



**Report on the INECO Syria
Stakeholder Workshop**
**“Building a common vision for mitigating water
pollution in the Barada River Basin”**
Sheraton Maaret Seydnaya, Damascus
Monday, September 10th 2007

Prepared by Studies and Integration Consulting
December 2007

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1. Introduction

The INECO Syria Stakeholder workshop was held under the auspices of the Deputy Minister of Irrigation, Dr. Souliman Ramah, at the Sheraton Maaret Seydnaya Hotel, on Monday, September 10th 2007. The workshop aimed at strengthening the alliance between the INECO Research Team and Local Stakeholders, and at providing a platform for constructively engaged dialogue on water pollution in the Barada River Basin. Furthermore, it aimed at exploring the perceptions of participants on causes and deficiencies contributing to the water management issue, and at initiating a constructive discussion on possible actions to address these. The workshop was attended by 54 participants from various ministerial departments, governmental agencies, regional authorities and NGOs (Annex II of this document provides a complete list), and by local press representatives.

This document provides a comprehensive summary of the event in terms of discussions held and outcomes achieved, and is structured as follows:

- Section 2 provides a comprehensive summary of discussions held during the workshop.
- Section 3 presents the outcomes of the workshop survey on water pollution causes and effects, and on possible alternative solutions.
- Annex I presents the event programme.
- Annex II lists the workshop participants.
- Annex III complements the 3rd Section of the document, by providing information on the background of the survey respondents.

All material relevant to the workshop can be found at the corresponding section of the INECO web site at: <http://environ.chemeng.ntua.gr/ineco/Default.aspx?t=382> .

2. Discussion Summary

Session 1: Introduction

The workshop started with the welcoming address of Dr. Jamil Falloh, Water Resources Manager in the Greater Damascus area, and representative of the Ministry of Irrigation. Dr. Falloh elaborated on water pollution issues in the Barada River Basin, explaining that wastewater discharged without prior treatment imposes great health and environmental concerns. He pointed out that the Government is undertaking new projects, and has embarked on a large investment programme, aimed at the building of new wastewater treatment plants.

After the opening, Prof. Dionysis Assimacopoulos, the INECO Project Coordinator made an introduction to the concepts of INECO by presenting the broader context and challenges for water management in the MENA Region, and the specific purposes and methodology of INECO. He explained the purposes of the workshop, and the opportunities that it can offer to both the project but most importantly to the local stakeholders who are participating in this effort.

Session 2: Water pollution in the Barada River Basin – Causes and Effects

Session 2 of the workshop was initiated by Eng. Malek Al Haddad (Studies and Integration Consulting, SIC). Eng. Haddad pointed out that respect towards the environment is a responsibility which is shared among individuals, communities, organizations and the Government. He specifically stressed that the role of policy makers is to establish and implement a practical and applicable framework for integrating the management of water resources in the national context, taking into account the experience and best practices already applied in other countries.

Then, he presented an overview of the current institutional and economic setting for water quality management in Syria, and made an introduction to the water management issue that was the theme of the workshop, i.e. “Water Pollution from household, industrial and agricultural drainage water in the Barada River Basin. Eng. Haddad showed many photos from the Barada River, from its source to the Otayba Lake, and the end point of the river. The photos unveiled many pollution sources around the river. Furthermore, he pointed out the increased urbanization of the greater Damascus Area during the last 40 years, demonstrating satellite photos. He closed his presentation by providing a tentative illustration of the institutional and economic causes and effects of the water management issue to be further discussed in the next sessions. This illustration is presented in Figure 1.

Subsequently, Ms. Eleni Manoli (Chemical Engineer, National Technical University of Athens), presented the concepts for Integrated Water Resources Management, and instruments and approaches for preventing and controlling water pollution. During this presentation, workshop participants were asked to complete on several pieces of “post-it” paper, their perceptions on the causes and effects of water pollution in the Barada River Basin. The new cause-and-effect tree, according to the perception of local stakeholders is depicted in Figure 2.

Session 3: Introduction to building objectives

The 3rd Workshop Session involved discussions among the workshop participants on causes and potential solutions to the problem, which has become extremely acute and raises big concern among all authorities and parties concerned.

Mr. Jamal Jarad, (Ministry of Housing) focused on fees for wastewater treatment. He explained that these are calculated as an additional percentage of 7-8% of the water supply bill. These fees are collected only for the few large cities that have wastewater treatment plants. Presently, studies have been launched for 23 wastewater treatment plants in the Damascus countryside, in order to alleviate the pollution of the Barada River. Concerning the application of water-related legislation, Mr. Jarad mentioned that the provisions of Environmental Law No 50 are very clear on issues that concern law violation.

Ms. Rim Abedrabboh (Water Department of the Ministry of Local Administration and the Environment), noted that the application of the law for both private and public sector establishments is a very crucial issue, and that it is very important to harmonize and integrate the different sectoral policies. She further talked about the re-allocation of water through the use of economic instruments, as means to reduce resource overexploitation, pointing out that the achievement of this goal should be based on a participatory approach, involving all the

responsible bodies in order to identify and agree upon solutions. Additionally, she elaborated on the change of current concepts related to water, stating that *“everybody talks about food security; however we need to be aware of the relation between food security and water security. For example, if we have an agricultural plain which produces water-demanding crops for export, we need to mention the cost of water and the cost of exploiting our own resources. This use aggravates water deficiency, not just for future generations but also for this generation. Currently, the Barada River Basin is the one which faces the most important deficit in Syria.”* She further pointed out that there are many studies on this issue and their results need to be implemented, and mentioned that the Environmental Law is still not applied because there are many difficulties to apply it in the public sector due to the lack of political will.

