



REPORT ON SWIM-SM

2.2.3a TRAINING WORKSHOP AND STUDY TOUR FOR DEVELOPING THE CAPACITY OF PROSECUTORS AND INVESTIGATORS FOR THE ENFORCEMENT OF WATER & ENVIRONMENT LEGISLATIONS

3-18 June 2013

The Netherlands, Spain and France



umweltbundesamt[®]

.....Water is too precious to Waste



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1. Background, Objectives

1.1 INTRODUCTION

The Sustainable Water Integrated Management – Support Mechanism (SWIM-SM) is an EC-funded Regional Technical Support Project that includes the following Partners Countries (PCs): Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, Libya, Syria and Tunisia. The Project is funded by the European Neighborhood and Partnership Instrument (ENPI) South/Environment. It aims to promote actively the extensive dissemination of sustainable water management policies and practices in the region given the context of increasing water scarcity, combined pressure on water resources from a wide range of users and desertification processes, in connection with climate change.

In SWIM-SM countries, many cases of non-compliance with water and environmental legislations are committed without prosecution due to lack of capacity in producing accredited indicting evidences and inadequacy in capacity for prosecution. This failure cannot be attributed to lack of legislations but repeatedly due to the inadequate enforcement capacity including monitoring and inspecting in general and near absence of trained and qualified prosecutors in particular. The efficiency of court systems addressing water and environmental non-compliance varies widely among SWIM-SM PCs, with some having acceptable efficacy while others are seriously inefficient. The number of judges and prosecutors who are familiar with water and environmental laws and requirement in SWIM-SM PCs is extremely insufficient.

In this connection, SWIM-SM has convened a training workshop and study tour, entitled “Development and execution of a capacity development program for water & environment prosecutors and investigators” in The Netherlands, Spain and France, from 3rd to 18th of June 2013.

1.2 OBJECTIVES

The overarching objective of the activity is to develop the capacity of water and environment prosecutors and investigators to ensure compliance with legislations for better IWRM.

The specific objectives encompass capacity development in the following areas:

- (i) methods to prepare sound environment and water legislations & by-laws including permitting and licensing,
- (ii) recognition of best institutional and legislative structures and mechanisms needed to address water and environment violations,
- (iii) appropriate measures and techniques to be undertaken by water and environmental inspectors, regulators and prosecutors to address violations and noncompliance
- (iv) measures for enabling community participation in preventing non-compliance with water and environment noncompliance.

2. Methodology and Approach

The participants of this training were water and/or environmental government officials at mid career level. A total number of 18 water and environment professionals and 10 prosecutors and legal advisers from 9 SWIM-SM PCs (in total 28 trainees) participated in the training and study tour.

The first component of the capacity building activity consisted of a training workshop with presentations and discussion, hosted by UNESCO-IHE in The Netherlands in Delft. A second component was a study tour in the three European case countries The Netherlands, Spain and France. These countries are recognized



for their advanced systems in monitoring, inspecting and prosecuting cases of water and environment violations.

The workshop and study tour promoted discussion, interaction between the participants, discussion of actual cases of non-compliance with water and environment regulations, field visits for monitoring stations, operating accredited laboratories, remote and automated monitoring systems, etc. The workshop included the following:

- Power point presentations.
- Sharing of experience of some participants during visits and in classroom discussions on their national experience in monitoring, inspecting, documenting, reporting and prosecuting water and environment legislations and making use of the three visited countries' experiences. This included discussion of suggested policies for effective enforcement of water and environment legislations.
- Facilitated discussions to identify options to link inspection, accredited monitoring, investigating, reporting and prosecuting tasks to water regulation and management.
- Presentations and interventions from invited speakers and SWIM key-expert to bring national, regional and global experience into perspective.

Copies of training material developed by SWIM-SM key expert, all the presentations and other supporting documents were distributed to participants on memory sticks.

3. Topics addressed during the training course

The program started off with a Workshop hosted by the UNESCO-IHE in Delft, Holland, 3-5 June, in contract with the SWIM project. The programme featured presentations by the SWIM project KE, a NKE of legal background and UNESCO-IHE staff and a consultant. The Workshop was intended to provide the participants with a logical and conceptual framework for the appreciation of the complexity and multi-disciplinarity of the enforcement of water and environment laws, and for an understanding of the relevant *problematic* and of approaches in handling it.

