

## Alexandria, Egypt

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### **The city and its water resources**

Alexandria City in the northern coast of Egypt is the most downstream city on the longest river in the world, the Nile River, with Egypt being the most downstream country on the Nile that is shared among 10 countries. Similar to the whole country of Egypt, the Nile River represents the main renewable source of water supplying over 95% of its water demand. Currently the City of Alexandria receives its urban water from the Nile. Currently inhabited by more than 4 million people, the city of Alexandria resides on the Mediterranean coast, which makes it a summer destination, increasing its population in the summer to 6 million people putting more pressure on the city's water demand. Although the city receives rainfall of about 200 mm/year, this storm water finds its way into sewage systems, drains into the Mediterranean Sea without use, or seeps into the coastal groundwater aquifer through the little-left infiltration areas of the city. Most of the city is covered with potable water supply networks, but many peri-urban and informal settlements lack sewage/sanitation coverage. Most of the city sewage is at least primary or secondary treated, however potential uses of this treated wastewater are yet to be explored in line with the country's National Water Resources Plan.

### *Main water pressures and issues affecting Alexandria*

Satisfying the increasing water demand, developing local water resources, collecting and separating storm water and making use of it, along with groundwater use, grey water recycling, reuse of treated wastewater, water demand management, allocating the appropriate water resources to the appropriate water uses, exploring other non-conventional water resources such as sea water or brackish groundwater desalination, and protecting water ways, and water bodies such as lake Maryout from pollution are some of the challenging water management issues that put pressure on the city of Alexandria.

In the city of Alexandria there are 9 low-income, peri-urban areas that remain un- or under-served with water and sanitation services. Though there are city and governorate level plans for extending or up-grading services to these areas, the involvement of residents / users from these marginalized areas of the city has been limited.

A number of efforts are being exerted by the Egyptian Government to address the problems in Alexandria, such as:

1. The efforts of the Ministry of Housing in cooperation with Alexandria Company for Sanitation, to enhance the treatment and reuse of sanitary waste-water that is currently being dumped into water bodies.
2. The Governorate of Alexandria is exerting serious efforts towards the development plan of Alexandria and towards achieving efficient decision-making. Its true willingness to engage in wider dialogues with stakeholders is encouraging and reflecting the desire to achieve sustainable and popular accomplishments. A coordinating donors' activities' unit has been set up within the governorate.
3. The Governorate is also implementing the 'Informal Settlements Development Program', which reflects the serious confrontation of the ever-growing slums' expansion, represented by 30 informal settlements in Alexandria, which are inhabited by about 1.36 million inhabitants, as follows:
  - ♦ 9 in Al Montazah district (formal and informal);
  - ♦ 8 in Amiriya district (mostly informal);
  - ♦ 5 in East district (formal and informal),
  - ♦ 2 in Central district (formal and informal),
  - ♦ 5 in West district (mostly informal), and
  - ♦ 1 in Borg Al Arab Markaz and City

Alexandria enjoys a vibrant civil society represented by strong NGOs as well as an active elected public local council. Cooperation between these entities is strong and continued, which is considered an added strength to proper development. Furthermore, there is a noticeable and welcomed international donors' interest in Alexandria's development.

#### **Alexandria LA establishment and Stakeholder engagement strategy**

The learning alliance has already been established with representatives from all the sectors in Alexandria. These include representatives from Ministry of Housing, Alexandria Drinking Water Holding Company, Alexandria Sanitation Services Holding Company, Academic Research Institutes and universities, local NGOs, Alexandria Governorate, Environmental Agency of the Alexandria governorate, City coordinator, members of CEDARE, and representatives from the Ministry of Water Resources and Irrigation, Ministry of Health,. The ToR's for these representatives includes highlighting the challenges faced in Alexandria with respect to water-related issues, as well as ensuring dissemination of information between the different LA and stakeholders of all sectors in Alexandria. It is important to focus on IUWM and coordinate between parties to gather information from all sectors in Alexandria on resources, infrastructure, stakeholders, and demands of the people. Once this information is gathered, it is important for them to put guidelines for an IUWM plan to be developed and implemented in Alexandria. Rules and procedures that govern the functioning of the LA group are in effect, but need more time and effort to reach such clear agreements on the

commitments to be made by the SWITCH project and the participants. In terms of facilitation of the learning alliance, an LA facilitator and co-facilitator have been appointed for the city of Alexandria, as well as several other members of the CEDARE team who help in the LA facilitation.

Involvement in LA includes:

1. Ministry of Water Resources and Irrigation,
2. Ministry of Housing, Utilities & Urban Development,
3. Ministry of Agriculture and Land Reclamation,
4. Ministry of Health and Population,
5. Ministry of State for Environment Affairs,
6. Alexandria Governorate,
7. The Holding Company for Water and Sanitation Services,
8. Holding Company for Drinking Water in Alexandria,
9. Holding Company for Sanitation Services in Alexandria,
10. Professors in Universities and Research Centers,
11. NGOs.

The above mentioned directorates nominated one or two participants to be members in the LA Working Group, and to take the following tasks:

1. To coordinate between the represented directorate and the LA
2. To facilitate any requirements or data from the directorate needed for the project
3. To represent the directorate in the upcoming events (training, workshops, ect.)

The LA meetings are planned regularly every three months in the Alexandria Governorate. There is one that is take place on January 23<sup>rd</sup>, 2008 in Alexandria.

### **Overall LA objectives**

*An effective partnership for knowledge sharing in urban water management in Alexandria and Egypt.* To support the development of the IUWM plan and demonstration activities, a learning alliance involving key city (but also national and neighborhood level) stakeholders would provide a platform to identify detailed research needs, undertake joint research activities and share results. It would also collate and make accessible existing knowledge and best practice, document case studies and accessible policy briefs targeted at decision makers (English and Arabic language), develop a city urban water management website and newsletter, and hold regular conferences, workshops and other events. The learning alliance would facilitate two key activities that have been provisionally identified:

- a. IUWM planning
- b. piloting development-scale IUWM approaches (demonstration site)

Communication between LA members is always there, especially by phone, emails, and official letters. There are occasional visits to Alexandria (meetings, training, workshops, etc.), as well as the regular LA meetings that take place every 3 months.

Due to their interrelated nature of work, such mechanisms allow continuous communication but there is always room for improvement of communication. For this reason, establishing an Alexandria City website is an optimum mechanism of disseminating information regarding the SWITCH project. The city website development was established soon to facilitate information among the various LA members and it is updated regularly with the recent events, final reports, news for the upcoming meetings and trainings and important links to most of Alexandria Stakeholders..

The address for this website is <http://switchalex.wordpress.com>. A city poster was produced to document the Alexandria vision, scenarios, LA members, Challenges, needed research studies, objectives of the Alexandria LA and its progress thus far.

Monitoring and tracking mechanisms are in place, and used to measure how to approach the objectives. Whenever an activity is carried out, feedback is collected using a simple evaluation form, disseminated to the participants and returned for feedback on what was done and whether we are on the right track to achieve our goals. The Alexandria LA co-facilitator participated in the LA training workshop in Accra, Ghana on December 11-14, 2007, to enhance the mechanisms with respect to LA facilitation. The training focused on monitoring and evaluation to develop monitoring plans.

Process documentation techniques were used from the beginning, utilizing the different documentation mechanisms like writing articles and essays, taking photos, and video recording of events to document the activities being done, however some of these mechanisms require more efforts in order to become more organized and representative. This was enhanced by members of the CEDARE team participated in the process documentation training in Lodz, Poland in 2007. Mostly changes have been documented by either writing reports or through photography since these two are quite feasible. Video recording documentation needs further practice in order to perfect its use as a documentation tool.

Three LA meetings took place in Alexandria from March 13-24, 14<sup>th</sup> March 2007, 12<sup>th</sup> June 2007, and 23<sup>rd</sup> of January 2008. The meetings were intended to introduce the Alexandria LA to each other and begin assessing the situation of water supply and sewage facility in the city. These four meetings were very successful, and it was recommended to invite members from the private sector and other agencies to join the Learning Alliances. In the 3<sup>rd</sup> meeting on June 12<sup>th</sup> 2007, a panel was agreed upon in order to select a demonstration site in Alexandria according to the criteria. The meeting introduced new LA members, discussed what is expected from the SWITCH project in Alexandria, how can each member play a very important role in the process of assessing the situation of water resources and sanitation services and facilities in the city, and it resulted in some assignments for each member to get ready for the next workshop on "Visioning and Scenario building for Alexandria IUWM plan" in July 2007.