Subsequently, Ms. Shahira Kasea (Water Directorate of the League of Arab States), pointed out that solutions to problems are already known. What is needed are decisions, and their application should originate from decision-makers at the high political levels, and not from experts, as is the common problems in the Arab world. She stressed that all ministries should be involved, in order to create a very specific, targeted and clear water policy. This should be presented to the high-level decision makers in order to be applied.

Subsequently, Prof. Assimacopoulos explained that possible thematic areas for exploring solutions to water pollution pertain to five different areas: (a) Enforcement, (b) Encouragement, (c) Engineering, (d) Education, and (e) Economics.

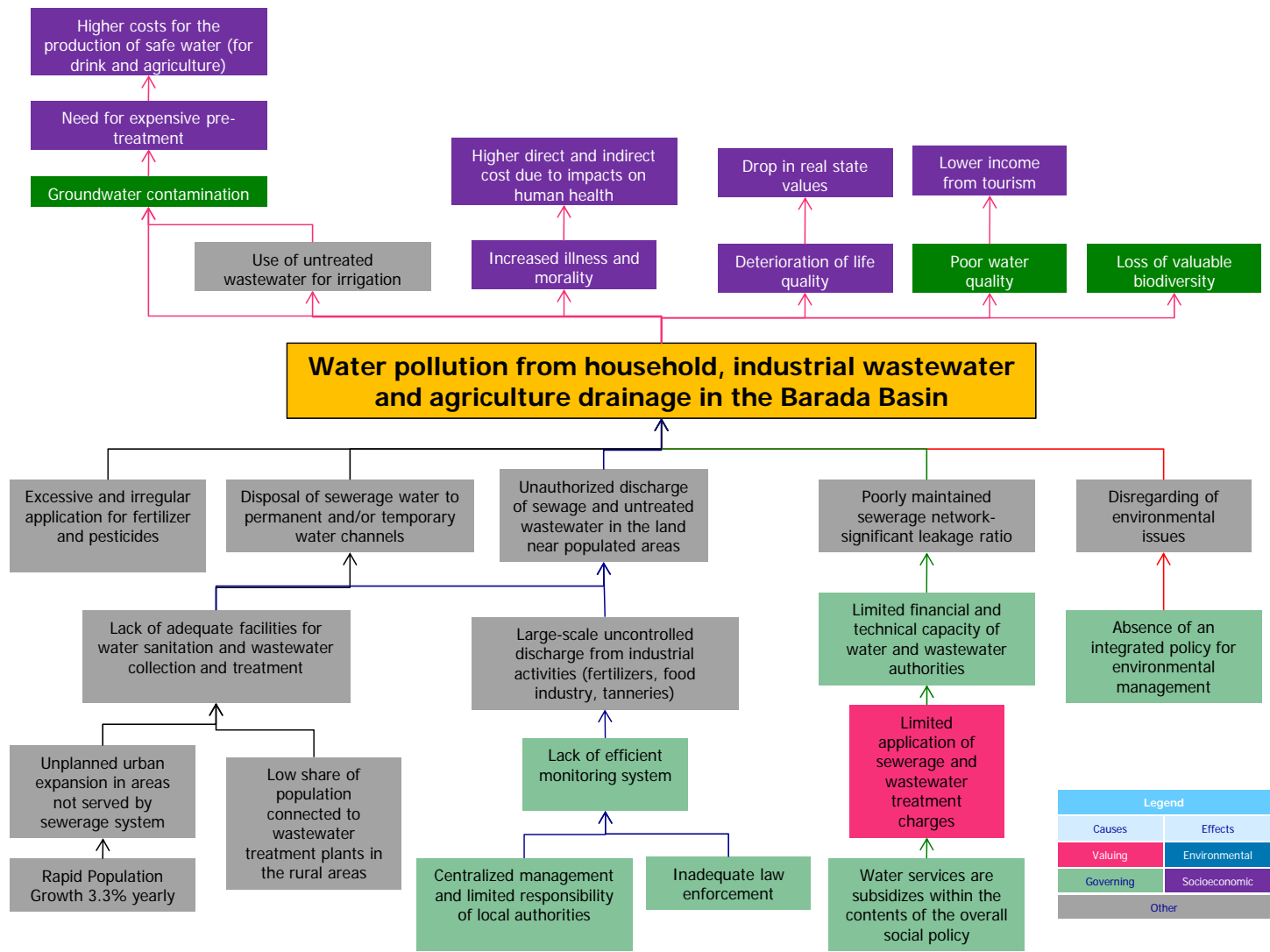


Figure 1: Tentative illustration of causes and effects of water pollution in the Barada River Basin (as presented by Eng. Malek Al Haddad)