The NKE gave two presentations, illustrating the scope, contents and main features of contemporary water resources legislation from a comparative law perspective. He then zeroed in on the specifics of water laws enforcement, with actual examples of relevant legislative provisions, and with a sample of water abstraction and water pollution law enforcement cases drawn from a variety of jurisdictions (Australia, Hong Kong, India). He also addressed the institutional aspects of the administration and enforcement of water resources legislation, from a comparative perspective.

The UNESCO-IHE experts focused on the Dutch law enforcement perspective from a legal/administrative angle, with particular emphasis on compliance monitoring by water resources users, including polluters. In this context, the speakers illustrated an analytical model developed by the Dutch Ministry of Justice to measure the level of compliance and the effectiveness of enforcement (so-called "Table of Eleven"). The SWIM project KE provided the "how-to" get water/environmental law enforcement off the ground perspective, with a series of five interlocking presentations. The UNESCO-IHE complemented the latter with an overview of professional qualifications and training requirements of water law enforcement officers.

The presentations invariably drew questions from the participants. When invited to provide their assessment off-the-cuff, at the close of the Workshop, all the participants voiced appreciation for the



effort to shed light on a much neglected aspect of the water/environment legislation, and for the quality of the speakers.

3.1 TOPICS COVERED IN THE WORKSHOP

The workshop covered the different topics linked to capacity development of water and environmental inspectors, analysts and prosecutors as follows:

Module 1: Presentations on the legal and institutional framework for water management

- Rule of law as a necessity for Integrated Water Resources Management (IWRM).
- Scope and contents of legislation for the sustainable management of water resources and of the freshwater environment, including licensing and permitting, within the IWRM context.
- Types and levels of inspection and authority that should be given to inspectors by the water and environmental regulating authorities.

Module 2: Presentations on compliance and enforcement of water and environment legislations

- Legal machinery for the enforcement of water resources legislation
- Institutional arrangements for the administration, monitoring and enforcement of water resources legislation
- Technical and administrative capacities needed for inspection, monitoring, measuring, recording and reporting for indicting non-compliance and enforcement of water and environment legislations.

Module 3: Presentations on capacity and methods for compliance and enforcement in water management

- Qualifications, training, experience and competence of inspectors, field and testing laboratory operators and prosecutors to ensure compliance and enforcement of water & environment legislations.
- Universally recognized and accredited methods of sampling, monitoring, measuring and reporting including the necessary precision, accuracy, reproducibility, sensitivity, and detection limit of the analytical monitoring and measuring methods.
- Reliability and credibility of evidence of non-compliance including routine inter and intra-calibration, maintenance and operation of monitoring systems, sampling gears and measuring instruments.
- Minimum acceptable Quality Assurance (QA) and Quality Control (QC) programs including blind samples, blanks, replicates, spikes in water and environment monitoring and inspection systems.

Module 4: Presentations on reporting and monitoring

- Proper documentation of all aspects related to methods of monitoring, inspection, sampling, analyses and reporting.
- Area monitoring, citizen complaints and community involvement for better compliance with water and environment legislations.

Closing session:



- Overall knowledge and lessons learnt
- Group brain storming and discussion: what could be applied at home?
- Coordinated role of water officials, the environment inspectors and monitors and how they will complement the role of the prosecutors in enforcing water and environment legislation's.
- Feedback and evaluation by participants
- Certificates and closing of the workshop

For successful attendance of the workshop at IHE, the participants received a certificate of participation.

3.2 TOPICS COVERED IN FIELD VISIT - NETHERLAND

The Workshop was followed and complemented by a study tour to the National Water Authority (*Rijkswaterstaat*) in Lelystad (6 June), and to the Dutch Delta Water Board in Dordrecht (7 June). The Study tour had been organized by UNESCO-IHE in contract with the SWIM project.

In Lelystad, presentations by the host institution illustrated the Dutch institutional architecture for water resources management at the national, provincial, regional (Water Boards), and local levels, and dwelled upon the modalities and manner of compliance monitoring, inspection and enforcement action by, in particular, the water administrations at the two principal levels of government – i.e., national (*Rijkswaterstaat*) and regional (Water Boards – *Waterschappen*) – in relation to, in particular, water pollution. Given the multiplicity of governmental actors involved, the Water Authority's law enforcement action, in particular, calls for a high degree of cooperation with all such actors – something which did not seem to represent a serious challenge however in the Dutch context.