### Learning Alliance members goals and aspirations

Stakeholders are categorized in two main groups; primary and secondary. Primary stakeholders are the intended beneficiaries of the project, while secondary stakeholders are those who act as intermediaries. The two levels would assist in conducting the analysis pertaining to the management of water resources in Alexandria, and the analysis pertaining to the stakeholders' involvement in the SWITCH Project.

LA member	Issues, goals and aspirations
Ministry of Water Resources & Irrigation (MWRI), Egyptian Water Partnership (EWP), Universities, Research Institutes	<b>Supply optimization</b> , including assessments of surface and groundwater supplies, water balances, wastewater reuse, and environmental impacts of distribution and use options.
EWP, MWRI	<b>Demand management</b> , including cost-recovery policies, water use efficiency technologies, and decentralized water management authority.
Peri-Urban Communities, NGOs	<b>Equitable access</b> to water resources through participatory and transparent management, including support for effective water users association, involvement of marginalized groups, and consideration of gender issues.
EWP, MWRI, Ministry of Environment (MOE), Alexandria Sanitation Company (ASC), Governorate of Alexandria (GOA)	<b>Improved policy, regulatory and institutional frameworks</b> , such as the implementation of the polluter-pays principle, water quality norms and standards, and market-based regulatory mechanisms.
MWRI, GOA, EWP, ASC, Universities, Research Institutes	<b>Intersectoral approach</b> to decision-making, combining authority with responsibility for managing the water resource

### Primary Stakeholders

- ◆ Alexandria Governorate (Governor, or assigned representative)
- ◆ Ministry of Water Resources and Irrigation (MWRI)
- ◆ Ministry of Housing, Utilities, and Urban Communities
- ◆ Drinking Water and Sanitation Holding Company for Egypt (under Ministry of Housing) (National Organization for Potable Water & Sanitary Drainage)
- ◆ Alexandria Holding Company for Drinking Water
- ◆ Alexandria Holding Company for Sanitary Drainage
- ◆ Ministry of Agriculture
- ◆ Egyptian Environmental Affairs Agency (EEAA)
- ◆ Ministry of Health
- ◆ Alexandria Local Council

### Secondary Stakeholders & Special Interest Groups

- ◆ Center for Environment and Development in the Arab Region and Europe (CEDARE)
- ◆ NGO's (leading: Egyptian Water Partnership, Friends of the Environment, and Pioneers of the Environment)

- ◆ Research Community in Alexandria (University of Alexandria, National Institute for Ocean Sciences)
- ◆ Fisherman Authority
- ◆ Political parties (NDP representatives of Alexandria)
- ◆ Local community
- ◆ Lobby groups (Media and others)

The main interests for the different primary and secondary stakeholders were clarified in the stakeholder analysis report. The Stakeholder Analysis report for the city of Alexandria has been submitted however, it may require some modification. These modifications are being made and the report will be re-submitted soon. The stakeholders for Alexandria encompass participants from all sectors of society including the Ministries of Water Resources and Irrigation, Housing, Environment, Health, and Agriculture. It also encompasses members of the Governorate of Alexandria, the National Water and Wastewater Holding Company, Alexandria Drinking Water Company, Alexandria Wastewater Company, experts and professors from Alexandria University, local NGOs, political parties, and civil society participants. Each of these stakeholders have been assessed with respect to their resources (human, financial, etc.), influence, and involvement in the decision making process. These have all been analyzed and assessed within the Stakeholder Analysis report for the city of Alexandria.

#### **Towards an IUWM Plan**

This activity would support the Governorate and other key institutions to develop a plan for integrated urban water management up till 2017, and possibly a vision for IUWM up till 2037, identifying scenarios, strategies and plans for more sustainable, less risk-prone and more equitable water management that supports city development. The plan would be consistent with the National Water Resources Management Plan (which envisions the development of local plans) and existing sector plans in Alexandria (water and sanitation master plans are currently being developed to 2037). However there is currently no integrated planning or innovative urban water management measures is taking place at the city scale. Implementation would depend on alignment and adding value (without duplicating existing plans and planning processes). SWITCH's role would be to provide an integrated planning methodology, framework/ principles, mentoring/ facilitation/ backstopping support etc. Potentially the planning methodology could be scaled up to other cities in Egypt.

The “Alexandria Integrated Urban Water Management (IUWM) Plan for year 2030) / A Vision for the Water Future of Alexandria” is envisaged to include futuristic thinking of the water supply and sanitation sector in Alexandria. It will look at how Alexandria can meet a large part of its future water demand locally without depending mainly on Nile Waters as it will be difficult in the future to meet the growing demands with increasing demand in the upstream part of the Nile in Egypt. It will look at making use of rainfall harvesting and storm water usage in Alexandria which receives little rain but can help in filling the demand gap, at using

groundwater while managing potential problems of salt water intrusion, with Alexandria being a coastal city, at water demand management measures that could be considered to reduce water requirements. It doesn't leave out the wastewater treatment and reuse options, the enforcement of regulations to prevent industrial pollution of water bodies.

SWITCH has been introduced to the city of Alexandria to set the stage for Alexandria to be among the leading cities in implementing Integrated Urban Water Management (IUWM). An IUWM long term plan will be developed. The IUWM plan will address current problems and issues of urban water management in Alexandria including lack of sanitation coverage, industrial pollution and challenges facing the supply of water to a city that is located at the end of the Nile River system, which is considered the main renewable water resource of Egypt that supplies more than 95% of its demand. The overall objective of SWITCH-LA in Alexandria is to provide a framework and tools and main guidelines for assist the city of Alexandria to produce and to implement an Integrated Urban Water Management (IUWM) plan. This plan will address the previous mentioned pressures in Alexandria and possible alternatives for solutions. It will try to build on the innovations developed in the SWITCH research activities and other demo cities, as well as those urban water management measures that will prove applicable for Alexandria.

This should all be done in parallel with investigating and utilizing other water resources that are available and feasible to use such as rainwater, groundwater, desalination, as well as reuse and recycled water resources. The aim is to not become solely dependant on the River Nile water, and integrate one or more of these resources where feasible into the Alexandria water network. This is all necessary for the "Integrated Urban Water Management plan" for the city of Alexandria which will be the main output result for the SWITCH project in Alexandria to face and overcome the rapid increase in water demand of the city by the year 2037.

#### *Linkages of SWITCH with other regional/city water initiatives*

The SWITCH Project has established links with several activities and initiatives in Alexandria including:

- National Water Resources Plan-NWRP (Egypt's IWRM Plan 2017)
- National Water MDGs Plan (2015)
- WSS Master Plans (2037)
- Lake Maryut Project
- "Alexandria Growth Pole" World Bank Project
- Governorate Advisory Committee on Storm Water Management

#### **Alexandria IUWM Vision**

The workshop on "Visioning and Scenario building for Alexandria IUWM plan" took place on 24-25 of July 2007 at Helnan Palestine hotel in Alexandria.

This workshop was preceded by a short preparation session on the 23<sup>rd</sup> and was followed by an evaluation session on the 25<sup>th</sup>. The workshop was very successful in coming up with the initial statement of Alexandria's SWITCH project Vision, Objectives, Strategies, and different predicted scenarios. The exercises and workshop were extremely beneficial for all LA members present. The outputs agreed upon from this workshop include a vision statement and several initiatives aimed for year 2037. Alexandria's LA team now has an agreed-on vision which can be described as:

- We envision a proud water city where available water resources are managed in an integrated manner, with the participation of all citizens, and are used effectively for development within a framework of environmental sustainability
- Where all citizens have access to high quality (meeting national norms), reliable, sustainable, and affordable water and sanitation services and benefit from a clean and healthy environment
  - A. A clean and well managed aquatic environment (coastal and lake Maryut?)
  - B. Provided by a renewed and upgraded network
  - C. With full separation of sanitation and (agricultural and rainwater) drainage networks
  - D. With treatment and reuse of agricultural, industrial, and domestic wastewater
  - E. With agricultural water use managed as part of a city wide water management plan

## **SWITCH Demonstration activities**

### **Development of Sustainable Neighborhood-scale IUWM in Fishing Village**

A proposal was prepared to be submitted in month 24, The purpose of the demo project is to move towards a closed loop systems that minimizes water use, wastewater reuse, improves aesthetics and public health, include institutional and governance systems, and are feasibly operational, and financially viable. The project will involve piloting of the most appropriate technologies and strategies for water sensitive design including decentralized wastewater treatment, water demand management, rainwater harvesting and water reuse. SWITCH's support to this demonstration site is imperative to promote more sustainable service delivery and improved urban development in this sensitive environment to reduce the burden of new development on water resources, utilities and environment. In this area, SWITCH will focus facilitating planning of upgraded basic infrastructure (water, sewerage and drainage), and possibly solid waste management to protect open water bodies such as Lake Maryout from pollution.

