemented to reach the public so that will be looking for branded products.

5.7 Manufactures Submit Products for Labeling

After the protocols for each product are finalized, the manufacturers will apply for the labeling of the qualified products which they have.

5.8 Monitor and compliance enforcement

As the program gets underway, there will be a program of market surveillance to assure that only products that have been tested and are in compliance with the program are using the program label.

6. Potential Sponsoring Agencies

In order to implement a labeling program, the first step is to determine if there is an existing organization either in government, an NGO or private organization that has the capability and the independence to effectively implement and maintain a labeling program.

There are several potential agencies that should be considered:

6.1 Jordan Institute for Standards and Metrology (JISM)

JISM is the most likely government organization that has the legal mandate and structure to host the labelling certification program. JISM is responsible, according to the Standards and Metrology Law No. 22 (2000), to ensure that products available on market are compliant with the adopted technical regulations. For this to be fulfilled, JISM is tasked with the development, revision, amendment, and monitoring of the implementation of standards and technical regulations with regard to most services and products.

Presently, more than 35 products receive JISM's endorsement label, the Jordan Quality Mark (JQM) shown in Figure 5.

JISM is also responsible for adopting international regulations, standards, and guidelines where appropriate and possible. In addition, JISM is responsible for accreditation of testing and calibration laboratories and certification bodies. JISM carries out its tasks in consultation with relevant ministries and governmental and non-governmental bodies. Figure 10 shows JISM’s structure for regulation and enforcement.

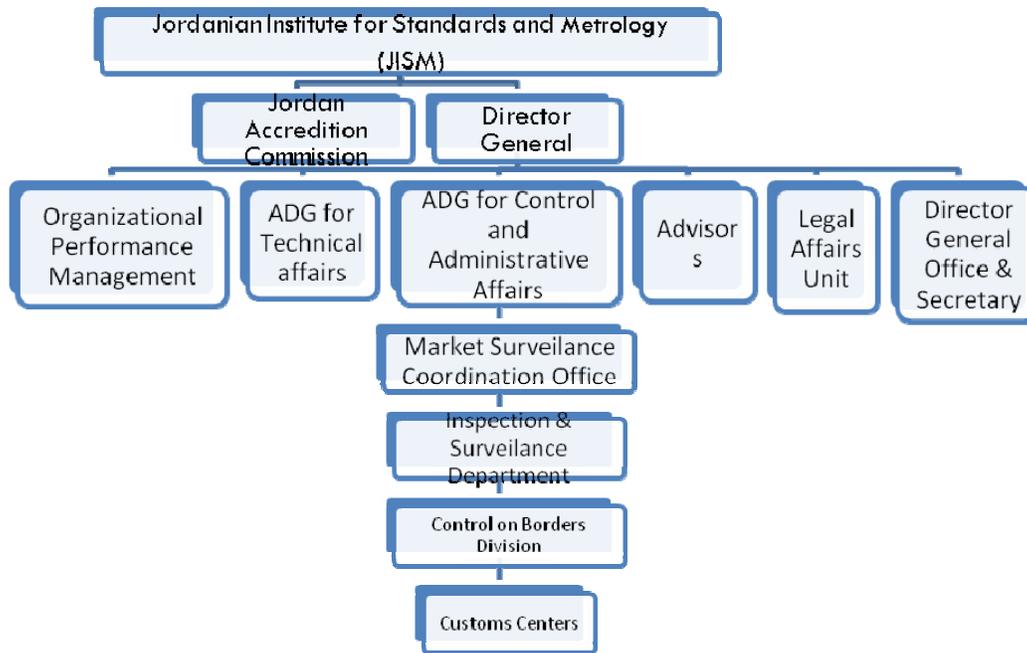


Figure 10: Organization Chart - JISM

6.2 National Energy Research Center (NERC)

NERC is a semi-government and nonprofit organization established for the purposes of research, development and training in the fields of new and renewable energy, raising the efficiency of using energy, etc. The research center is one of the specialized science and technological centers working under the umbrella of the Higher Council for Science and Technology. The mandate of NERC would need to be revised or interpreted to include water efficiency since reducing water use also reduces energy consumption.

6.3 Ministry of Environment (MOE)

MOE has the mandate and legal authority to coordinate all aspects of environmental management in Jordan. MOE may have sufficient respect from consumers in Jordan to be considered for hosting a labeling program.

6.4 Royal Scientific Society (RSS)

RSS is the largest applied research institution, consultation and technical services provider in Jordan, with more than 600 staff. RSS is semi-governmental and nonprofit organization. RSS does not currently manage any programs similar to a labeling program but they would be an excellent partner to provide testing and technical services to the organization that manages the labeling program.

6.5 Steering Committee or Board of Directors

In order to implement the labeling program, a steering committee will need to be established. Some of the potential members of the steering committee are listed below:

- Jordan Institute for Standards and Metrology (JISM).
- Ministry of Water and Irrigation (MWI).
- Water Authority of Jordan (WAJ).
- Royal Scientific Society (RSS).
- Miyahuna (Amman Water Utility).
- Aqaba Water Company (AWC).
- Amman Chamber of Commerce.
- National Society for Consumer Protection.
- Amman Chamber of Industry.
- Jordan Engineers Association (JEA).
- Ministry of Industry & trade (MIT).
- Contractors Association.
- Builders Association.
- Consumer Oriented NGOs.

7. Work Plan

The following sequential work plan to implement a Labeling Program for Water Efficient Products in Jordan is proposed. It is assumed that USAID will provide either an amendment to IDARA's Contract or hire another consulting firm to implement this work plan. Therefore, the future consultant will be called Consultant in the description below. All tasks will be performed by the Consultant unless otherwise specified. If it is agreed that there will be a combined water and energy labeling program, then the work plan would be amended to include energy labeling.