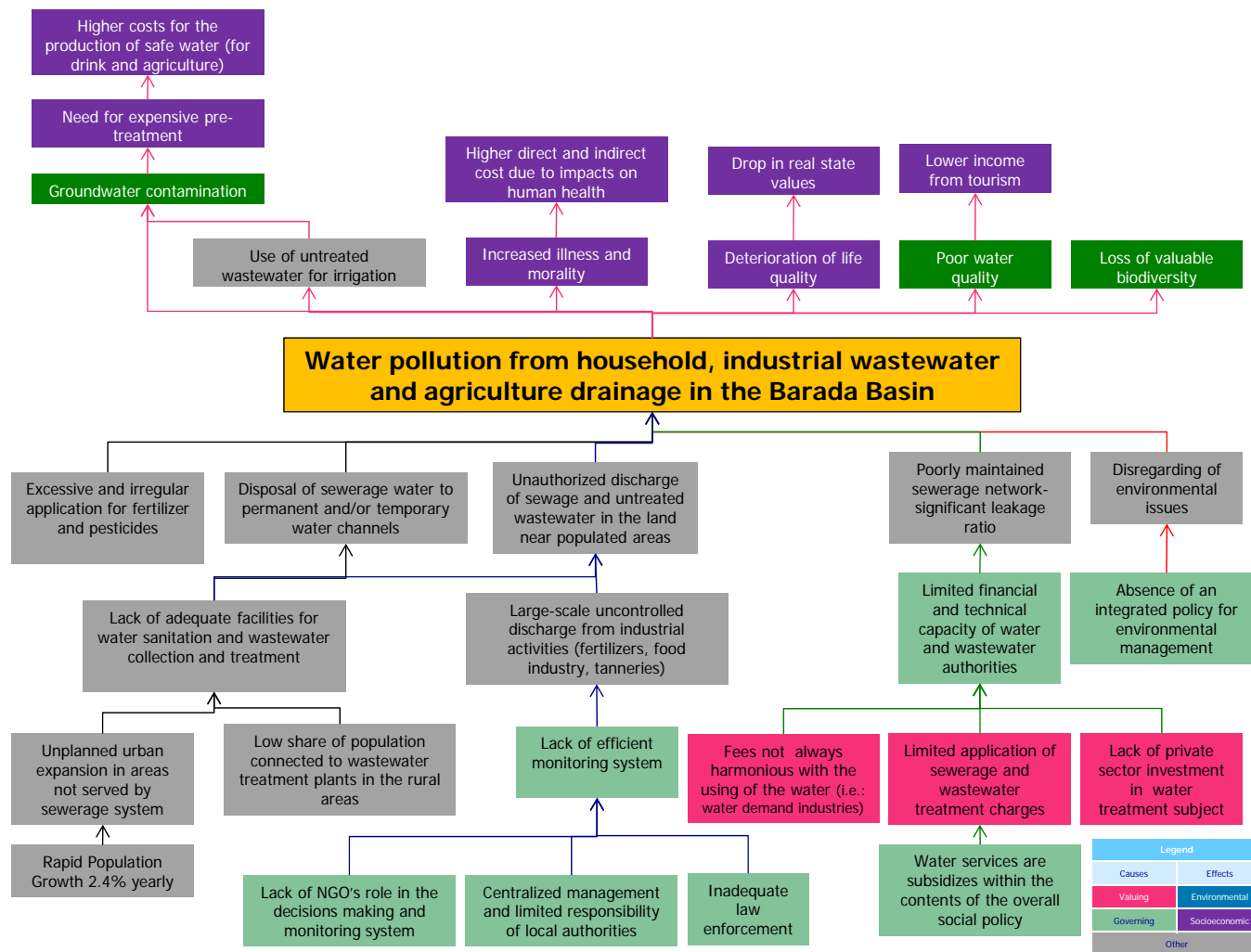
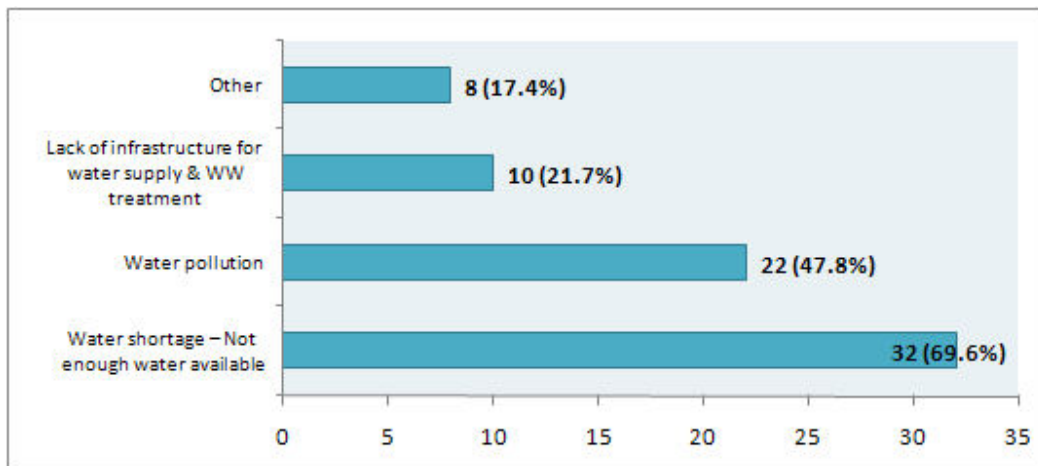


Figure 2: Causes and effects of water pollution in the Barada River Basin, as mapped by the workshop participants