A site selection panel of LA members was chosen to visit several sites to select an appropriate demonstration site according to the criteria imposed. A decision was made to select the fishing village (Maa'wa Elsayadien) as Alexandria's demonstration site. Information pertaining to this specific area, including water and

sanitation services, was collected but needs more details, verification, and fine-tuning. Stakeholder mapping within the fishing village is in progress as it is a component of the social inclusion survey that is currently in progress there. Options including a questionnaire survey would enable us to determine the qualified individuals within that community, and their further involvement with the project. This questionnaire will be completed in order to map the stakeholders and representatives of the community, as well as assess their needs as a society. It is important to select individuals who are qualified and well educated to be able to better represent the local community in the LA. The survey questionnaire is in progress, and it will help us to determine the key stakeholders within this community.

This fishing village is a slum area that is currently without adequate official and community developed sanitary system. Characteristics of the fishing village include:

- It's area is about 65 feddan ~ 273,000 m<sup>2</sup>
- The eastern boundary is: the highway entrance
- The western boundary is: lake Maryut
- The northern boundary is: Tarek St.
- The southern boundary is: Elkabbary road
- Number of residents: 10,564

**Sanitation services:** There is a random sanitation service done with the public's efforts. The main roads contain sanitation pipe networks however the smaller more narrow roads do not, due to the nature of their narrowness and the slope elevation of these inner roads. Unconventional sanitation systems need to be explored here. The existing sanitation network is connected to the Gharbeia Wastewater treatment Plant.

**Water services:** There is an already existing water supply network to the majority of the village with 95% water coverage. However there are some areas that are still uncovered. There are 1272 households that receive water. Water quality and availability appear to not be a problem, however changing the behavior of dealing with water as an important resource would be beneficial. Pipes of sizes 4 inch and 6 inch diameters need maintenance in network. Maintenance needs to be done to prevent losses in the network due to connection problems and to detect water theft in the system.

**Buildings & population:** The majority of the households are small buildings of 1 to 2 floors, but the area is of controllable size, and of reasonable population. The fishing village has been an area for 2 or 3 previous service projects done by foreign agencies, and non-governmental organizations.

**Innovative features/science:**

Unconventional urban sanitation systems will be implemented and utilized in the fishing village due to its complex nature. A feasibility study will be performed on

the area to see what alternative urban sanitation system is the most appropriate, and how best to implement it in this area.

***Potential impact:***

1. Reducing the disposal of sewage and pollution into Lake Maryout
2. Improving sanitation services by construction of new alternative technologies of wastewater collection
3. Treatment of wastewater in nearby wastewater treatment plant
4. Increase water availability for agriculture by reuse of treated wastewater
5. Improving livelihood of people in the village

***Relationship to LA – evidence of demand:***

Members of the LA have in fact been the ones that researched possible locations of demonstration sites in Alexandria based on the area's demand and its fitting with the criteria imposed. Specific criteria for the demonstration site, was imposed on the selection committee comprised of LA members. LA members have been involved in the decision making process for the demo site and their response was very positive.

***Plans/ideas for scaling up:***

This demonstration site will act as a pilot project for future projects in other sites around Alexandria and Egypt. A policy briefing paper with the outcomes of the demonstration project, along with its strengths and weaknesses will be compiled at the end of the project to be used for future areas in Egypt.

***Co-funding confirmation:***

The Alexandria Governorate and the Alexandria wastewater company have indicated willingness to share in the costs and especially to cover the installation of sewage networks and connections to households and to transport the sewage to the closest treatment facility.

### Alexandria Demonstration Project Budget Request

<b>Year</b>	<b>Partner</b>	<b>Budget (EUR)</b>	<b>Matching Fund Organization (name)</b>	<b>Budget (EUR)</b>	<b>Total Budget (EUR)</b>
<b>2006</b>	-	-	-	-	-
<b>2007</b>	-	-	-	-	-
<b>2008</b>	CEDARE, IRC, UNESCO-IHE	<b>39,710</b>	Water Company Alexandria, Wastewater Company Alexandria, Alexandria Governorate	73,748	113,459
<b>2009</b>	CEDARE, IRC, UNESCO-IHE	<b>79,421</b>	Water Company Alexandria, Wastewater Company Alexandria, Alexandria Governorate	147,496	226,917
<b>2010 – Feb. 2011</b>	CEDARE, IRC, UNESCO-IHE	<b>92,658</b>	Water Company Alexandria, Wastewater Company Alexandria, Alexandria Governorate	172,079	264,737
<b>Total</b>	CEDARE, IRC, UNESCO-IHE	<b>211,789</b>	Water Company Alexandria, Wastewater Company Alexandria, Alexandria Governorate	393,323	605,112

## **SWITH relation to workpackages**

### **Workpackage 1.1-1.4 (See also D6.2.14)**

CEDARE will work with Learning Alliance to define vision, sustainability indicators and scenarios for future urban water management in Alexandria. This will include analysis of existing plans and agree on the concept, scope of work, and roles/responsibilities for an IUWM plan at city level, an agreed for an IUWM plan and IUWM plans being put on national policy agenda. Life cycle assessment will build on a conceptual model of the city to quantify overall environmental impact of the urban water system. At the end of Month 30 the Decision Support System will be clear and agreed with data and software requirements.

There will be 3 more workshops till month 60 for the process of IUWM planning. It is noteworthy here to mention that activities under theme 1 here also collide with some new activities under WP 6.2. The additional funding requested under WP 6.2 is designated to cover these costs as well as the IUWM planning process.

The first workshop (Data Analysis) will be planned in Alexandria between September – October 2008. At first, it was planned that the draft City Water tool would be available but this will not be the case before month 35. The idea therefore is now to use this workshop to discuss with the LA the research results so far produced within SWITCH, in the context of strategy development (together with WP 6.2) ,discuss with the LA the specifications of the City Water tool (together with the other workpackages in Theme 1). Specific objectives include:

- Assess the current status of SWITCH in Alexandria:
  - LA work in Alexandria
  - RIDA analysis results and the WRA report (IRC)
  - Simulation results of the current situation in Alexandria using Aquacycle (NTUA)
- Discuss needs of Alexandria LA from City Water and application requirements (Theme 1 partners, interaction between SWITCH partners and LA members)
- Define expectations from the IUWM plan

The second workshop (Data analysis and City Water -Information Sharing Platform) will be planned in Alexandria for November 2009. It will combine D1.4.9 (Training package on City Water). Specific objectives include:

- Present City Water to Alexandria LA (Theme 1 partners)
- City Water to be perceived and discussed as a tool towards the formation of the IUWM plan (Interaction between SWITCH partners and LA members)
- Provide training on City Water (Theme 1 partners)

The third workshop (New City Strategy for Urban Water Management) will be held in Alexandria in the last year of the project. Final Workshop – End of Project – November 2010. Specific objectives include:

- Present City Water results for Alexandria (Theme1 partners)

- Explore Possibilities for LA members in using City Water after the end of SWITCH programme (Interaction between SWITCH partners and LA members)
- Present the IUWM plan (SWITCH partners)
- Commit on final reporting (what to include, who is doing what) (interaction between SWITCH partners and LA members)

The budget-partners in this WP have resources to produce the deliverables, but not necessarily for the workshops. That is why additional funding is requested under wp6.2 for these workshops. The workshops are part of a process that leads to the production of a new city strategy. This city strategy will be a worked-out strategic plan indicating the strategic direction that water management in the city should take. Both the strategic plan and the strategic direction should be based on research and demonstration results from the SWITCH project. The translation of these results into a strategy is one of the actions required. To coordinate a fully worked-out strategic plan much more resources are needed, at least one full time senior person, with supporting staff and inputs from the LA institutions.