Task 1: Establish Water Efficiency Labeling Team (WELT)

- Hold focus groups with consumers to determine whether JISM has the credibility with consumers to host the labeling program. If the results are not sufficiently positive, other ministries, organizations or NGOs will be tested for their credibility with consumers and another host agency will be selected.
- Hold meetings with JISM or the selected host agency. The agency should be ready to commit to hiring the staff of the WELT team after the Consultant contract is completed and providing other funding as needed to sustain the program.
- Complete contractual arrangements for hosting of the WELT including in-kind contributions, eventual funding of staff positions, managerial support, reporting structure, etc. During the life of the consulting contract the staff will be under contract and will report to the Consultant.
- Develop job descriptions and hire the WELT staff positions
 1. Director.
 2. Administrative Assistant.
 3. Marketing and outreach coordinator.
 4. Technical product coordinator.
 5. Establish and equip the WELT office.

Task 2: Develop a Five Year Work Plan for the WELT including a detailed timeline and activities for Year 1.

The tasks listed below will be included in the Work Plan:

- Identify first product to be labeled and sequence for labeling of additional products.
- Establish Stakeholder Committee and hold stakeholder meetings to discuss the draft and final work plan.
- After the Work Plan is finalized, form a Steering Committee to assist in implementing the work plan.

Task 3: Hire Contractors

- Consultants and/or contractors will be hired to implement the marketing and outreach plan as well as to perform technical studies and testing of products to be labeled:
- Develop marketing plan, scope of work for marketing contractor and hire marketing contractor. The marketing plan should include consumer campaigns best practices to encourage proper use of water using products and habit changes that reduce water consumption, i.e., not prewashing dishes before adding them to dishwashers.
- Develop scope of work for technical studies required and hire consultant to perform these studies.
- Develop scope of work for product testing required and hire testing lab to perform these studies.

Task 4: Gain the Support of Manufacturers and Retailers for the Labeling Program

- Establish a manufacturers and retail working group. Seek input from manufacturers and retailers to overcome barriers to a labeling program.
- Discuss ideas from local manufactures on support needed for transition to efficient products.
- Propose to the Government of Jordan that the Jordan Renewable Energy Fund be expanded to include funds to provide incentives to manufacturers and/or consumers for water efficient labeled products.
- Discuss cost impacts of labeling and develop implementation plan.
- Discuss partnership agreements for participating in the labeling plan.
- Discuss potential products for water efficiency labeling.
- Achieve consensus on moving forward with a labeling program.

Task 5: Review and Establish a Name and Label for the Program

- Develop and test potential names and labels with consumer focus groups.
- Agree with stakeholders on the final name and label.

Task 6: Launch the Labeling Program

- Hold a kickoff ceremony for the labeling program including the final name and label design.

Task 7: Develop and Finalize Product Criteria for Each Product.

- Establish a Technical Product Group for the product.
- Determine minimum efficiency level for labeling.
- Determine performance requirements.
- Hold stakeholder workshop(s).
- Publish draft criteria for comments.
- Publish final criteria.

Task 8: Establish Testing Labs

- Work with RSS to design a testing lab for labeled products.
- Construct the testing lab.

Task 9: Train Testing Labs Staff

- Train staff to operate the testing lab.

Task 10: Implement Marketing Program

- Implement regular advertising, outreach, point of sale demonstrations, media interviews, etc.
- Hold a press conference, etc for each product launch in conjunction with retailers and manufactures.
- Include outreach programs for schools and university to educate the youth about water efficient products.
- Partner with trade associations, Chamber of Commerce and other businesses to promote the program.

Task 11: Investigate and Implement Incentive Programs

- Work with Miyahuna, Aqaba Water Company and other utilities to develop incentives for purchasing labeled products to replace inefficient products and in new construction.
- Design and implement customer incentive program and expand on utility incentives.
- Work with the Ministry of Finance to exempt labeled products from import and VAT taxes.

Task 12: Evaluate and implement a Water Efficient Home, Apartment and Building Program

- In conjunction with energy efficiency organizations, JEA, ASEZA, GAM and other municipalities, implement a labeling program for water and energy efficient homes, apartments and buildings. This program will include labeled products, water wise landscaping, recycling, and efficiency practices such as recirculating hot water pumps, etc.
- Design a plan to gather data on number of efficient products labeled and sold under this program.
- Define and implement a plan to evaluate the program one year after implementation of the first product.

Task 13: Design and Implement Evaluation Plan

- A periodic program evaluation should be conducted to ensure the program is effective and meets its goals.

8. Level of Effort, Budget and Schedule

A Water Efficiency Labeling Program requires a substantial financial commitment and a sufficient timeframe of 10 years or longer to be successfully established. The Budget and Level of Effort (LOE) Table and the Schedule are intended for the first five year period. LOE is the number of work days.

Table 3: Budget and LOE

Item Description	LOE Year 1	Year 1	LOE Year 2	Year 2	LOE Year 3-5	Year 3-5	Totals Years 1-5
International Consultants	100	\$100,000	50	\$50,000	25	\$25,000	\$225,000
Local Consultants	300	\$66,000	300	\$66,000	560	\$123,200	\$501,600
IDARA Local Staff Coordinator	260	\$60,000	260	\$63,000	0	0	\$123,000
Customer Incentives		\$25,000		\$25,000		\$25,000	
Communications and Outreach		\$125,000		\$185,000		\$205,000	\$925,000
Customer Incentives		\$25,000		\$25,000		\$25,000	\$125,000
Kick Off Workshop		\$4,000					\$4,000
Workshops for Manufacturers (2 per year)		\$6,000		\$6,000		\$6,000	\$30,000
Consumer Surveys and Evaluation		\$50,000			\$50,000	\$50,000	\$200,000
Training Sessions (4 per year)		\$12,000					\$12,000
Focus Groups (2)		\$10,000		\$10,000		\$10,000	\$50,000
Establish product testing Labs		\$100,000					
Train Testing Labs Staff				\$50,000			
Product Testing		\$50,000		\$50,000		\$50,000	\$250,000
TOTAL		\$608,000		\$505,000		\$494,200	\$2,595,600