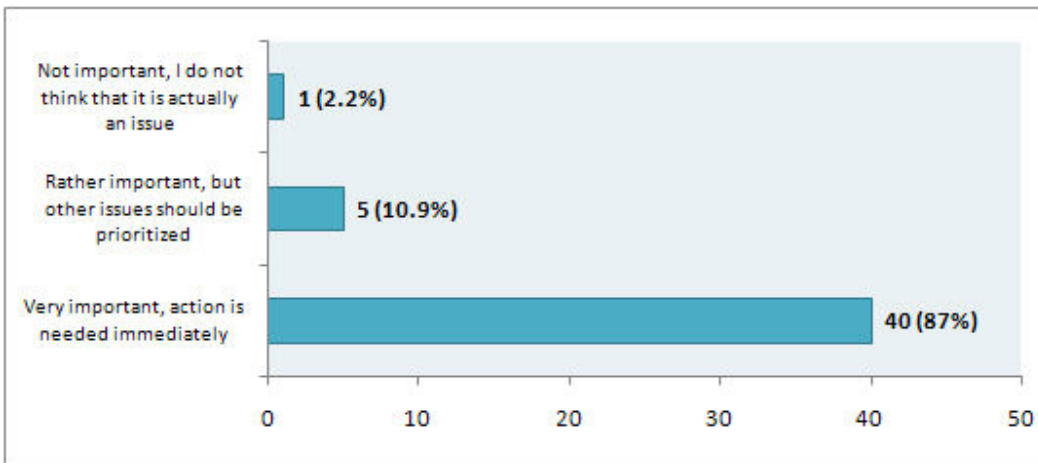
3. Workshop survey results

At the end of the workshop, participants were asked to fill in a simple questionnaire, containing multiple-choice and free questions. The questionnaire was answered by 45 participants, and results obtained per question are presented below. The respondents' background is presented in Annex III.

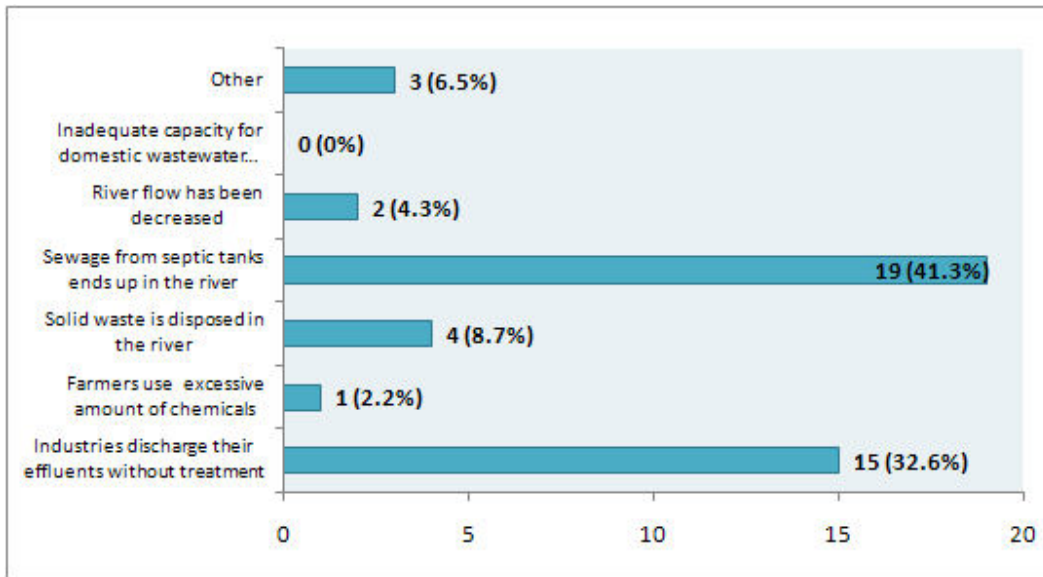
Which do you think is the most significant water-related problem currently faced in the Barada River Basin?



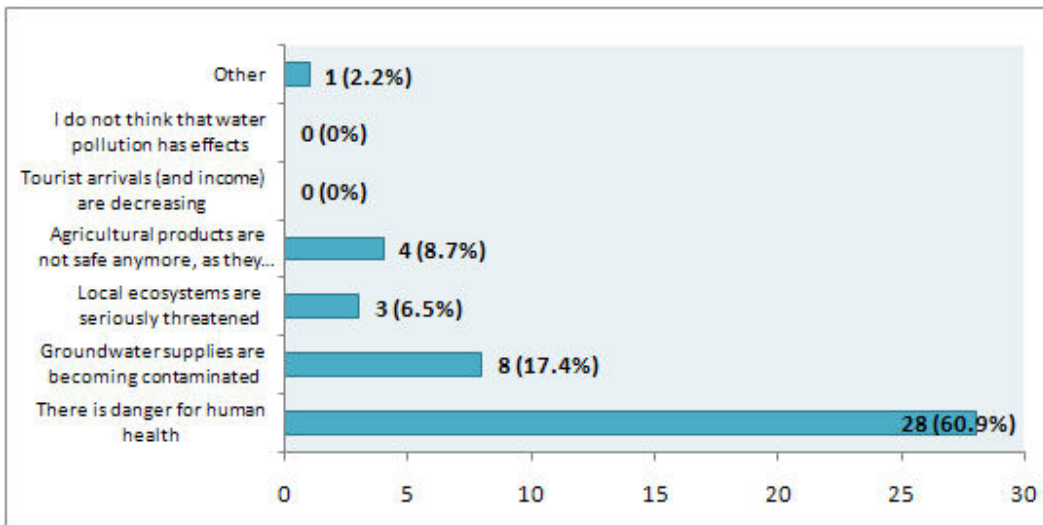
How significant do you think that water pollution is in your region?