In Dordrecht, the participants were exposed to the specific activities of the local (Dutch Delta) Water Board in the matter of, in particular, water-related permitting, including for the discharge of wastewater into freshwater bodies, and relevant compliance monitoring and enforcement. Land use controls were also mentioned in connection with, in particular, the protection of groundwater quality from pollution, with good coordination between the different levels of government authority involved. The presentations were followed by a visit of the local polder museum (*Kinderdijk* Museum), and a visit of the canal and traditional windmills which were once used to pump excess water out of the polder and keep the sea waters nearby at bay.

The visits provided useful illustrations of how the Dutch system of water resources management and the relevant government administration – including compliance monitoring and enforcement – works. However, this came about as a result of questioning by the participants and the accompanying SWIM team of instructors, as the presentations by the hosts were pitched at a fairly high level of generality compared to the specific scope and purpose of the study tour, and to the interests of the participants as a result.

The outcomes of this visit as expressed by the participants included knowledge on the following:

- The "Polluter pays principle" could be used in our region as a tax strategy.
- Tax can be calculated similarly as in Netherlands to get the fee per person /year.
- Inspection Monitoring Program Plan frequency should be based on quantities of discharge and Concentrations of pollution.
- Public participation should be taken into consideration in any future water strategy.
- Information and data related to water quantity and quality should be published.
- Water laboratories should be updated to provide the operators with accurate and precise results.



- Pollutants, discharges, population increase should be entered in a data base system.
- Water laws and regulations should start by promoting compliance then enforcement.
- The water management should be well delegated. The parties could take the form of national level committee, water boards, municipalities and the beneficiaries.
- The interaction between national and regional water boards with local authorities resulted into a well- organized and efficient water management.
- Horizontal coordination and involving relevant sectors in all aspects of water management is fundamental for IWRM.
- The water boards have the ability to raise money at the local level to carry out their objectives.
- The windmill system using renewable energy is a great solution for managing water resources and reducing the risk associated with flood episodes.

3.3 TOPICS COVERED IN FIELD VISIT - SPAIN

Study Tour in Spain (Seville, Daimiel, Cd. Real, Madrid, 10-12 June)

On 8 June the SWIM project party travelled from Amsterdam to Seville, where the Spanish leg of the study tour, also organized by UNESCO-IHE on contract with the SWIM project, began.

On 10 June, the participants were inducted to the Spanish water legislation and to the relevant government – and non-governmental - water administration at the University of Seville, seat of Spain's New Water Culture Foundation. The host speaker provided an ample and detailed illustration of the complex Spanish regulatory system of water resources use and protection from pollution, and of its administration by, in particular, the central and the river basin government administrations. He also dwelled at length on the influence of the European water directives, and on the problematic state of compliance of the Spanish legislation and administration with them. The speaker made also specific mention of issues of water law enforcement, with reference to the special environmental competencies public prosecutors in each Province have, to the training in progress of judges in environmental law issues, to the corps of field inspectors attached to the River Basin Organizations (*Confederaciones Hidrograficas*) and to the Regions (*Comunidades Autonomas*), and to the environmental crimes units of the national police force (*Guardia civil*).

From Seville the SWIM project party moved on to the village of Daimiel and to Cd. Real, on 11 June. The former location sits amid a National Park, whose natural features have long been under threat due to protracted over-extraction of groundwater. The aquifer is on its way to recovery, however, thanks to rigorous groundwater users-enforced restraint on groundwater pumping. In Cd. Real the participants visited the Guadiana River Basin Organization. They were received and addressed to by the President/CEO, and by representatives of the Water Rights Administration and Compliance unit (*Comisaria de Aguas*) of the RBO, among others. Whereas the former dwelled at (excessive) length on the generalities of water resources management practices and issues in the Guadiana river basin, the latter provided – on an explicit request from the floor - useful and detailed information on the organization and practice of monitoring and sanctioning non-compliance with water abstraction licensing and with wastewater discharge permitting regulations. Particular attention was also devoted in this connection to the application of remote-sensing techniques in aid of monitoring compliance and, in general, of law enforcement, in international and domestic Spanish practice. The SWIM project party moved on to Madrid immediately after the meetings at the Guadiana RBO.



On 12 June, the party visited the Tagus River Basin Organization in Madrid. Presentations covered extensively the regulation of the use and protection of the State water public domain, and the organization and procedures for compliance monitoring and for sanctioning of non-compliance by the RBO's Water Rights Administration and Compliance unit (*Comisaría de Aguas*). In this particular connection, it was mentioned that the unit handles on average 1,000 inspections and sanction proceedings each year, against an average 15,000 applications/year for water abstraction, wastewater discharge, and other activities affecting the State water public domain. The water quality monitoring network in the basin was also illustrated at length, and a site visit arranged to a monitoring station in the vicinity of Madrid.