Table 4: Time Schedule

Activity		Schedule																			
		Yr 1				Yr 2				Yr 3				Yr 4				Yr 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task1	Establish Water Efficiency Labeling Team	Yellow	Yellow																		
Task2	Develop a Five Year Work Plan for the WELT including a detailed timeline and activities for Year 1.	Blue	Blue																		
Task3	Hiring Contractors		Yellow	Yellow																	
Task4	Gain the Support of Manufacturers and Retailers for the Labeling Program	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Task5	Review and Establish a Name and Label for the Program	Yellow	Yellow	Yellow	Yellow																
Task6	Launch the Labeling Program																				
Task7	Develop and Finalize Product Criteria for each product.			Product 1				Product 3				Product 5									
				Product 2				Product 5													
Task8	Establish Testing Labs			Blue	Blue	Blue	Blue	Blue	Blue												
Task9	Train Testing Labs Staff			Blue	Blue	Blue	Blue	Blue	Blue												
Task 10	Implement Marketing Program			Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Task 11	Investigate and Implement Incentive Programs							Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Task 12	Evaluate and implement a Water Efficient Home, Apartment and Building Program											Blue	Blue	Blue	Blue						
Task 13	Design and Implement Evaluation Program											Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow

9. Conclusion

1. Jordan could improve water efficiency by implementing a comprehensive water efficiency labeling program; however, the challenge to gain the attention of residential consumers when water costs are small fraction of total water, energy and fuel expenditures.
2. Jordan could achieve significant synergies by implementing both a water and energy efficiency labeling program through the same organization.
3. A labeling program should not be initiated without a firm commitment for sustainable long term funding of 10 years including significant funding for an ongoing outreach program.
4. The labeling program must be implemented by an organization that has high consumer trust and confidence.
5. The labeling program should also promote water efficient practices that complement the use of water efficient products.

10.Recommendations

1. USAID should consult with the Government of Jordan and if necessary other donors to determine if a commitment can be established for long term funding for a water efficiency labeling program.
2. Since the United Nations Development Program is currently considering a proposal for an Energy Products Labeling Program, the feasibility of a joint energy-water products labeling program should be considered.
3. If a water efficient labeling program is initiated, it should take into account the many lessons learned by other labeling programs.

11. References

1. USEPA, Water-Efficient Product Market Enhancement: Focus Group Findings, August 20, 2004
2. USEPA and ERG, Voluntary Product Labeling Programs: What Have We Learned?, 2005
3. USEPA, Memo to Ed Osann: Response to Questions from Steering Committee
4. Water Efficiency Labeling and Standards (WELS) Scheme, www.waterrating.gov.au
5. USEPA, ENERGY STAR and Other Climate Protection Partnerships: 2006 Annual Report, 2007
6. USEPA, Documents from the WaterSense Web Site, www.epa.gov/watersense

12. Appendix- Minutes of Meetings

1. Ministry of Water and Irrigation.
2. MWI-Stakeholder's Meeting.
3. Manufacturers of Water Using Products, Meeting No. 1.
4. Manufacturers of Water Using Products, Meeting No. 2.
5. Jordan Institute of Standards and Metrology.
6. National Society for Consumer Protection.
7. RSS-National Energy Research Centre.
8. United States Agency for International Development (USAID).
9. United Nations Development Programme (UNDP).

1. MOM- Ministry of Water and Irrigation

Time: 12:00 am – 1:00 pm, May 4, 2008

Location: MWI Offices, Amman, Jordan

Attendees:

- H.E. Eng. Mohamed Momani, MWI WDMU
- Eng. Rania Abdel Khaleq, MWI WDMU
- Mr. Tony Gregg, IDARA Project
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist



Purposes:

1. Brief MWI on the labeling program for water efficient products;
2. Gain the opinions and ideas from MWI on the labeling Work Plan to be developed;
3. Explain what will be discussed in the Kick-Off Meeting; and
4. Cite the goals for the mission of the International S&L Consultant.

Discussion Points:

Prior to the meeting, an overview of the program, products potential for labeling, a summary of what has been learned in the Desk Study, and a list of goals for this mission was developed by the Consultant to aid the discussion with MWI.

Mr. Gregg introduced Ms. Lisa to H.E. Momani and to Eng. Rania. He provided background on the purpose of our meeting with them today. Ms. Lisa briefed H.E. Momani on the purpose of her mission over the next two weeks and asked his guidance.

About MWI:

H.E. Momani provided an overview of the WDMU program to-date and stated his vision for the program. He suggested that he would like the meeting tomorrow to explain why this project is important, why these participants will be there, and what the hope for the meeting is.

H.E. Momani said that assessing the purchasing behaviors of consumers of water using appliances is very important, as is the performance of baseline surveys. He said that the surveys inform the steps of labeling. He indicated his opinion that labeling of products had the potential to shift the inefficient products from the market.

H.E. Momani also stated that some items, like toilets, are 50 year old technology; and that their usage has not changed much. He indicated that factors for consideration must be developed with consultation by stakeholders.

One large problem, he said, was that products “of origin” as stated on the packing list are often made in a different country. For example, a product marked as “US made” might have been manufactured in China for a US supplier. This makes product’s quality assurance difficult.

The IDARA program, he suggested, should work closely with the Amman Chamber of Commerce in order to track these sorts of issues. H.E. Momani also asked that within the implementation of this Task, that IDARA also consider the workshops for training that will be needed, as well as the end users training which is necessary.

IDARA also must, H.E. Momani said, convince the government agencies like JISM and MOIT, that labeling water efficient products is within the country’s (and the agency’s) best interest.

In summary, H.E. Momani said that he had great confidence in the labeling program and that his support was very high. He added that the Water Demand Policy being penned presently would bring even greater attention to this very important project.