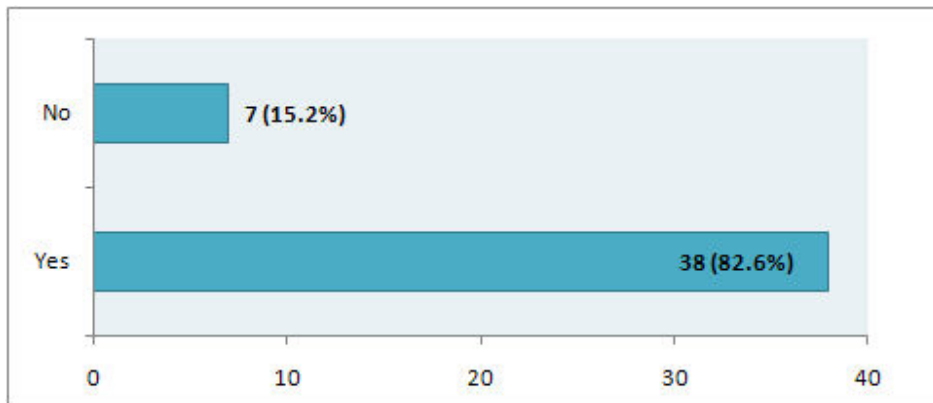
**Which, according to your view, is the most important cause of water pollution in the Barada River?
(only one answer possible)**



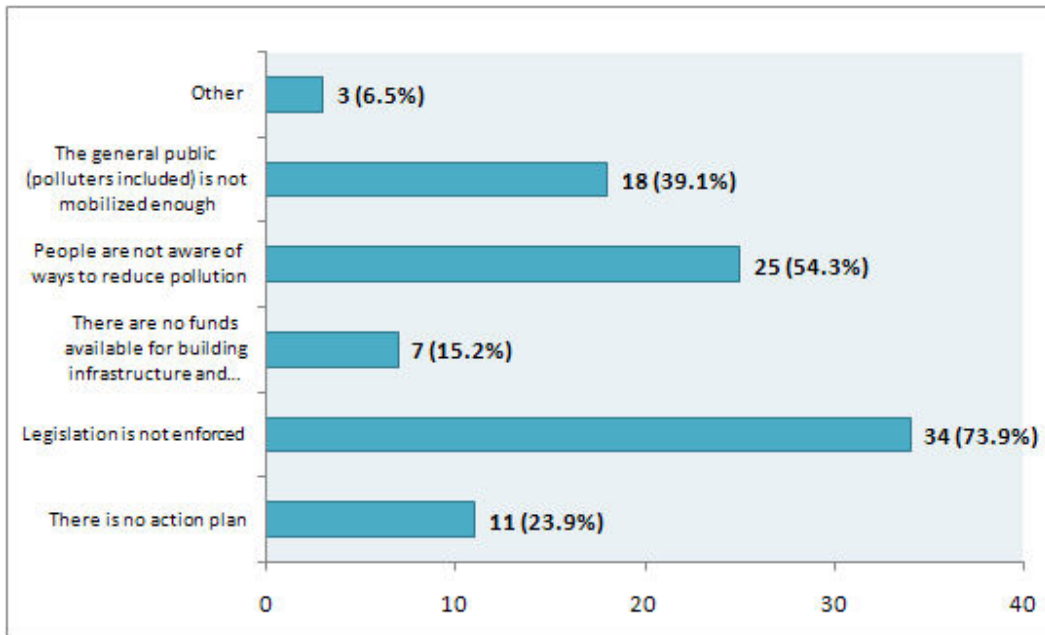
Which, according to your view, is the most important effect of water pollution



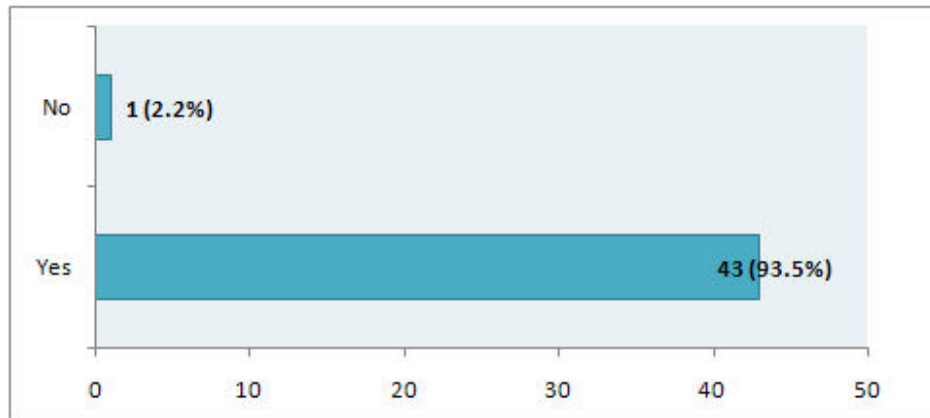
Does water pollution affect your daily activities?