#### Specifying Inputs

Activities	Work Description	Contributions
Preparation of the Workshops	Responsibility of Demo city coordinator/facilitator (3 weeks per workshop). The maximum number of workshops in the demonstration cities in the period M25-42 is 3, depending on which workshops have been held already before M25.	NTUA: Contribute in Planning (Agenda, participants from SWITCH) & Provide training on tools (if and when required) during the Workshops
Reporting of the Workshops	3 days per workshop	Shared effort between CEDARE ,NTUA, IRC
Preparation of the strategic direction document	At least 2 weeks per year	Reporting by CEDARE. NTUA & IRC to provide feedback on Theme 1 planning for Alexandria for the coming year.
Logistics	Venue and other organization costs	CEDARE , EC contribution (IRC, UNESCO-IHE?)
Participation in training event in Delft	1 week and travel costs - A training in scenario planning – strategy development will be organized, jointly with 6.2 in Delft mid 2008	CEDARE – Theme 6 facilitator, EC contribution (IRC, UNESCO-IHE?)

### **Workpackage 3.1 (Water Demand Management)**

CEDARE provided a training in November 2007 on Water Demand Management. Part 2 of this training will take place in May 2008. In between the two trainings, data will be collected and compiled by the participants so that an assessment of the situation can be made, and thus a comprehensive look at how to proceed in WDM from now on. This training was attended by middle-management representatives from the water companies and wastewater companies of all governorates across Egypt, as well as representatives from the Ministries of Water Resources and Irrigation, and Housing. The training also includes members of the Alexandria learning alliance. It will provide training in end-use analysis, least-cost planning and demand management planning best practice. It gave a clear view on the reality of the data gaps that need to be collected in order to start a good water demand management cycle in Alexandria, as well as in the other governorates. The second component of the "Water Demand Management" Training will culminate the exercises for 'water demand management' as well as incorporate all the missing data gaps that need to be assessed when compiling an Integrated Urban Water Management (IUWM) Plan.

#### *Deliverables for Workpackage 3.1*

##### D.3.1

1. The second component of Water Demand Management training will take place in May 2008.
2. A report on the culmination of the training will be produced.
3. Process Documentation is in progress during and throughout the trainings.
4. A study in collaboration with theme 1 and D6.2.14 will be produced under D6.2.14 on WDM in Alexandria. Data and methods obtained from the trainings will be used to help the contents of this report. This study is aimed to enhance the progression of the IUWM Plan in Alexandria.
5. Materials CD and distribution to LA and other participants

### **Workpackage 6.1 (Institutional Change)**

CEDARE will complete an institutional mapping assessment for the City of Alexandria as a whole, including governance issues with respect to legal frameworks of organizations and their liabilities. Institutional mapping assessment requires training of personnel to fulfill such a task and clear and explicit criteria need to be labeled for this task.

#### *Deliverables for Workpackage 6.1*

##### D6.1.2

- CEDARE is in the process of beginning to prepare an institutional mapping report which will build upon the Stakeholder Analysis Report in Alexandria.
- Preparation of TOR for Alexandria Institutional mapping is in the process of beginning to prepare an institutional mapping report which will build upon the Stakeholder Analysis Report in Alexandria.

#### D6.1.5

- CEDARE has contributed to a better understanding between the stakeholders and the institutions for cooperation and coordination with the LA to promote the IUWM Plan and work towards it through several LA meetings where institutional rules have been clarified and activities and plans of different institutional have been shared.
- CEDARE has reviewed a series of papers on institutional aspects for communication and enhancement of IUWM including:
  1. Communication for Social Change: An Integrated Model for Measuring the Process and Its Outcomes, by Maria Elena Figueroa, D. Lawrence Kincaid, Manju Rani, Gary Lewis.
  2. Governance: Literature Review, by Colin Green
  3. Mapping the field: the landscapes of governance, by Colin Green
  4. Institutional Maps, by Colin Green.
  5. Where are Institutions? By Geoffrey M. Hodgson
  6. Overview: the Watertime project and the construction of the final recommendations and decision aid, by David Hall
  7. The New Institutional Economics of India's Water Policy, by Tushaar Shah
- CEDARE has managed to agree with the LA and negotiate with the Alexandria Governorate to formalize the role of the LA as an advisory committee to guide in the IUWM.

#### D6.1.6

- This report will work in collaboration with D6.2.14 to work towards good governance for an IUWM Plan. This will be prepared in year 4 and 5 of the project.

### **Workpackage 6.2 (Learning Alliances)**

#### *Water Awareness Event: March 2008*

This event will coincide with World Water Day, and will be held on two separate days. The first day will be held in collaboration with the Ministry of Water Resources and Irrigation (MWRI) at the Ministry on the 22<sup>nd</sup>, while the second day will be held in Sawy Cultural Center in collaboration with the Egyptian Water Partnership (EWP) NGO on the 24<sup>th</sup>. Both events will be targeting end users with special emphasis on women and children. The two days will encompass a series of events such as skits or a show on water conservation behavior mechanisms, as well as simulated Parliament for Water by children discussing water issues. The SWITCH project will be publicized in this event through the dissemination material that will be given away at both events. Packages with water conservation material will be produced and disseminated for sharing among the end users in these events. The SWITCH logo will be placed on these packages and information on the SWITCH project as well as the local work in Alexandria will be provided in these packages.

#### *Deliverables for Workpackage 6.2*

##### D6.2.4 Reports on recruitment and training of LA teams (month 6)

- Recruitment of LA took place in January 2007.

- An LA Training took place in CEDARE, Egypt in January 2007.
  - The LA facilitator attended an LA training in Lodz, Poland in July 2007.
  - The LA co-facilitator attended an LA training in Accra, Ghana in December 2007.
- D6.2.5 Institutional analyses focused on the challenges in working towards a paradigm shift and institutional change within each demonstration city (month 6-9)
- Institutions and Stakeholders focused on working towards change within Alexandria and the demo site. (An IUWM Plan)
- D6.2.6 Reports on the formalization of the LAs in all demo cities (month 6-12)
- Report on formation in city story
  - Stakeholder Analysis report is complete
- D6.2.7 Reports summarizing research needs and opportunities for effective research and demonstration activities (month 6-18).
- Technical and Financial Proposal for the Demonstration Site complete with all interventions and budgets needed to fulfill the interventions.
  - Identification of research needs for IUWM plan in city story
  - Identification of research opportunities for IUWM in Aquacycle
- D6.2.8 Regular reports on research activities and related learning and uptake within the LAs (quarterly), including ,road maps?.
- Visioning Workshop took place in Alexandria in July 2007
    - Report on Visioning workshop complete with process documentation.
    - Report and material CDs disseminated and made available to all.
  - Regular LA meeting reports completed for the following meetings.
    - 1<sup>st</sup> LA meeting (January 2007)
    - 2<sup>nd</sup> LA meeting (March 2007)
    - 3<sup>rd</sup> LA meeting (June 2007)
    - 4<sup>th</sup> LA meeting (January 2008)
  - Alexandria LA Regional Partners Meeting (Cairo/Alexandria December 2007)
- D6.2.9 Regular reports on demonstration activities and related learning and uptake within the LAs (quarterly)
- LA Progress reports of work achieved to that point.
  - 1<sup>st</sup> LA Progress report complete (June 2007)
  - 2<sup>nd</sup> LA Progress report complete (Dec. 2007)
- D6.2.11 Extensive process documentation (accessible through the project internet platforms)
- Process documentation complete for trainings, meetings, and workshops.
  - SWITCH Alexandria website launched and active.  
<http://switchalex.wordpress.com> , <http://switch.cedare.int>
- D6.2.12 Guidelines for learning and innovation in the context of IUWM (Month 4 draft and month 60 final)
- Travel between the cities should create information exchange and learning and innovation within the context of IUWM.
  - Media coverage of SWITCH project:
    - Press releases of ALL trainings and workshops done so far
    - TV Interview with BEATTY environment Channel on SWITCH project
    - TV Interview with Alex TV on SWITCH project

- Radio coverage on SWITCH project

#### D6.2.13 Journal papers on analysis of LA learning processes (5 by Month 60)

- CEDARE will contribute to the papers written by the partners to produce journal papers with analysis of LA learning process. This will be joint work between IRC and CEDARE.