2. MOM- Ministry of Water and Irrigation- Stakeholder’s Meeting

Time: 9:00 am – 1:00 pm, May 5, 2008

Location: MWI Offices, Amman, Jordan

Attendees:

- H.E. Eng. Mohamed Momani, MWI WDMU
- Eng. Rania Abdel Khaleq, MWI WDMU
- Mr. Tony Gregg, IDARA Project
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist
- Ms. Hala Dahlan, Project Manager, IDARA

Purposes:

1. Brief the Labeling Working Group (LWG) on the labeling program for water efficient products;
2. Gain the opinions and ideas from LWG on the labeling Work Plan to be developed;
3. Explain labeling in general and its potential for Jordan; and
4. Cite goals for the mission of the International S&L Consultant.

Discussion Points:

Prior to the meeting, an agenda was sent to the LWG. Ms. Dahlan introduced the project, and Ms. Lisa, and yielded the floor to H.E. Momani who provided the LWG with background on the purpose of our meeting with them today and a summary of his support to the project.

Presentations:

H.E. Momani provided an overview of the WDMU program to-date and stated his vision for the program. He also stated that he would like to know the process of

market transformation, and cited the difficulties, such as points of origin. H.E. Momani said that the MWI and USAID ought to be consulted for review of the next steps and that he has high hopes and regard for the IDARA Task being undertaken by this Consultant.

Ms. Dahlan provided participants with an overview of the program, the expectations for the meeting, and a summary of today's agenda. Ms. Nour provided a presentation of the Survey Snapshot results, to indicate to the participants that interesting and useful information had been gleaned. Ms. Lisa presented a summary of labeling, its potential, and the processes by which she intended to develop a work plan during the coming weeks.

Discussion Points:

One participant asked where the program should begin labeling. What are the first steps?

Another stated that the Jordan Quality Mark is on 35 products and that it carries the higher requirements than the standards. The representative from JISM, from the Standards Division, suggested that her colleague from the Certification Program of JISM to be contacted and included in the Workshop.

One participant wanted to know if this was to be a government program or an NGO program.

Dr. Waleed stated that a label ought to be mandatory, and that two products ought to be selected and then labeled. He also mentioned that the energy efficiency label NERC is proposing includes Technical Standards.

The manufacturing folks said that the share of local manufacturers for water saving products in Jordan is very small; and that they already receive tax incentives. They also receive sales tax exemption, and import tax exemption. However, it was noted by one participant, the government of Jordan does not typically provide "subsidy" to manufacturers.

The participant from MWI asked how we might transform the market. What is the first step towards that?

Another stated that for different products, some companies import US products but which are made for US manufacturers who are located in China. This is a real problem, the participant said. He asked how do we align or reconcile this problem.

There is a need for primary data, one participant said. The survey undertaken must be a primary survey of consumers. Other participants suggested that the LWG add consumers groups, the press/media, and an advertising agency to its members.



During the discussion, the participant affiliated with the Water Wise Women project, said that they had performed a calculation that indicated that the typical person uses 15 liters of water each time they perform *wadu* and that 85% of the population is Muslim. He indicated that at 75 liters a day (5 *wadu* per day) that number is significant. He wondered if this process might be amended somehow. Ms. Lisa said that perhaps in discussion with the religious leaders, a new process may be suggested but that this must be very carefully done; and further, it represents “water practice” not labeling. He indicated that the Koran said “don’t waste water when you’re standing in the river” and that he would be interested in this project.

There is a Water Demand Management Unit in Jordan under MWI and a meeting was held on May 4th. The Royal Scientific Society and Building Component Laboratory ought to be visited.

In conclusion, H.E. Momani said that he had great confidence in the labeling program and that his support was very high.

3. MOM- Manufacturers of Water Using Products: Meeting No. 1

Time: 10:30 am – 11:00 am, May 6, 2008

Location: Jordan Industrial Estates

Attendees:

- Mr. Radi Alghoul, Technical Manager, National Star, Manufacturing *Samsung* Products
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist

Purposes:

1. Brief the local manufacturers on the labeling program for water efficient products;
2. Gain the opinions and ideas from local manufacturers that may inform the labeling and/or the labeling Work Plan to be developed;
3. Garner much-needed metrics on the scale of manufacturing done in this facility; and
4. Engender their support for the labeling program and their participation in the upcoming meeting on the 15th of May.

Discussion Points:

Prior to the meeting, a questionnaire for guidance of the meetings was prepared in order to lead the meeting towards gaining the inputs required by the IDARA team.

Ms. Nour introduced herself, Ms. Lisa, and the IDARA program to Mr. Radi and provided background on the purpose of our meeting with him today. Both Ms. Nour and Ms. Lisa asked questions in order of the questionnaire. Those answers are listed as per the questionnaire for ease of internal reference to Final Report and Work Plan.

About Your Company:

This plant manufactures Samsung products such as refrigerators and clothes washers. (Note: For the purposes of this discussion, questions were limited to clothes washers.)

The plant manufactured 20,000 units in 2007 (both drum type and twin tub). They do trade regionally, with their primary market being Syria followed by Iraq, Egypt, West Bank, Lebanon, and Morocco. In Syria, they have captured about 10% of the market. Domestically, Samsung has captured about 20% of the market.

Marketplace:

Their customers are almost entirely residential, with no commercial clients of note. They consider their key competition to be LG, Haier, Daewoo, and others. They have two distributors in Jordan and in Syria they have one. In Jordan, one of those distributors sells only Samsung products while the other sells competitors' products as well. In Syria the distributor is solely Samsung-oriented. In both cases, the distributors are responsible for all product advertisement, including point-of-sale. Distributors use mostly printed media.

Labeling for water efficiency, he felt, would have a positive impact on their sales margin as the cost to implement would be negligible while the impact on sales is large.

Products:

Currently, they apply the energy efficiency labels to their products for sale in Egypt, in compliance with the import rules for Egypt. Those labels are applied prominently to the fronts of the products (see photo). They have their own testing laboratory in-house to assure compliance with the stipulations of Samsung as well as the product standards specified by the labels. In terms of new products, they are selling a Sliver+ model that reportedly is high in their performance.



Opinion on the labels:

When shown the new label being proposed for energy efficiency in Jordan, Mr. Radi felt that it would be very acceptable to consumers and manufacturers.