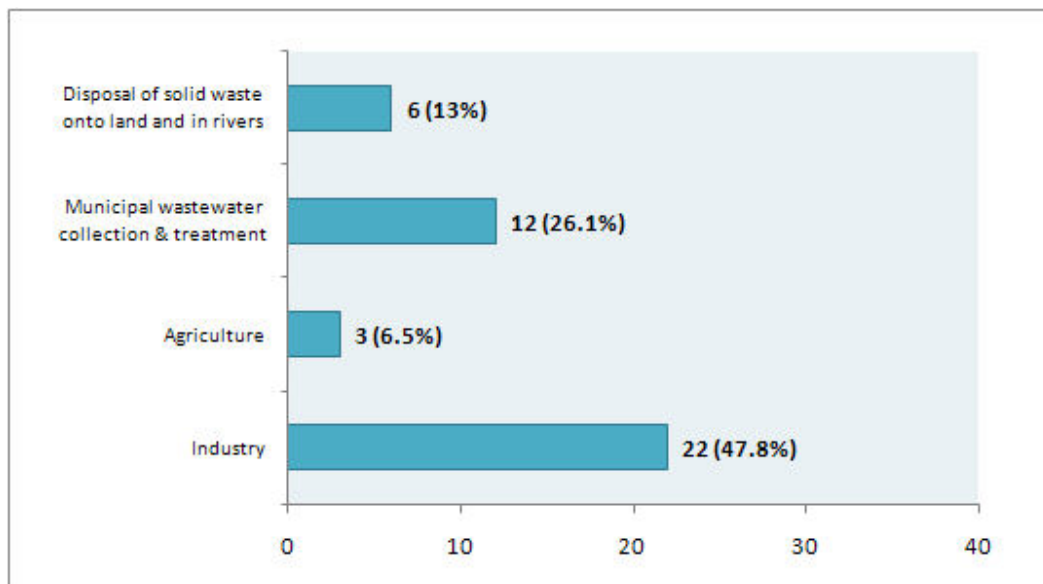
Which, according to your view, are the underlying cause(s) of water pollution? (more than one answer possible)



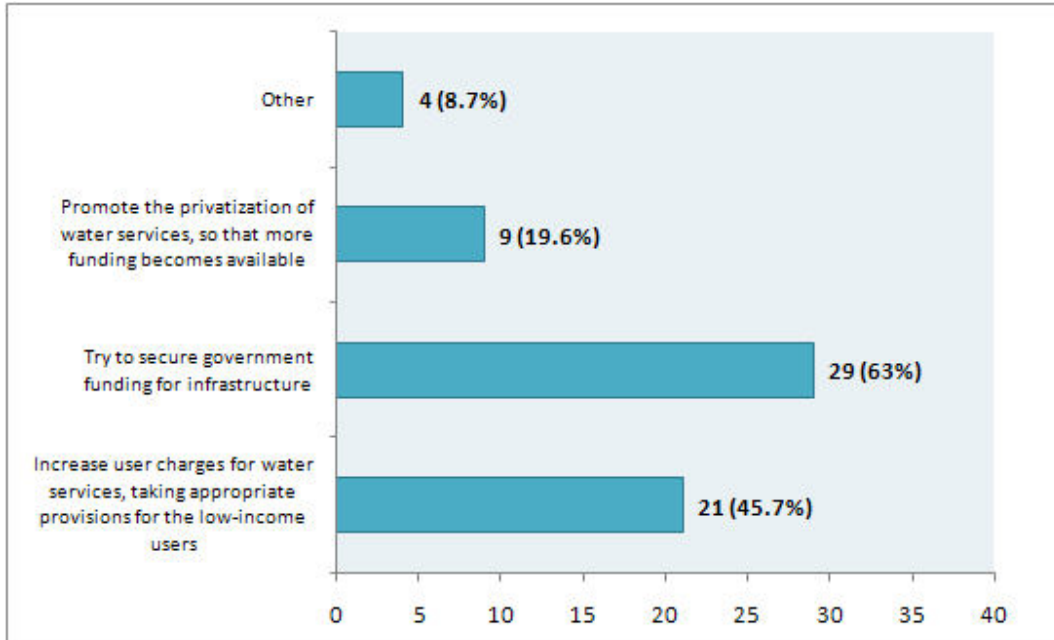
According to your personal view, are there administrative problems or constraints that should be overcome for effective solutions to be implemented?



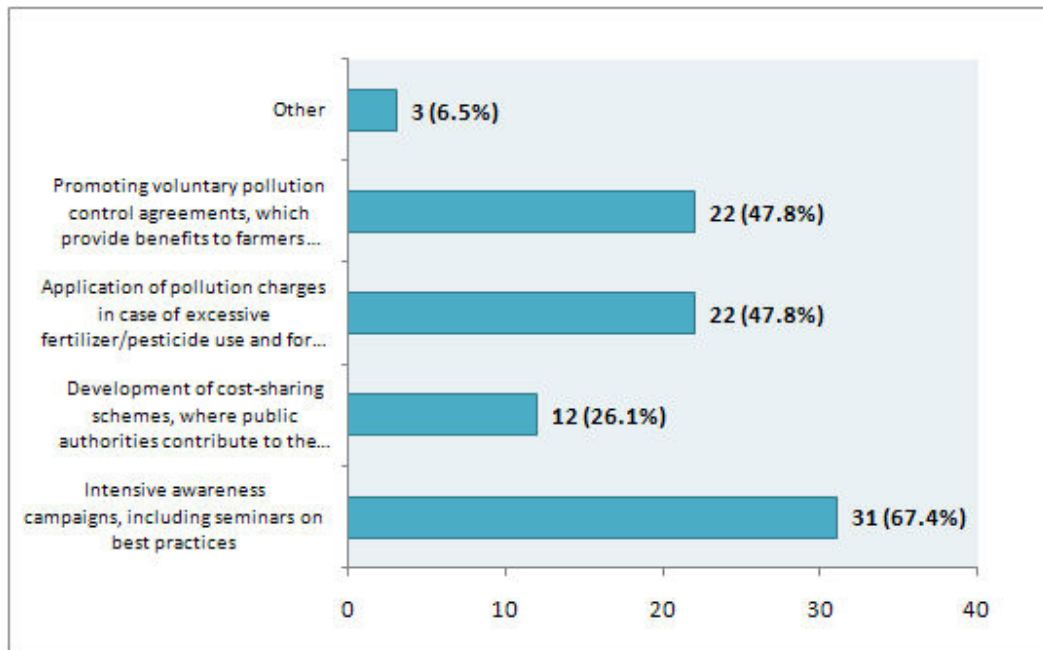
Which, according to your view, is the primary source of water pollution? (only one answer possible)