**NEW DELIVERABLE:** D6.2.14 Formulation of an Integrated Urban Water Management (IUWM) Plan for the City of Alexandria (by Month 60). Deliverable achieved in coordination and collaboration with theme 1 specifically wp 1.1 and 1.2, with partners from these workpackages. The lead partner of this deliverable will be CEDARE, with close cooperation and collaboration from IRC, and NTUA. Budget for this deliverable seen further down in document.

Components:

##### C6.2.14.1 Framework for IUWM Plan

- Water Resource Assessment (WRA) and DSS development Trainings in Alexandria and Athens (by NTUA). The WRA and DSS work should last till July 2009.
- Three workshops from Month 25 till Month 60 on City Water and IUWM planning (See also above description of workshops in theme 1.1).

C6.2.14.2 Research and studies on storm-water potential, wastewater reuse, water demand management, and water cost recovery (4 research studies to be completed by 2010).

#### *WRA and DSS contents:*

The following proposals are made in response to points made during the LA meeting on 23 January and the WRA and DSS planning meeting on 24 January:

1. Local specialist support in Alexandria. Specialist support, comprising a part-time senior water resources management specialist and a post-doctoral student, should be contracted to work on the WRA and the DSS. In parallel to this specialist water management support, a part-time senior facilitation specialist, based in Alexandria, to strengthen the facilitation of the overall SWITCH process.
  - The water management specialists will coordinate support with the overall SWITCH process facilitation specialist and the CEDARE LA support team, and work in close consultation with the Alexandria LA member organizations, CEDARE (Cairo), IRC (Delft, The Netherlands) and the National Technical University of Athens;
  - The water management specialists will provide the central contact point in Alexandria for all involved in WRA and DSS work and address any arising problems;
  - Under the guidance of the overall SWITCH process facilitation specialist, the water management specialists will ensure that maximum use is made of information and knowledge held by any relevant stakeholder within and outside.
2. Training and capacity development. A training and capacity development programme be carried out that builds capacity within the LA in the development and operation of DSS that can be used as one mechanism of embedding integrated urban water management in Alexandria.

### *Deliverables from WRA and DSS work*

The deliverables from the proposed Alexandria WRA and DSS work will include:

- A set of Resource, Infrastructure, Demand/Access (RIDA) tables that will provide a schematic and numerical overview of Alexandria's water service delivery systems. This will include putting numbers (along with measures of uncertainty) on the RIDA schematic that has already been produced for Alexandria (see Figure 1).
- An integrated urban WRA for Alexandria Governorate. This will be similar to the recent water resource assessment for the Maltese Islands that involved IRC staff. This report can be downloaded from: <http://www.fao.org/docrep/009/a0994e/a0994e00.htm>.
- A functional version of the AQUACYCLE Model that has been set up to work in Alexandria This model was described in the paper presented by Stella Apostolaki at the second SWITCH scientific and integration meeting (November 2007).
- An IUWM Strategy Evaluation Report that uses modelling and outputs from the WRA to evaluate the potential scale and range of benefits/beneficiaries of different interventions and strategies. This report will also evaluate potential positive and negative externalities associated with different interventions and strategies.
- A functional version of the CITYWATER DSS that will support IUWM decision making and complement software that is currently in use (e.g. Watercad and Sewercad).
- A cadre of professionals who have the skills and capacity to use and upgrade the CITYWATER DSS.
- Process documentation providing evidence and lessons learned of this innovative interdisciplinary and multi-stakeholder way of working (lead by the senior facilitation specialist and IRC support)

*See requests for budget below at the end of the document.*

### **Workpackage 6.3 (Social Inclusion)**

CEDARE will link with work packages 6.2 (Learning Alliances), 6.4 (Finance & Cost Recovery), and 1.1 (Sustainability Indicators) to identify all the stakeholder groups, with specific attention to those groups currently under-served, for improved integrated urban water management and to conduct a participatory needs identification and prioritization with those groups. Based on the outcomes of the prioritization activity, to plan pro-poor measures that seek to enhance the opportunities for these stakeholders' participation in the Learning Alliance decision making processes and to develop a locally tailored assessment methodology for measuring the impact of the pro-poor measures with regards to technical, economic, social, environmental, etc indicators. Social inclusion will be focused in the demonstration site in Alexandria, being the Fishing Village of Ma'awa el Sayadeen. The areas of potential that will be explored there include:

- Making use of rainfall harvesting and storm water usage in Alexandria.
- Making use of groundwater while managing potential problems of salt water intrusion.
- Water demand management measures that could be considered to reduce water requirements.

- Wastewater treatment and reuse options
- The enforcement of regulations to prevent industrial pollution of water bodies.
- Emphasis on ensuring that the poor are served;
- Commercial viability of utilities;
- Separation of provider and regulator;
- Increasing role of the private sector through a variety of methods, ranging from management contracts to full privatization;
- Developing approaches which distinguish between the large city and the peri-urban areas;
- Emphasis on transparency of process
- Reforming legal and institutional frameworks;
- Capacity building for regulators;
- Promote better policy, regulatory, and institutional frameworks for sustainable environmental management;
- Greater attention to rights and market-based instruments;
- Attention to possible climate change impacts;
- Promotion of Strategic Environmental Assessments to move "upstream" in the decision-making cycle;
- Promoting environmentally and socially sustainable private sector development;
- Focusing on the positive linkages between poverty reduction and environmental protection;

### *Deliverables for Workpackage 6.3*

D6.3.1 Baseline reports on current water situation in demonstration project areas including: levels of cost recovery and current tariffs; data on access to, use of and control over (e.g. positions in management and decisions about use, payment, etc) services by women, poor, children, and other vulnerable or marginalized groups – including also information about whether these issues are currently measured, included in planning for water services, and assessed and monitored in the demonstration cities (M6)

- A Baseline Survey will be investigated on the demo site, and a baseline report will be written with the outcomes and conclusions of this survey.

D6.3.2 Case studies on selected approaches or methods to optimize social inclusion (M12)

- Case Studies investigated and report compiled, written and approval taken on report. (Complete).

D6.3.3 Experiences and learning are shared within and among stakeholders in participating cities via range of media including: project website, flyers, workshop reports, guidelines, video/audio documentation, etc (linked to Work Package 0.2 Dissemination and Training)

- SWITCH Alexandria website launched and active.  
<http://switchalex.wordpress.com>, <http://switch.cedare.int>
  - Documents will gradually be loaded onto the Internet for all to view.
- Documentation of trainings and workshops complete.

D6.3.4 Process documentation on how Learning Alliances facilitated the development of adaptive, socially inclusive, management actions (linked to WP 1.2 Access to and use of Knowledge and Dissemination)

- Technical and Financial Proposal of Demo Site Report based on Social Inclusion (complete).
- Process documentation is in progress.

D6.3.5 Report on training Learning Alliance members and the research teams on socially inclusive, participatory planning and management (Participatory Planning Cycle Management and Qualitative Information Systems methodology) – IRC together with local counterpart.

- A Social Inclusion Workshop will be done in August 2008 with all the LA members and participating bodies.
- A report on the Workshop will be compiled for documentation.
- A Situation Analysis report will be compiled and written once the work of Social Inclusion is complete to see the impacts of Social Inclusion before and after.

## **Workpackage 6.4**

### *Deliverables for Workpackage 6.4*

D6.4.1 A conceptual framework for evaluating the financial side of the relevant infrastructure in the demo projects and selected cities.

- Discussed ToR with Emanul and Rachel
- Regional partner will be working on this deliverable with support from CEDARE.
- CEDARE has reviewed a series of papers for communication and enhancement of IUWM including:
  1. Water, Ethics, and Economics, by Colin Green
  2. Is water Different, by Colin Green
  3. The New Institutional Economics of India's Water Policy, by Tushaar Shah

D6.4.2 Reports on the demo projects and selected cities on the different ways of financing the relevant infrastructure and the cost recovery system chosen.