Presently, the labels on all products are prominently displayed on the front of the products as well as on the box in which it is shipped. When asked if he felt this position for new labels would be appropriate, he agreed that it would be.

Incentives and Support:

When asked if incentives of some type (such as co-advertising) would provide an incentive for his company to participate in a labeling program, he indicated that joint advertising (in which many brands are shown in one ad) would not be acceptable to them, however, co-funding for advertising that features Samsung would be agreeable as an incentive.

When asked about penalties or enforcement of a new label, Mr. Radi states that he felt the labels ought to be mandatory, and that all manufacturers must be mandated to use them, and further, that they must be visible.

He felt that visible labels will raise beneficial competition in the marketplace and would allow consumers to make informed choices readily when selecting a new product.

The cost to apply a label to their product is not a significant cost or burden for them.

From the Government:

When asked about what support the government might need to provide, such as training, etc. Mr. Radi did not feel any particular support would be needed.

About You:

When asked what support the IDARA program may need to provide, Mr. Radi indicated that consumer awareness on how to understand the labels would be good.

Other:

When shown the proposed label and asked to comment further on it, Mr. Radi said that the label should be easy to read and perhaps be dual language (that is, English along with Arabic) for foreigners needing to read it.

When asked if there were items missing from the label that he would add to it, as a technical person, he said, *"The real specifications should be for comparing quality. Some products are not priced the same due to internal issues in Jordan. With labels that allow people to see the differences, they would select for better quality, regardless of higher price."*

Mr. Radi then added that the labels ought to include: water consumption and spin speed.

Note: Mr. Radi's facility is tax exempt on exports (such as those products to Egypt) due to the Arab Free Trade Agreement. However, in Jordan, they are subject to sales tax.

4. MOM- Manufacturers of Water Using Products: Meeting No. 2

Time: 11:30 am – 1:00 pm, May 6, 2008

Location: Jordan Industrial Estates, Sahab Industrial Zone, Jordan

Attendees:

- Mr. Said Dahbour, Factory Manager, MEC (Middle East Complex for Engineering, Electronics, and Heavy Industries PLC) Manufacturing LG Products (among others)
- Ms. Abeer Ghaith (Quality Control Inspector)
- Mr. Sami Saleh (Quality Control Inspector)
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist



Purposes:

1. Brief the local manufacturers on the labeling program for water efficient products;
2. Gain the opinions and ideas from local manufacturers that may inform the labeling and/or the labeling Work Plan to be developed;
3. Garner metrics on the scale of manufacturing in this facility; and
4. Engender their support for the labeling program and their participation in the upcoming meeting on the 15th of May.

Discussion Points:

Prior to the meeting, a questionnaire for guidance of the meeting was prepared in order to lead the meeting towards gaining the inputs required by the IDARA team.

Ms. Nour introduced herself, Ms. Lisa, and the IDARA program to Mr. Said and his two staff and provided background on the purpose of our meeting with them today. Both Ms. Nour and Ms. Lisa asked questions in order of the questionnaire. Those answers are listed as per the questionnaire for ease of internal reference to Final Report and Work Plan.

About Your Company:

This plant manufactures LG products such as clothes washers. They also manufacture TVs, LCD, refrigerators, air conditioners, microwaves, and ovens. (Note: For the purposes of this discussion, questions were limited to clothes washers.) MEC is an OEM for LG, Daewoo, Haier, and Samsung. This location (visited today) is under license to *LG* only.

The plant manufactures two types of units, drum and twin tub. They manufactured 18,000 units in 2007 (twin tub) and 45,000 (drum type). Their plan for 2008 is to manufacture 70,000 (twin tub) and the same as 2007 for the drum type. The twin tub type is for export to Egypt, Lebanon, and Iraq primarily as well as to serve the domestic market.

They trade regionally, with their primary market being Egypt, Lebanon, and Iraq (in order of percentage). Overall, MEC has captured an estimated 91% of the regional market. Domestically, LG has claims to have captured about 78% of the market.

Marketplace:

Their customers are almost entirely residential, with no commercial clients of note. They consider that with 91% of the regional market, they have no key competition. They have eight distributors (showrooms) in Jordan dedicated to promoting the LG brand. All distributors are responsible for all product advertisement, including point-of-sale. They are, he says, very supported by the LG parent company in this regard, with a very large budget for advertising. Distributors use printed media and other unspecified ways of advertising.

Labeling for water efficiency, he felt, would have a positive impact on their sales but he noted that the cost to implement adding a new label will add to the cost, in that it will require man-hours to apply, etc. Still, it would have a positive influence on sales.

Mr. Said also noted that many consumers in Jordan purchase the drum type washer to be modern, but also have a twin tub style machine in their homes as they find these easier to understand, use, and generally more practical.

Products:

He added that they have a new model, for the drum type of model, which has increased its rpm from 600 to 800 and now, to 1000 revolutions. With this model, he indicated, there is an estimated energy savings of 18% over the old model. Sales people have been trained by LG to promote this new model, with its new features and specs, and LG has organized that training.

There is also a new model dedicated to improve “health care”. This washing machine avoids the bacterial build-up in the un-drained waste water that often causes allergens in the homes. It uses a steam-type application. And they are also selling the Ag+ type models (similar to the ones shown in the Samsung factory).

Opinion on the Labels:

Currently, they apply the energy efficiency labels to their products for sale in Egypt, in compliance with the import rules for Egypt. Those labels are applied prominently to the fronts of the products (see photo). They have their own “burn-in” laboratory in-house to assure compliance with the stipulations of LG as well as the product standards specified by the labels. A photo of their labels is shown herein.

He also noted that their problem with adding a new label to be prominently displayed on the front of the products is problematic in that some people like to remove the labels and that is often “sticky”. Additionally, he said, the machines are designed with labels in mind and too many labels on the front of the machine would be unpleasing ascetically. When asked where he felt the best position for new labels would be, he said on the back of the unit and on the box.

Incentives and Support:

When asked if incentives of some type (such as co-advertising) would provide an incentive for his company to participate in a labeling program, he indicated that co-funding for advertising that features LG would be agreeable but wouldn't provide much incentive since LG's ad budget is so high already.