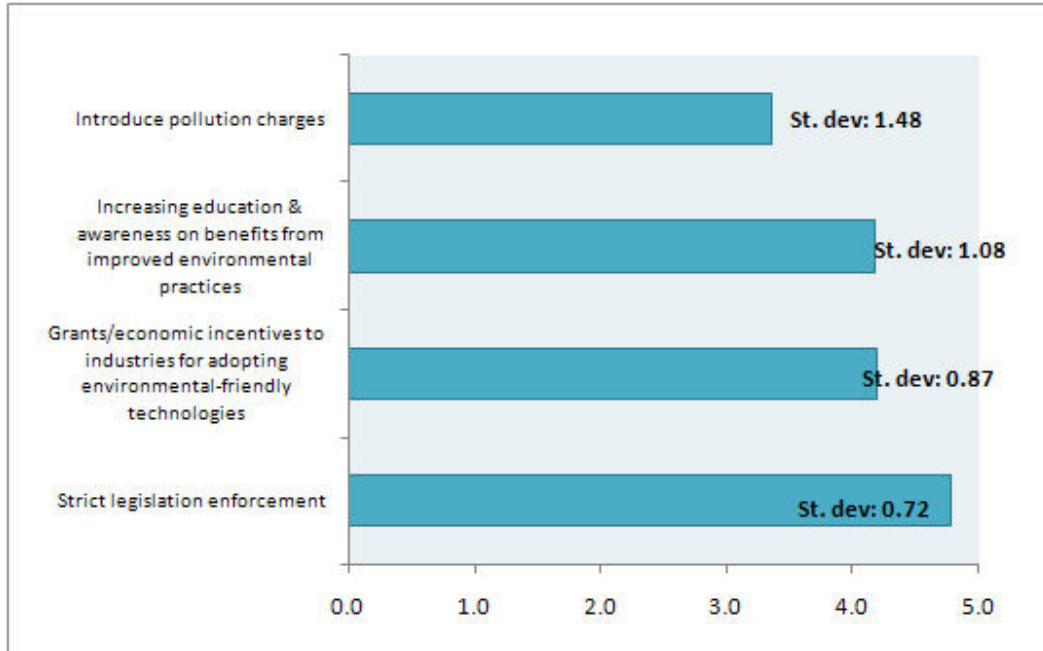
It can be claimed that water services cannot respond to the increasing need for new infrastructure, due to financial constraints. How do you think that this issue can be addressed? (more than one answer possible)



Pollution from agrochemicals is often attributed to lack of awareness of farmers on how to apply fertilizers and pesticides. Which of the following measures you think would be most likely to have a significant impact on the current agricultural practices? (more than one answer possible)



Industries, including small manufactories, are considered primary contributors to water pollution. Please rank the following measures according to the possible impact that they may have, using a scale from 1 (no contribution) to 5 (high contribution)



4. Media Coverage

The workshop was attended by various media representatives. Several articles were published in local newspapers and websites. The following interviews were given to the local media:

- Prof. D. Assimacopoulos (INECO Project Coordinator) gave a 45-minute interview on the workshop at the Syrian Television; the interview was accompanied by coverage of the workshop and small interviews from its participants.
- Eng. Malek Al Haddad gave a radio interview on the event.

Material from the press coverage is provided at the pertinent section of the INECO website (<http://environ.chemeng.ntua.gr/ineco/Default.aspx?t=388>).

Annex I: Event Programme

09:00 – 09:30	Registration
Session 1: Introduction	
09:30-10:00	Welcoming address <i>Dr. Jamil Falloh, Representative of Ministry of Irrigation, Water Resources Manager in the greater Damascus area.</i>
10:00-10:30	The INECO Project: Principles and Approach <i>Prof. D. Assimacopoulos, School of Chemical Engineering, National Technical University of Athens</i>
10:30-10:45	Coffee Break
Session 2: Water pollution in the Barada River Basin	
10:45-11:15	Water pollution issues in the Barada River Basin. A tentative identification of causes and effects <i>M. Haddad, Studies and Integration Consulting</i>
11:15-12:15	Discussion on the focal problem of water pollution, its causes and effects
Session 3: Identifying objectives and alternative solutions	
12:15-12:45	Alternatives and best practice examples from international experience <i>E. Manoli, School of Chemical Engineering, National Technical University of Athens</i>
12:45-13:00	Introduction on building objectives <i>Prof. D. Assimacopoulos, School of Chemical Engineering, National Technical University of Athens</i>
13:00-14:00	Discussion on objectives, alternative options and their implications
14:00-14:15	Completion of assessment questionnaires
14:15-16:00	Lunch