On balance, the study tour to Spain provided rich and targeted analyses of the Spanish water legislation, and of the relevant administrative organization and practices in the matter of water/environment legislation compliance monitoring, and of relevant enforcement.

The outcomes of this visit as expressed by the participants included knowledge on the following:

- An integrated water and environment legislation to control all water resources & water uses is necessary to avoid fragmentation and overlap in current water and environment laws.
- Central hydrologic Information System is necessary to provide water quantity and quality data parameters in real time and each 15 minutes by using automated monitoring systems, remote sensing and area monitoring techniques.
- They use this information to feed it in a decision support system that help decision makers in managing water resources and to develop informed water and environment policies.
- Data base in SWIM countries is not disclosed and often suffers from gaps, while in Spain it is available and free for all to use.
- Laboratories are well equipped in many of SWIM countries, however chain of custody and quality assurance need to be enhanced to provide credible evidence for indictment of water and environment law violations.

3.4 TOPICS COVERED IN FIELD VISIT - FRANCE

On 13 June the SWIM project party travelled from Madrid to Paris, for the start of the French leg of the Study Tour. This leg of the Study Tour had been organized by Mr. Jacques Sironneau, head of the water legislation office in the French Ministry of Ecology, Sustainable Development and Energy.

In Paris, the Study Tour participants were first presented with the main features of the complex regulatory system of water abstraction and wastewater disposal in effect in France, and of the relevant government administration, by Mr. Sironneau. The presenter alluded to compliance monitoring and enforcement, with a penalty system of administrative and criminal sanctions in place only since 1992, and consolidated into a unified system of environmental penalties with effect as of 1 July 2013. The following speaker, Mr. M.Ripoche, also of the Ministry of Ecology, Sustainable Development and Energy, dwelled upon the organization of the administrative police functions of the government water administration, notably at departmental level – involving compliance monitoring and imposition of administrative measures on offenders - and illustrated the complex web of coordination mechanisms in place. In particular, the twenty-five separate government entities initially tasked with police functions in the field of the environment were merged in January 2012 into two, respectively in charge of policing activities in relation to water and nature (the National Water and Aquatic Environment Office (*Office National de l'Eau et des*



Milieux Aquatiques – ONEMA), and of policing controlled installations and facilities. Interestingly enough, the yearly plans commit the staff of the various government units tasked with water resources law compliance monitoring and enforcement to dedicate 20% of their time to monitoring/reporting activities, with the goal of 600 checks carried out on average every year, nationally. Aggregate numerical data were also provided for the year 2011 regarding compliance monitoring and law enforcement action by all governmental actors concerned. All combined, and in addition to the national police force (*Gendarmérie nationale*), a total of 4,000 officers carry out compliance monitoring and law enforcement duties in the field of water resources (and nature protection) legislation nationally.

The two presentations which followed in Paris on 17 June a.m., given by, respectively, Mr. P.Boyer of ONEMA and Ms. C.Donnizaux of the Justice Ministry, (a) zoomed in on the principal government agency engaged in monitoring compliance with water legislation, and in water law enforcement generally, and (b) provided an overview of government policy in the matter of prosecutions of environmental offences. The Justice Ministry's policy in the matter of prosecution of environmental offences/crimes is aimed at consulting with local actors with a view to adapting prosecution strategies to local conditions and means, coordinating with the government actors in charge of compliance monitoring and law enforcement, and the education and training of public prosecutors in environmental matters. The legal system's responses to environmental crimes were also illustrated. In addition to compounding of offences – which has the effect and advantage of not staining the offender's criminal record - and to out-of-court settlement – with the offence being reported in the offender's criminal record -, the legal system's responses include the obligation to undergo training and awareness-raising seminars, the obligation to restore the conditions prior to the offence, and the cessation of the offending activity. This last measure, however, has never been resorted to, so far.

In Marseille, the last leg of the Study Tour in France and overall, the participants were treated to the specifics of water and environment legislation enforcement in the relevant Region (*Provence, Alpes, Cote d'Azur – PACA*) by six different speakers, including from the local Public Prosecutor's office. Several discrete examples of law enforcement proceedings were provided, ranging from the illegal damming of a watercourse by the riparian landowners to the disposal of storm-water runoff from a shopping mall to the excavation of trenches and laying of pipes. Examples of actual offence reports (*procès-verbaux*) were also shown to the participants.