- Discussed with wastewater company and governmental on cost sharing prepared proposed
- Regional partner will be working on this deliverable with support from CEDARE.

D6.4.3 A study of the institutional arrangements chosen in the different demo projects and selected cities to obtain finance and to assure cost recovery

- Regional partner will be working on this deliverable with support from CEDARE.

D6.4.4 A comparative study on different financial approaches and instruments used and the cost recovery systems put in place and their success.

- Regional partner will be working on this deliverable with support from CEDARE.

### Achievements from M13 to M24

Achievements from M13-24				
Activity	Specific objective	Task	Deliverable Number	Date Achieved
2 <sup>nd</sup> LA Meeting			<ul style="list-style-type: none"> <li>• List of Issues</li> <li>• <b>D6.2.6/6.2.8</b></li> </ul>	2 <sup>nd</sup> LA meeting took place on March 14, 2007
3 <sup>rd</sup> LA meeting Visioning Workshop on SWITCH approach & scenario planning	Identify UWM challenges, possible measures, and indicators for sustainability		Alexandria City IUWM Vision Future Scenarios discussion document <b>D6.2.6/6.2.8</b>	3 <sup>rd</sup> LA meeting took place on June 12, 2007
Social Inclusion Training in Delft	CEDARE participated in training		<b>D6.3.3</b>	April 2007
Visioning Workshop	IUWM Vision and Scenario		<b>D6.2.7/6.2.8</b>	Visioning workshop took place in July 2007.
Report on Visioning Workshop			<b>D6.2.7/6.2.8</b>	Completed and disseminated to all LA members and theme 1 partners in August 2007.
Demo Site Proposal includes SI			<b>D6.3.4</b>	November 2007
Learning Alliance Facilitation	Train Alexandria LA Facilitator		<b>D6.2.4</b>	LA facilitator and Co-facilitator attended a Process documentation training in Lodz, Poland and a monitoring and evaluation workshop in Accra, Ghana in July and December 2007 respectively.
Report on Stakeholder Analysis	Under wp 6.2	Identifying stakeholders in Alexandria	<b>D6.2.5</b>	Completed with revisions in January

				2008
1 <sup>st</sup> WDM Training	Train Alexandria & Other cities Professional on WDM, Put WDM on the Political Agenda	Select Professionals to be trained, Provide WDM training	<b>D3.1</b>	1 <sup>st</sup> WDM Training took place from 11-14 November 2007.
4 <sup>th</sup> LA meeting	Discuss Demonstration Site and financing of activities.		<b>D6.2.8/6.2.9</b>	4 <sup>th</sup> LA meeting took place on January 23 <sup>rd</sup> 2008.
Report on Case Studies for Social Inclusion	Case studies on slum areas in Alexandria		<b>D6.3.2</b>	Report completed in December 2007.
Alexandria LA Regional Partners Meeting		P.Bury Travel Report	<b>D6.2.8/6.2.12</b>	Meetings in December 2008
RIDA/Aquacycle meetings in Cairo/Alexandria	(RIDA) water resources assessment and develop scenarios modeling process to develop a IUWM strategy	Prepare needed data for modeling.	Report on RIDA/Aquacycle meetings <b>D6.2.8/6.2.12</b>	Meetings are to take place from January 20-24, 2008.
TOR for Alex Institutional mapping		Preparation of TOR for Alex Institutional mapping	<b>D6.1.2</b>	January 2008
Identification of research needs for IUWM plan in city story			<b>D6.2.7</b>	January 2008
Identification of research opportunities for IUWM in Aquacycle			<b>D6.2.7</b>	January 2008
Reports reviewed on institutional cooperation		Reports on Institutional cooperation and coordination	<b>D6.1.5</b>	March 2007
Reports reviewed on conceptual framework for financial evaluation		Reports on financial evaluation	<b>D6.4.1</b>	March 2007
Media Coverage of SWITCH project			<b>D6.2.12</b>	September 2007

## Planned Activities for M25-42

### Workpackage 3.1

Planned Activities 2008				
Activity	Specific objective	Task	Deliverable Number	Milestone
2 <sup>nd</sup> Component of the WDM Training	Complete WDM Training of Professionals, Get Preliminary Indications on WDM Potential in Cities	Provide Training, Compile WDM preliminary data, Analyze data, Recommend best WDM measures for cities	D3.1	May 2008
Report on WDM Training - Documentation			D3.2 /3.3	May 2008

### Existing Budget Allocation M25-42

Workpackage 3.1	Total Budget
2 <sup>nd</sup> Component of WDM Training	6500
Total	6500

### Workpackage 6.1

Planned Activities 2008				
Activity	Specific objective	Task	Deliverable Number	Milestone
Report on Institutional Mapping Analysis			D6.1.2	June 2008

### Existing Budget Allocation M25-42

Workpackage 6.1	Total Budget
Deliverable 6.1.2	
Reporting on Institutional Mapping Analysis	8000
Total	8000

### Workpackage 6.2

Planned Activities 2008				
Activity	Specific objective	Task	Deliverable Number	Milestone
Water Awareness Event	(public awareness)		D6.2.11/6.2.12	March 2008
LA quarterly			D6.2.8/6.2.9	March

progress report				2008
Set up SWITCH Alexandria office	Office for LA facilitator based in Alexandria.	Prepare equipment for LA office (PC, phone, fax, desk, internet, etc.)	<b>D6.2.3</b>	March 2008
5 <sup>th</sup> LA Meeting Discuss WDM measures	Discuss WDM Measures, Discuss outputs for WRA, Discuss demonstration activities and further research needed.	Prepare for WDM Training, TOR for WDM Study in Alexandria	<b>D6.2.8/6.2.9</b>	April 2008
Update Alexandria SWITCH City Website			<b>D6.2.11/6.2.12</b>	April 2008
WRA training in Alexandria	Hands on training by NTUA		<b>D6.2.8/6.2.12</b>	April 2008
Intensive DSS Training and Capacity Development for WRA in Athens	Selected members from the LA to travel to Athens for Training		<b>D6.2.8/6.2.12</b>	May 2008
Report on WDM in Alexandria	Specific Study and research to Alexandria		<b>D6.2.7</b>	June 2008
LA quarterly progress report			<b>D6.2.8/6.2.9</b>	June 2008
Report on Institutional Mapping Analysis			<b>D6.2.5</b>	June 2008
WRA training in Alexandria	Hands on training by NTUA		<b>D6.2.8/6.2.12</b>	June 2008
6 <sup>th</sup> LA Meeting Storm Water Management & Potential	Discuss Storm Water Management & Potential, Discuss outputs for WRA		TOR for Storm Water Study in Alexandria <b>D6.2.8/6.2.9</b>	June 2008
Social Inclusion in IUWM Planning – Workshop	Discuss Social Inclusion in IUWM Planning	Discuss demonstration activities.	Report on Workshop <b>D6 6.2.9</b>	July 2008
7 <sup>th</sup> LA Meeting on discussions on Wastewater Reuse Measures	Discuss Wastewater Reuse Measures, Discuss outputs for WRA		TOR for Wastewater Reuse Study <b>D6.2.8/6.2.9</b>	August 2008
WRA training in Alexandria	Hands on training by NTUA		<b>D6.2.8/6.2.12</b>	August 2008

Report on Storm Water Management in Alexandria	Specific study and research for Alexandria		<b>D6.2.7</b>	September 2008
LA quarterly progress report			<b>D6.2.8/6.2.9</b>	September 2008
Follow up on Demo site activities			<b>D6.2.7</b>	September 2998
Data Analysis Workshop	Wp 6.2 and theme 1 together.	WRA Analysis results and the WRA report	Simulation results of the current situation of Alex using Aquacycle <b>D6.2.8/6.2.12</b>	Sept – Oct. 2008
Intensive DSS Training and Capacity Development for WRA in Athens	Selected members from the LA to travel to Athens for Training		<b>D6.2.8/6.2.12</b>	November 2008
LA quarterly progress report			<b>D6.2.8/6.2.9</b>	December 2008