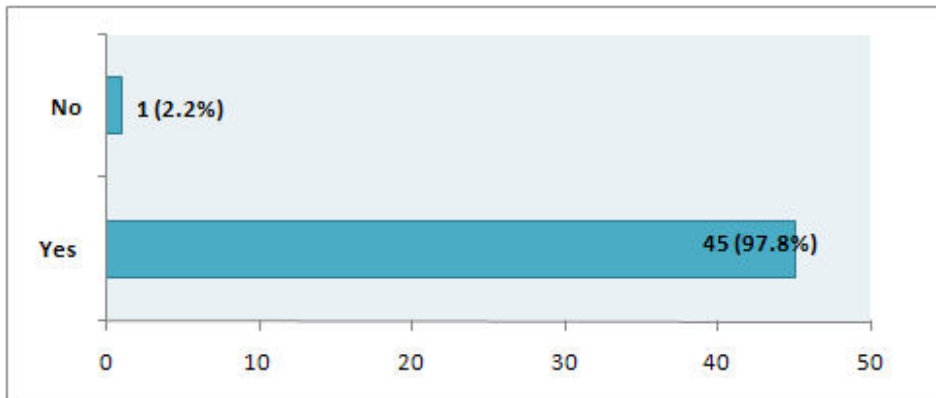
Annex II: List of Workshop Participants

	Name	Affiliation
1	Dr. Nasser Nasser	Atomic Energy Commission of Syria
2	Hanan Masalkha	General Commission For Scientific Agricultural Research
3	Adel Marai	Syrian TV
4	Dr. Samir Safadi	Syrian Environment Society
5	Rani Daioub	General Company For Engineering Studies And Consulting
6	Watheq Rassol-Aga	Supreme Council of Sciences
7	Maan Daoud	General Commission For Scientific Agricultural Research
8	Ahmad Majar	General Commission For Scientific Agricultural Research
9	Kaian Joumaa	Press
10	Suliman Atia	Press
11	Shaheera Qaseea	League of Arab States
12	Michel Khaiat	Press
13	Amal Marouf	Press
14	Dr. Abd-Jabar Dahhak	Friends of Damascus Society
15	Tamim Al-Inklizi	Mayor of Al-Mleha municipality
16	Ahmad Ghazi	Industrialist
17	Eng. Laila Darra	Damascus Governorate, Directorate of Environment
18	Eng. Ferial Housaini	Damascus Governorate, Directorate of Environment
19	Assaad Dakhil	Water Resources Directorate in Damascus and Damascus Rural
20	Kassem Natouf	Water Resources Directorate in Damascus and Damascus Rural
21	Abdelhakeem Saad-Deen	Water Resources Directorate in Damascus and Damascus Rural
22	Nahida Fallouh	Water Resources Directorate in Damascus and Damascus Rural
23	Yassin Touma	Water Resources Directorate in Damascus and Damascus Rural
24	Ibrahim Yakhour	Institutional and Sector Modernisation Facility Project
25	Lian Catinis	Institutional and Sector Modernisation Facility Project
26	Ahmad Zlita	General Commission For Scientific Agricultural Research
27	Dr. Ramez Nasser	Atomic Energy Commission of Syria
28	AbdRahman Kassem	Atomic Energy Commission of Syria

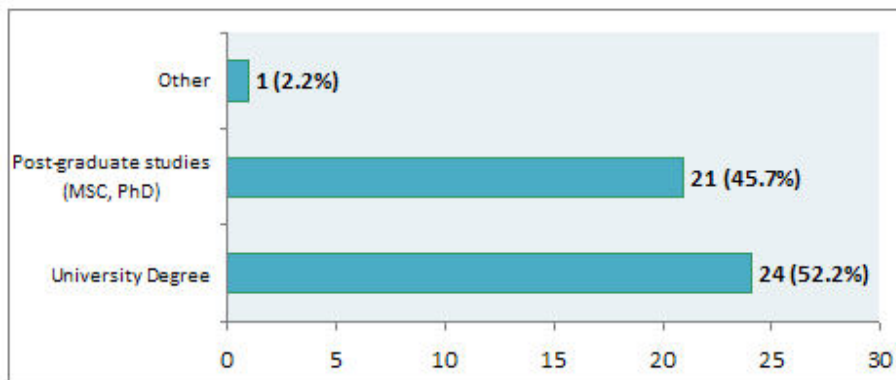
	Name	Affiliation
29	Dr. Boulos Abo-Zakhem	Atomic Energy Commission of Syria
30	Iad Abo-Madi	Atomic Energy Commission of Syria
31	Rania Hafez	Atomic Energy Commission of Syria
32	Maissa Aawa	State Planning Commission
33	Instissar Mardini	Ministry of Utilities and Housing
34	Reem Abd-Rabbo	Ministry of Local Administration and Environment
35	Hanan Shawki	Ministry of Utilities and Housing
36	Jamal Jerad	Ministry of Utilities and Housing
37	MariamMashta	Ministry of Irrigation
38	Moukhtar Dana	Ministry of Irrigation
39	Souhair Khaiat	Ministry of Irrigation
40	Mahmoud Abdouni	Ministry of Irrigation
41	Imad Fattal	Ministry of Irrigation
42	Loutfi Nemer	Ministry of Irrigation
43	Youssef Toutou	Ministry of Irrigation
44	Reem Nasser-Alla	Ministry of Irrigation
45	Kinana Moustafa	Ministry of Irrigation
46	Taher Haj-Hassan	Ministry of Irrigation National Water Resource Commission
47	Ahmad Shehaddat	Ministry of Irrigation National Water Resource Commission
48	Maiada Koudmani	Ministry of Irrigation Water Quality Monitoring Directorate
49	Najeeb Hassoun	Ministry of Agriculture National Project for Transforming to Modern Irrigation
50	Hussein Alawad	Ministry of Agriculture National Project for Transforming to Modern Irrigation
51	Zouia Dagouz	Ministry of Tourism
52	Abeer Alnouss	Ministry of Tourism
53	Ahmad-Nizar Alwawi	Ministry of Finance
54	Ahmad Alhaj-Hassan	

Annex III: Background of respondents to the workshop survey

Permanent residents of the greater Damascus area



Educational Background



Age Group