The programme of presentations had been extremely well thought out, progressing in a logical and compelling order which cascaded from the generalities of the legal framework in place for the management, development and protection of water resources in France, and of arrangements in place for the administration and enforcement of the legislation, moving on to the specifics of law enforcement – first from a national perspective, and then from the specific perspective of a particular administrative Region (the PACA, in Marseille).



4. Workshop Evaluation

4.1 RESULTS FROM EVALUATION FORMS

Organizational/Administrative	Scores ¹					Total responses (out of 22 participants)	Average
	1	2	3	4	5		
Good Handling of Invitations, Visa Support, Information Sharing and Smoothing Obstacles	0	0	0	2	20	22	4,9
Smooth flow of programme, efficient handling of emerging needs and attentiveness to participants concerns	0	0	0	1	21	22	4,95
Efficient Logistics: Accommodation, Transportation, Tools and Equipment	0	0	0	3	19	22	4,9
Sub-Total	0	0	0	6	60		4,9
Planning for the Workshop							
Efficient and Effective Communication of Objectives, & Expectations from Participants	0	0	1	9	11	21	4,5
Efficient and Effective Follow-up of Preparations and Progress towards the Event	0	0	1	6	14	21	4,6
Clarity, Coverage and sufficiency of concepts, Objectives, anticipated outputs and outcomes	0	0	1	13	8	22	4,3
Procedural issues: Selection and Design of Methodology, Programme/Daily Agenda and Work Rules	0	0	1	4	17	22	4,7
Presentations Correspond and contribute to the Planned Objectives and Conducive to Enhanced shared Understanding and participation of Relevant Issues	0	0	0	5	17	22	4,8
Sub-Total	0	0	4	37	76		4,6
Executing the Workshop:							
Efficient and Effective Performance and Interaction by Participants	0	0	2	5	15	22	4,6
Efficient and Effective Facilitation	0	0	1	1	19	21	4,8
Efficient and Effective Cooperation and Team Spirit	0	0	5	4	13	22	4,4
Acceptable Level of Achievement of Planned Objectives	0	0	0	8	14	22	4,6
Positive Overall Impression On the Personal Level of Participants	0	0	0	4	13	17	4,8
Sub-Total	0	0	8	22	74		4,7
Grand Total	0	0	0	0	0	0	0

¹ **Scale:**

1 = "Strongly disagree," or the lowest, most negative impression

3 = "Neither agree nor disagree," or an adequate impression

5 = "strongly agree," or the highest, most positive impression



4.2 COMMENTS AND RECOMMENDATIONS OF TRAINEES

Feedback at the workshop

1.a. Visa issuance

- The main issue was lack of time to apply for the visa. Some participants had no problems but others had a lot of problems, including having to apply for two separate visas (instead of one Schengen visa).

1.b. Assistance at arrival

- It was considered to be very good.

1.c. Accommodation

- The participants were unanimous in saying that it was good but far from the city centre.

1.d. Facilities at IHE

- They were considered by all to be good.

1.e. Programme agenda

- The agenda was hailed as smooth, informative and interesting.

1.f. Speakers

- Overall they were much appreciated by the audience for their knowledge and for the quality of their presentations.

1.g. Interpreters

- They were overall considered to be good, accurate and professional.
- There were problems with the microphones, particularly the wireless microphone, which were noted both by the participants and the interpreters.

2. What did you like most about this workshop?

- The idea of the workshop and its theme were applauded. Many commented on how important implementation and enforcement of the law are.
- One of the aspects most appreciated was having the opportunity to hear and exchange experiences of and with the other countries with similar issues. It was seen as helping benchmarking and for the countries to have a sense of the level they are at.
- The convergence of the experience of the lecturers and of the examples provided was seen as very positive. There were many comments on how informative the content was, how focused it was and the timely delivery of the different lectures.



3. What did you like least about this workshop?

- Many participants would have liked to have more time for questions after the different lectures. They also mentioned that they would have liked to have time for discussions and interactions between them to discuss topics they found relevant.
- Trans-boundary issues were mentioned as an area they would have wanted to hear about.
- The European Water Framework Directive is another area the participants wished they had heard more about.
- Some would have wanted to have the presentations in advance.