## Workpackage 6.2

<b>Planned Activities 2009 till M42</b>				
Report on Wastewater Reuse in Alexandria	Specific study and research for Alexandria		<b>D6.2.7</b>	January 2009
8 <sup>th</sup> LA Meeting Water cost recovery	Cost Alternative Policy Measures		TOR for Water Cost Recovery Study <b>D6.2.8/6.2.9</b>	January 2009
WRA training in Alexandria	Hands on training by NTUA		<b>D6.2.8/6.2.12</b>	January 2009
Intensive DSS Training and Capacity Development for WRA in Athens	Selected members from the LA to travel to Athens for Training		<b>D6.2.8/6.2.12</b>	March 2009
9 <sup>th</sup> LA Meeting	Develop IUWM strategy	Prepare data and needed outputs for IUWM plan	<b>D6.2.8/6.2.9</b>	April 2009
WRA training in Alexandria	Hands on training by NTUA		<b>D6.2.8/6.2.12</b>	May 2009
10 <sup>th</sup> LA Meeting	Demonstration site activities researched	Further needs and support to demo site	<b>D6.2.8/6.2.9</b>	July 2009

## Planned Activities for M43-60

<b>Planned Activities for M43-60 (2009-10)</b>				
LA Quarterly Progress Report			<b>D6.2.8/6.2.9</b>	August 2009
Follow up on Demo site			<b>D6.2.7</b>	September 2009

activities				
Report on Water Cost Recovery in Alexandria	Specific study and research for Alexandria		<b>D6.2.7</b>	September 2009
11 <sup>th</sup> LA Meeting			<b>D6.2.8/6.2.9</b>	October 2009
Data Analysis and City Water Workshop <b>(TENTATIVE TO BE AGREED FOR LAST 18 MONTH PERIOD)</b>	theme 1 work from NTUA	-Present City Water to Alexandria LA -City Water discussed towards formation of IUWM plan -Training on City Water by theme 1.	<b>D6.2.8/6.2.12</b>	November 2009
12 <sup>th</sup> LA Meeting			<b>D6.2.8/6.2.9</b>	January 2010
13 <sup>th</sup> LA Meeting			<b>D6.2.8/6.2.9</b>	April 2010
14 <sup>th</sup> LA Meeting			<b>D6.2.8/6.2.9</b>	July 2010
Follow up on Demo site activities			<b>D6.2.7</b>	September 2010
New City Strategy for IUWM Plan – Workshop <b>(TENTATIVE TO BE AGREED FOR LAST 18 MONTH PERIOD)</b>	theme 1 work from NTUA	City water results presented to Alexandria	Present IUWM Plan <b>D6.2.8/6.2.12</b>	November 2010
15 <sup>th</sup> LA Meeting			<b>D6.2.8/6.2.9</b>	November 2010

### Existing Budget Allocation from M25-42

Activity	total
Water Awareness workshop (end users, gender, NGOs), World Water Day, Printing and Dissemination of IUWM and Awareness Material (March 2008)	4000
5 <sup>th</sup> LA Meeting Discuss WDM Measures (April 2008)	1600
Follow up on Demo Site Activities	6600
LA Progress Reports	7500
Support to papers on LA processes	1150
City Storyline	2200
Process Documentation	7500
6 <sup>th</sup> LA Meeting Storm Water Management & Potential (June 2008)	1600
Social Inclusion in IUWM Planning – Workshop (July 2008)	6500

7 <sup>th</sup> LA Meeting Wastewater Reuse Measures (August 2008)	1600
8 <sup>th</sup> LA Meeting Water cost Recovery(January 2009)	1600
9 <sup>th</sup> LA Meeting – IUWM strategy (April 2009)	1600
10 <sup>th</sup> LA Meeting (July 2009)	1600
Travel expenses for next 18 months	9525
<b>Total</b>	<b>54575</b>

### Existing Budget Allocation from M25 till M60

	<b>Total Budget</b>
<b>Workpackage 6.2</b>	
<b>Deliverable 6.2.7</b>	
Follow up on Demo Site activities	10300
<b>Deliverable 6.2.8</b>	
5 <sup>th</sup> LA Meeting	1600
6 <sup>th</sup> LA Meeting	1600
7 <sup>th</sup> LA Meeting	1600
8 <sup>th</sup> LA Meeting	1600
9 <sup>th</sup> LA Meeting	1600
10 <sup>th</sup> LA Meeting	1600
11 <sup>th</sup> LA Meeting	1600
12 <sup>th</sup> LA Meeting	1600
13 <sup>th</sup> LA Meeting	1600
14 <sup>th</sup> LA Meeting	1600
15 <sup>th</sup> LA Meeting	1600
<b>Deliverable 6.2.9</b>	
City Storylines	4400
Social Inclusion Workshop (July 2008)	6500
LA Quarterly Progress Reports	12000
<b>Deliverable 6.2.11</b>	
Process Documentation	12000
Water Awareness Event	4000
<b>Deliverable 6.2.12</b>	
Travel between cities and exchange of innovations	14369
<b>Deliverable 6.2.13</b>	
Support to papers on LA learning processes	3300
<b>Total</b>	<b>84469</b>

### Additional Requested Budget from M25 till M60

<b>Deliverable 6.2.14</b>	
Set up SWITCH Alexandria Office	2000
Alexandria based specialist support	53250
WRA DSS trainings in Athens	6000
WRA DSS trainings in Alexandria (5 trainings)	18750
Study on WDM for IUWM Plan	10000
Study on Stormwater for IUWM Plan	10000
Study on Wastewater reuse for IUWM Plan	10000

Study on water cost recovery for IUWM Plan	10000
Workshop 3-Data Analysis for IUWM (2008)	5000
Workshop 4- City Water and Planning for IUWM (2009)	5000
Workshop 5 – City Water and IUWM (2010)	5000
Interim DSS Report (2009)	5000
<b>Total</b>	<b>140000</b>

#### **Additional Requested Budget from M25 till M42**

<b>Deliverable 6.2.14</b>	
Set up SWITCH Alexandria Office	2000
Alexandria based specialist support	53250
WRA DSS trainings in Athens	6000
WRA DSS trainings in Alexandria (5 trainings)	18750
Study on WDM for IUWM Plan	10000
Study on Storm-water for IUWM Plan	10000
Study on Wastewater reuse for IUWM Plan	10000
Workshop 3: Data Analysis for IUWM	5000
<b>Total</b>	<b>115000</b>

#### **Breakdown of Additional Requested Budget from M25 till M60:**

	<b>Y 2008</b>	<b>Y 2009</b>
<b>Alexandria based specialists support for WRA and DSS development</b>		
Senior water management specialist (4days/month, 350 Euro/day)	14000	12600
Senior process facilitation specialist (1st month 64 hrs then 4 hrs/week, 350 Euro/day)	9100	6300
Post-doc student (Full-time 03/03-08/08, 50% time 09/08 -07/09, 900 euro/month)	7200	4050
Management/organizational fees for time/services/transportation and logistics for trainings	12500	6250
Facilities for LA office in Alexandria	2000	0
<b>Modeling and DSS training and capacity development</b>		
NTUA hands on training in Alexandria (1000 Euro/visit) (travel costs for NTUA to Alex) <sup>1</sup>	3000	2000
LA intensive capacity development in Athens (1000 Euro/person/visit)	4000	2000
<b>Total (Euro)</b>	<b>51800</b>	<b>33200</b>
<b>Total (Euro)</b>	<b>80000</b>	

Note: According to proposal by Peter, Charles, Dionysis, and CEDARE (CEDARE, IRC, and NTUA)

1. NTUA travel costs will not go to CEDARE, but to NTUA.

<b>Year 2008 /2009/2010 : IUWM Planning in Alexandria</b>	
Workshop 3: Data Analysis Workshop (2008)	5000
Workshop 4: Data analysis and City Water (2009)	5000
Workshop 5: New City Strategy for Urban Water Management (2010)	5000
Interim DSS Report (2009)	5000
<b>Total</b>	<b>20000</b>

Note: According to proposal by Dionysis, (NTUA)

<b>Year 2008 /2009/2010 : Reports and Studies in Alexandria for IUWM Plan</b>	
Report on Water Demand Management	10000
Report on Storm-water Management	10000
Report on Wastewater Reuse	10000
Report on Water Cost Recovery	10000
<b>Total</b>	<b>40000</b>

It is more convenient and logical to place the budget for these reports under 6.2, since it should be collaboration with the LA.