We did not ask about penalties or enforcement of the new label.

Mr. Said felt that water efficiency labels will increase competition in the marketplace and would allow consumers to make informed choices readily when selecting a new product.

The cost to apply a label to their product is a factor of consideration for them.

From the Government:

When asked about what support the government might need to provide, such as training, etc. Mr. Said did not feel any particular support would be needed.

About You:

Mr. Said was not asked what support the IDARA program may need to provide.

Other:

When shown the proposed label and asked to comment further on it, Mr. Said said that it would be acceptable to consumers and manufacturers. However, he added, *"Nothing tells the consumer what an 'A' really means! How can the people know if A or C is better? There should be a smiley-face, or something graphic, to show people who may not read well, that 'A is good' and perhaps a person with pockets-out to tell them that 'E is bad'!"*

In general, he said, the labels should be simple. People are not educated engineers, and must be able to glance at all labels and know immediately which one rates better.

Note: Mr. Said's facility is tax exempt on exports (such as those products to Egypt) due to the Arab Free Trade Agreement. However, in Jordan, they are subject to sales tax.

Note: Mr. Said's MEC Company for home appliances (visited today) has spent US\$200 ml, invested US\$100 ml more, and now totals US\$300 ml to shift to a new location 15 km away. This location (visited today) is the main factory.

5. MOM- Jordan Institute of Standards and Metrology

Time: 12:00 am – 1:00 pm, May 7, 2008

Location: Jordan Institute of Standards and Metrology, JISM

Attendees:

- Ms. Dalal Shehadeh – Head of Preparation of Standards Division
- Mr. Mohamad Salma'n- Head of Jordan Quality Mark (JQM) Division
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist

Purposes:

1. Brief the Head of Jordan Quality Mark Division on the labeling program for water efficient products;
2. Gain his opinions and ideas from the perspective of Jordan Quality Mark and JISM to inform the labeling and/or the labeling Work Plan to be developed;
3. Garner a better understanding of the institutional and functional labeling process JISM undertakes to apply the JQM; and
4. Engender JISM support for the labeling program and their participation in the upcoming meeting on the 15th of May.

Discussion Points:

Prior to the meeting, a JISM-specific questionnaire for guidance of the meetings was prepared in order to lead the meeting towards gaining the inputs required by the IDARA team.

Ms. Nour introduced herself, Ms. Lisa, and the IDARA program to Mr. Mohamed and provided background on the purpose of our meeting with him today. Mr. Mohamed described in detail the JISM JQM processes, as listed below. After that, an informal discussion took place. Both Ms. Nour and Ms. Lisa asked questions, guided by the questionnaire and topics that arose during this meeting. For the latter, the answers are listed as per the questionnaire for ease of internal reference to Final Report and Work Plan.

About your organization:

JISM has two key functions through this division: grant the JQM and conformity certification. Additionally, this year they have added the "Global Gap Certificate" for fruit and vegetables.

JISM conforms to ISO 65 "General Requirements for Product Certification Bodies" and is DAB-accredited, having been awarded their certification by Germany.

Ms. Dalal indicated that JISM is the body responsible for the issuance of labels; and that JISM was transferred as an independent entity from the Ministry of Industry and Trade (MOIT).

Eng. Mohamed mentioned that the Certification Department basically issues the following:

1. Conformity Certificate.
2. Quality Brand.
3. Issuing the global gap certificate (for fruits and vegetables).

Eng. Mohamed mentioned that the label (JQM) is granted to those products that meet higher efficiency standards than the minimum and that it is a voluntary label. The program for the JQM started in the year 2002.

The process, he said, begins by testing the products and that testing is conducted according to the following:

- Electrical equipments (MEMR).

- Mechanical equipments (R.S.S).
- Chemical materials (R.S.S & JISM).
- Testing conducted at the Ministry of Health Labs.

Eng. Dalal mentioned that if technical requirements have no national specifications, then international standards are taken into consideration for testing purposes. The label is granted after the issuance of a document to prove the product's conformity.

Eng. Mohamed mentioned that mandatory labels fall under the Control Department.

Products and Testing:

To apply the JQM to a product, JISM will audit the factory using a "checklist" performed by an auditor who has experience in auditing that type of manufacturer. He/she audits for QC, storage, process, and packaging (among other things) and basically looks at any factor that might affect or influence the product itself.

He then reports those findings, and if corrections are required, issues a Report for Corrective Action.

The second part of their work involves ensuring that the factory is ISO 9001-certified for Quality Control and management; and if it manufactures food, is certified as ISO 22000. (If a farm, the 1400 Jordanian certification must apply). If the facility is certified by an accredited body, they do not perform an audit.

That is the quality and technical portion of JISM's work.

The third condition of their work is 'testing in accordance with Jordanian standards'. In that case, they take a technical sample of the product and send it to a laboratory for conformance testing. Corrective action is requested if the product fails to meet the standards.

Products are sent to various labs according to their type. For example, electrical appliances are sent to MELLTS, RSS receives and tests mechanical products, RSS receives and tests chemicals (or else JISM's internal lab can test these), and food goes either to JISM's internal labs or to the Ministry of Health for testing.

JISM's technical requirements are based on Jordan's standards, and if there are none, rely upon international standards. There is a Technical Committee in JISM, comprised of experts from different sectors. The committee reviews and then issues a JQM Technical Requirement for each product. The product must have technical requirements that are higher than the standard in order to receive the JQM.

In sum, there is the technical audit, the Quality Management audit, and the testing. Certification lasts for 3 years, with surveillance completed each year.

The second activity of their work is *conformance*. This activity is carried out for exported products. For example, Saudi Arabia requires conformance with Saudi standards. In this case, JISM issues a Certificate of Conformance to show conformance with the Saudi standards. Again, a test sample is taken and then the certificate is issued.

JQM – Discussion

When asked about placement of the mark, Mr. Mohamed said that there are strict instructions for use of the mark. He will provide these.

The mark was designed internally. Typically, JISM will post a mark on the bulletin board in JISM and employees will comment on it, voting for any needed changes.

JISM was granted authority in the 1990s during the time when it was under MTI. In 1994, JISM became an independent government agency. The JQM was designed in 2002 with its own logo.

When asked if the JQM was well-known, Mr. Mohamed indicated that he thinks so, but that they have never tested this. A survey of consumer awareness and responsiveness to the mark could be very useful.

He said that they are trying to market the brand. They have run TV and print media ads to promote its acceptance.

Opinion on the Labels:

When shown the new label for energy efficiency, Mr. Mohamed said it was a very good label, and very easily understood. He said that JISM applies its JQM to paints, electric cables, but also to appliances like washing machines, refrigerators, and TVs. So in that case, the presence of an energy efficiency label that also shows water use would be very good.

In the case that energy efficiency and/or water efficiency become mandatory for these products, then JISM would apply this rule: that the product must bear the new EE/water labels in order to receive the JQM. *However, it must be decided which level (A-F) actually is the "minimum standard", above which the JQM would apply.*

Incentives and Support:

When asked if incentives of some type (such as co-advertising) would provide an incentive for JISM to participate in a labeling program for water efficiency, he indicated that co-funding for advertising would be agreeable.

We did not ask about penalties or enforcement of the new label.

He felt that the JISM processes which are well-established would be useful to any new labeling program.

6. MOM- National Society for Consumer Protection

Time: 11:00 am – 12:00 am, May 8, 2008

Location: NSCP Offices

Attendees:

- Dr. Mohammed Obeidat, President of the National Society for Consumer Protection, President of the Arab Federation for Consumers, Professor of Marketing & Consumer Behavior at Jordan University
- Dr. Abdel Fattah Kilani, President of the Jordanian Veterinary Association and Secretary of the National Society for Consumer Protection
- Mr. Hussein Omoush, Journalist
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist

Purposes:

1. Brief the National Society for Consumers Protection on the Labeling Work Plan and processes;
2. Gain the opinions and ideas from them since they have performed numerous surveys; and
3. Engender their support for the labeling program and their participation in the upcoming meeting on the 15th of May.

Discussion Points:

Prior to the meeting, a questionnaire for guidance of the meetings was prepared in order to lead the meeting towards gaining the inputs required by the IDARA team.

Ms. Nour introduced herself, Ms. Lisa, and the IDARA program to Dr. Obeidat and Kilani. Both Ms. Nour and Ms. Lisa asked questions in order of the questionnaire. Those answers are listed as per the questionnaire for ease of internal reference to Final Report and Work Plan.

About the Consumers Association:

They formed this organization 18 years ago, in 1989 and received a mandate, titled to do research through the Chairman of the Marketing Department at the Jordan University.

The Association produces a monthly newsletter, and a quarterly magazine. They also do Press Releases about 3 or 4 times per week.

The subscriptions (dues) are about 9JD per year, for an individual, more than that for a company.

They are members of the International Consumers Organization. They also established the Arab Federation for Consumers. Dr. Obeidat graduated from University of New York.

They provide workshops for Producers of goods, journalists, and women. They work with JOHUD.

Dr. Obeidat was pleased with the idea to plan cooperation with IDARA as they had worked with the previous WEPIA project. However, they did not receive follow up funding, so he does not want to spend more time planning proposals. He suggests that study, workshops, brochures, surveys and evaluations of the project are all areas with which they can assist.

He indicated that (as a general number) it may cost \$50-\$70,000 to perform a consumer survey of about 3,000 people. They have their own teams of enumerators with whom he feels confident.

He said the DOS does surveys also.

He indicated that the Administrative Council for JISM, headed by the MOIT, is their partner and that they are part of that Council. By law, he said, they are also on the High Food Council.

They produce about 5,000 units for circulation each quarterly. They also have outreach into the schools where they have worked with the Ministry of Education to have Consumer Clubs in schools that are called “friends for consumers”.

The journalist (Mr. Omoush) writes for the Jordan Times.

7. MOM- RSS-National Energy Research Center

Time: 10:15 am - 11:15 am, May 11, 2008

Location: Royal Scientific Society (RSS) at National Energy Research Center (NERC)



Attendees:

- Eng. Waleed Shahin Technical Manager, Rational Use of Energy & Solar Thermal Division and the Chair of the Technical Committee of Spec. 1717 for Clothes Washers.
- Mr. Moheye Eddin Twalbeh, Energy Consultant.
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA.
- Ms. Nour Esoh, Project Implementation Specialist.



Purposes:

1. Obtain a brief on their previous experience in the field of energy labeling.
2. Gain the opinions and ideas from the NERC that may inform the labeling and/or the labeling Work Plan to be developed;
3. Engender their support for the labeling program and their participation in the upcoming meeting on the 15th of May.

Discussion Points:

Prior to the meeting, a questionnaire for guidance of the meetings was prepared in order to lead the meeting towards gaining the inputs required by the IDARA team.

Ms. Nour introduced herself, Ms. Lisa, and the IDARA program to Mr. Moheye Eddin and provided background on the purpose of our meeting with him today.

About your Organization:

NERC's responsibility in labeling was based on consultation. Eng. Waleed has chaired the committee that drafted spec. 1717 (*Clothes washing machines for household use- Methods for Measuring the Performance - Energy Efficiency Label*).

He indicated that coordination on labeling is directly between RSS and JISM. The EE label was designed based on the Egyptian and the European labels, he said. Testing is usually conducted at the RSS labs.

Products and Testing

Eng. Waleed indicated that the EE label is the only label that is applied by them.

Eng. Waleed mentioned that the idea behind energy labeling was initiated by the National Energy Strategy through which seven committees were formed to develop specifications for the appliances that are most energy consuming.

One of those committees was responsible for energy labeling of clothes washers (specification 1717) he then mentioned that the label was developed based on the EU and Egyptian labels. Although the spec. was issued in the year 2006, Ms. Nour then mentioned that the specification is still under amendment.