### **Workpackage 6.3**

<b>Planned Activities 2008</b>				
<b>Activity</b>	<b>Specific objective</b>	<b>Task</b>	<b>Deliverable Number</b>	<b>Milestone</b>
Social Inclusion in IUWM Planning – Workshop	Discuss Social Inclusion in IUWM Planning	Discuss demonstration activities.	Report on Workshop <b>D6.3.3</b>	July 2008
Report on Social Inclusion workshop – Social Inclusion in IUWM			Report on Social Inclusion in IUWM <b>D6.3.3 /6.3.4 /6.3.5</b>	August 2008
Report on Baseline Survey	Dependant on information obtained from demo site and social inclusion workshop		<b>D6.3.1</b>	September 2008

### **Existing Budget Allocation M25-42**

<b>Workpackage 6.3</b>	<b>Total Budget</b>
Deliverable 6.3.1	
Report on Baseline Survey	12000
Deliverable 6.3.3	
Social Inclusion Workshop (budget collaboration with 6.2)	1200
Report on Social Inclusion Workshop	5000
Travel Costs	2600
<b>Total</b>	<b>20800</b>

### **Workpackage 6.4**

<b>Planned Activities 2008</b>				
<b>Activity</b>	<b>Specific objective</b>	<b>Task</b>	<b>Deliverable Number</b>	<b>Milestone</b>
Prepare a report on demo project interventions financial assessments		Report on Financial Assessment	<b>D6.4.1</b>	January 2009

### **Existing Budget Allocation M25-42**

Workpackage 6.4	Total Budget
Deliverable 6.4.1	
Report on Demo site Financial Assessment	7500
Total	7500

### Documentation

Report/Document	Status
Scoping report	Complete
LA action plan/ city storyline	Complete
Stakeholder analysis	Complete
Report of visioning workshop	Complete
Quarterly reports	Complete
Process documentation	Complete
Institutional Mapping Report	Gathering of information in process.
Demonstration Site Technical and Financial Proposal	Complete
IUWM Plan	Gathering of information is in process
Report on Water Awareness Event	-
Baseline Survey on Demonstration Site	-
Case Study on Slum Areas for Social Inclusion	Complete
Situation Analysis Report on Social Inclusion	-
Alexandria City Story	Complete

### Training

Training activity	Purpose	Target audience	Date Achieved
1 <sup>st</sup> WDM Training October 2007	Train Alexandria & Other cities Professional on WDM, Put WDM on the Political Agenda	Select Professionals to be trained, Provide WDM training	1 <sup>st</sup> WDM Training took place from 11-14 November 2007.
Social Inclusion Training in Delft	Social Inclusion	LA members	April 2007
LA Training in Lodz, Poland	Process Documentation	LA facilitators	July 2007
LA Training in Accra, Ghana	Monitoring and Evaluation	LA facilitators	December 2007
Workshop on Social Inclusion	More Social Inclusion in Decision Making	Learning Alliance Members	Yet to be planned.
2 <sup>nd</sup> Component of the WDM Training May 2008	Complete WDM Training of Professionals, Get Preliminary Indications on WDM Potential in Cities	Provide Training, Compile WDM preliminary data, Analyse data, Recommend best WDM measures for cities	Planned for 11-14 May, 2008.

## Dissemination

<b>Dissemination activity</b>	<b>Purpose</b>	<b>Target audience</b>	<b>Date Achieved</b>
Visioning Workshop CD	To disseminate the water pressures and challenges that faces city of Alexandria.	Decision makers and stakeholders in Alexandria	Complete
Water Demand Management Training CD	Disseminate the concept of WDM	Drinking water and sanitation companies all over Egypt, All LA members	Complete
Press Releases	Get Public Support to SWITCH innovative ideas	General Public	Complete and in progress with activities
TV Interviews	Get Public Support to SWITCH innovative ideas	General Public	Complete and on-going
Radio Interviews	Replicate SWITCH in other Cities	General Public	Complete and on-going
Newsletters	Create Awareness on IUWM	Specialists	Complete and in progress with activities
Publish Papers at Conferences	Create Scientific Support to IUWM	Researchers	Complete and in progress with activities
SWITCH Alexandria Website	Provide IUWM tools and methodologies to a bigger audience	Professionals & General Public	Complete and being updated with activities
UNESCO-IHE Conference	Disseminate Information on SWITCH in the Cities	Present Paper on SWITCH Alexandria IUWM at Conference	Complete
A poster for city of Alexandria	To address Alexandria vision, scenarios, main LA members, challenges, pressures, activities and areas to be studied	Other SWITCH cities and partners	Complete and downloaded on the SWITCH intranet website
Water Awareness Packages	Raise awareness on water conservation issues, behavior patterns, and water scarcity.	End users, General Public	In progress at March 22, 24 2008 World Water Day event

**Budget/Expense summary – Workpackage 6.2: All Learning Alliance Activities**

Year	Funds Available (total)	Funds Used (total)	Staff costs	LA meeting/ event costs	Local costs & other expenses	LA training costs (travel and expenses for participation)	Total Funds Remaining / Required (EUR)	Major activities and achievements Major achievements
Year 1 (Feb 2006 – Feb 2007)	20,439	27,836	14,106	626.76	2,187.00	6,276	(Required) 7,397	<ul style="list-style-type: none"> <li>• Planning &amp; Startup of Activities (February 2006)</li> <li>• SWITCH Kick Off Meeting (Delft – April 2006)</li> <li>• Pre-Scoping Visit &amp; Collection of Basic Information &amp; Data</li> <li>• City Coordination Meeting (Hamburg - October 2006)</li> <li>• Scoping visit a SWITCH launching workshop (Alexandria - October/November 2006)</li> <li>• Communication with MSc Students and collection of data for their research (November/December 2006)</li> <li>• Prepare work plan and report on existing stat and communication with potential LA members and resource persons for demo city activities (December 2006)</li> <li>• Presenting the SWITCH Project in Alexandria on a regional Arab Satellite channel (Beatty CEDARE Board of Trustees, and Members of the Arab Water Council, UNDP)</li> </ul>
Year 2 (Feb 2007 – Feb 2008)	41,761 <sup>(1)</sup>	37348	21536	2050	1784	5763	4473 <sup>(2)</sup>	<ul style="list-style-type: none"> <li>• SWITCH General Assembly Meeting &amp; Presenting Paper on SWITCH in Alexandria at SWITCH Scientific Meeting (Birmingham, January 2007)</li> <li>• Hosting and Organizing Learning Alliance Facilitation Training (CEDARE-Cairo, January 2007)</li> </ul>

								<ul style="list-style-type: none"> <li>• 1<sup>st</sup> LA meeting (January 2007)</li> <li>• 2<sup>nd</sup> LA meeting (March 2007)</li> <li>• 3<sup>rd</sup> LA meeting (June 2007)</li> <li>• LA facilitator participated in Documentation training in Lodz, Poland (June 2007)</li> <li>• Visioning workshop (July 2007)</li> <li>• IUWM Vision and Scenarios</li> <li>• LA facilitator and Co-facilitator hired</li> <li>• Established a functional and enthusiastic LA with stakeholders from all sectors</li> <li>• Complete Stakeholder Analysis Report</li> <li>• LA co-facilitator participated in LA facilitation training in Accra, Ghana (December 2007)</li> <li>• RIDA/Aquacycle Workshop (January 2008)</li> <li>• 4<sup>th</sup> LA meeting (January 2008)</li> </ul>
<b>Year 3 (Feb 2008 – Feb 2009)</b>	<b>44710</b> <sup>(3)</sup>	-	-	-	-	-	-	-
<b>Year 4 (Feb 2009 – Feb 2010)</b>	<b>20301</b> <sup>(4)</sup>	-	-	-	-	-	-	-
<b>Year 5 (Feb 2010 – Feb 2011)</b>	<b>19379</b> <sup>(5)</sup>	-	-	-	-	-	-	-

**Notes:**

1. 22,011+19,750 = 41,761. The 22011 refers to the sum for wp 6.2 from the original budget. 19,750 refers to half of the additional funds of 39500 for LA facilitation. The 39500 is to be used from month 19-30, thus 19750 was used from month 19-24 (second half of yr 2).

2. 4473 EUROS to be used in year 3 for 6.2

3. Additional request of funding is listed above.

4. Additional request of funding is listed above.

5. Additional request of funding is listed above.