Manufacturer's feedback on the labels was negative. So RSS and NERC asked international consultants to help develop a project for labeling to be funded through the UNDP. They asked for \$760,000. It is under consideration presently. It has taken more than a year. It is a 3 year program.



Ms. Lisa then asked if JISM was the only body responsible for issuing labels, Eng. Moheye Eddin replied that the Ministry of Environment is working on issuing an *eco label*.

Eng. Waleed indicated that the labeling program is very important not only on the national scale but also on the regional level. He mentioned that countries of this region should have a unified label. He indicated that they had tried some time ago to do a regional label, but that these efforts 'fell through'. Syria might have testing labs, for refrigerators, but as for regional testing, that also is not practical.

He felt that clothes' washers ought to be the first products labeled since they involve both water and energy and further, there is a standard developed.

Eng. Shahin suggested selling the labels, which would then provide the RSS with continuous funding for testing and labeling of products. Specifically, since the RSS is an NGO and its only source of funding is through the services it provides. He suggested 1 JD. Imported products, he said, are hard to count (as to the potential impacts of labels) since imports are tracked in kilograms not unit of product.

Incentives, he felt, would level the playing field for manufacturers. We also need a feasibility study. Additionally, private sector and campaigns are needed, so that "sponsored by" could be added to the communications.

He indicated that the Ministry of Energy and the Ministry of Planning ought to be involved and that the MOE is the technical arm; JISM is the standards and labeling agency; that RSS tests; and that MOIT does mandatory testing and clearance of products.

He said that Tunisia insists that if refrigerators are imported or assemble in Jordan (by law) these refrigerators must be labeled. Egypt also requires labels. Jordan, must, he said, have labels as well.

8. MOM- United States Agency for International Development (USAID)

Time: 10:00 am – 11:00 pm, May 13, 2008

Location: IDARA Project Offices

Attendees:

- Mr. Ross Hagan, Deputy Director, Office of Water Resources and Environment, USAID
- Ms. Setta Tutundjian, Project Management Specialist, USAID
- Mr. Mohamed Chebaane, Chief of Party, IDARA
- Mr. Tony Gregg, Program Manager, IDARA
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist

Purposes:

1. To review the status of the Work Plan prior to the Workshop to be held on May 15, 2008; and
2. Gain USAID's suggestions on additional items for consideration in the Work Plan.

Discussion Points:

Ms. Lisa reviewed some of the important points learned during the weeks of meetings, reported on the status and summary of the Work Plan, and asked for their comments and suggestions as to the direction of the next steps.

About the Workshop on the 15th:

Ms. Tutundjian indicated that she would be unable to attend due to a scheduling conflict; however, she indicated that Mr. Hagan may be able to attend if his schedule allows.

USAID Comments on Work Plan Structure and Expectations:

Ms. Tutundjian indicated that she found the potential calculation for savings due to labeling to be compelling; and further that there might be GDA opportunities for labeling. She indicated that the Work Plan should also include how labeling communications might address "youth" and suggested that the "military science" courses (3 hours) which most students must take might be one way in which to address labeling for water efficiency training.

Youth of high school age, college (14 – 23 years) and university students should be addressed, she indicated.

Mr. Hagan indicated that the barriers to local manufacturing of water efficient, labeled products must be addressed as being able to account for these metrics will be crucial. He suggested also that the JOHUD cartoon character is already a part of the Jordan culture, might be useful to help propel understanding of the new labels.

IDARA should strive to create a roster of laboratories and local manufacturers. Also, identification of the barriers and case studies, which might become appendices to a labeling report, may be developed. Mr. Hagan indicated that water from the DC is approximately 0.85 JD per cubic meter, and that to the home, water cost rises to 1.4 JD per cubic meter. Therefore, all the pumping and processing costs makes tying the labeling for water efficiency to the costs of energy makes good sense.

9. MOM- United Nations Development Programme (UNDP)

Time: 10:00 am - 11:00 pm, May 14, 2008

Location: UNDP Offices

Attendees:

- Ms. Amal Dababseh, Environment Specialist, UNDP Jordan
- Mr. Tony Gregg, Program Manager, IDARA
- Ms. Lisa Surprenant, International Standards and Labeling Consultant to IDARA
- Ms. Nour Esoh, Project Implementation Specialist

Purposes:

1. To review the status of the proposed UNDP funding for EE labels as per NERC suggestions; and
2. Gain UNDP's ideas on ways that USAID and UNDP may cooperate on the proposed labeling plans.

Discussion Points:

Ms. Lisa reviewed the status of the labeling plan for water efficient appliances and asked Ms. Amal to comment and explain the status and summary of the EE labels.

UNDP Comments:

Ms. Amal said that the project proposed by NERC would be under the UNDP GEF umbrella; and that plans for the project had begun more than 18 months ago. She also said that the NERC had asked 5 or 6 years ago of UNDP to assist the National Strategy on Energy, which is now approved by the Cabinet, as of 2004 Sept.

One feature of that plan was that WGs on standards for EE labels be enacted. It was requested that JISM do so, and they headed that WG. Also on the WG were Ministry of Public Works, and MOE. They started with the most energy intensive products and lighting almost 18 months ago. They looked at the Egyptian label to see if they might coordinate. Additionally, since it was to be applied mandatorily (the Egyptian label) to clothes' washers, they began to study that product.

An international consultant had been hired to draft the PDF A and B (now renamed) and that the Full Scale project (now called Medium Scale) had entered the pipeline some time ago.

Ms. Amal was pleased that Ms. Lisa has written all three project documents for UNDP GEF programs around the world, and also knows the international consultant they had used. There is synergy and potential between the two projects, particularly since there will be duplicated tasks if the coordination does not occur now.

Communication with Amal Dababseh, UNDP on October 21, 2008

Is it possible to include water efficiency in the program?

Due to the requirements of the approval cycle at the UNDP, if the proposal was expanded to include a water efficiency labeling program, then the proposal would need to be resubmitted to the UNDP and the proposal cycle would start from the beginning.