Feedback from evaluation forms at the end of the training

Liked most

Organization / logistics

- Good methodology
- Organization
- Rooms were comfortable
- Logistics

Presentations / Contents

- Very clear presentations
- Specific tools and formula to calculate fines
- Planning priorities for inspectors
- Preparing evidence for the court
- Much beneficial information
- Lots of information on legal aspects
- Lots of information on monitoring and reporting
- Lectures
- Knowledge on experience on success or failure stories
- Presentations with concrete examples
- Combining legal and technical experts

Needs improvement

Organization / logistics

- Receive course presentations in advance / print out of presentations during the session
- Translation in Arabic (for written documents)
- Translations of presentations
- Send participants list in advance
- Social events
- Hotel too far away from the town centre
- Wireless microphone



4.3 RECOMMENDATION AND GENERAL OBSERVATION OF THE INSTRUCTORS:

It is considered opinion of the instructors that the Workshop and Study Tour have been a valiant and successful attempt at shedding light on a much neglected aspect of the legal framework for the management, development and protection of water resources in a domestic context, and have provided a valued – by the participants, but also by the experts – learning opportunity. The scientific programme of the Workshop was rich, articulate and on-target. So was the scientific programme of the Study Tour, particularly the French leg. The logistics were flawless throughout – which was quite an achievement, considering the size of the travelling party, and the sheer number of places visited, in the three countries. To this must be added the complication of working in two (in Spain three) languages simultaneously. Paradoxically, the richness of the scientific programme, combined with its length, may have militated against maximum impact for (a) the amount and quality of the information provided – particularly at the very tail end of the long Study Tour - was such that internalization by the participants risked being per force selective, and (b) by the time the group reached France, and Marseille in particular, intellectual fatigue was beginning to show, and to take its toll on the attention span of most participants.

The awareness of participants, and their understanding and knowledge of the issues and approaches to law enforcement in general, and in all three countries visited - and particularly in France - were surely raised through the Workshop first, followed by the Study Tour and the exposure to the specifics and practicalities of water and environment laws enforcement in Holland, Spain and France. In general, the participants were genuinely interested in the Workshop and Study Tour, and in the training imparted to them. A sure indicator of this was the impeccable record of attendance of all participants throughout the intense sixteen-day (including two intervening weekends) programme. None of the participants missed any fraction of the programme, which is quite an achievement in itself. As in all groups, however, the level of interest and attention varied, with some showing visible and steady interest, as witnessed by questions asked during and after the various events on the programme. Others felt handicapped due to their limited command of French and/or English language; however indications were given in private conversations with a number of them that they were following attentively, and were learning. It is fair to infer that most participants learned a good deal about water (and environment) laws enforcement.

The following recommendations can be made:

- The need for a follow-up high level activity is necessary to draw a road map for PCs on the need for plans of action to improve compliance and develop enforcement capacities of water and environment legislations.
- Technical support is needed for updating and integrating water and environment legislations in countries of the regions.
- Countries of the region need to develop their inspection, monitoring, interpreting and reporting capacities using accredited systems.
- Participating countries are in need to develop a water and environment prosecution entity and build the capacity of a number prosecutor on investigating water and environment crimes and violations.
- Participating countries will need to develop capacity of expert witness to serve as advisers to the court of law when addressing water and environment cases of non-compliance.



- Clear guidelines are needed to assess sanctions that are proportional to non-compliance with water and environment laws.
- It is further recommended that the wealth of information and experience gained as a result of the Workshop and Study Tour be capitalized and injected in a manual carrying “Training material for developing the capacity of prosecutors and investigators on improving compliance and enforcement of water and environment legislations”, which has been prepared for the Workshop by the SWIM project KE. The enriched Manual will not only constitute a tangible outcome of the exercise, it will also serve as a much needed reference in a neglected and little known dimension of water legislation, and fill a gap as a result.
- The participants be approached again by SWIM project and be asked to assess whether and how the Workshop and Study Tour have impacted on their daily work.



5. Workshop and Study Tour agenda

Day	Time	Activity	Location	Facilitator	Other participants
Day 0 - Sunday 02.06.2013	<i>TRAVEL TIMES</i>	Arrival at Amsterdam airport Schiphol - Netherlands; transfer to Delft by bus	Amsterdam > Delft	Hendrike Clouting	
WORKSHOP at UNESCO-IHE, Delft					
Day	Time	Activity	Location	Facilitator	Other participants
Day 1 - Monday 03.06.2013	9:00-9:15	Welcome and Introduction to UNESCO-IHE	Room A2, UNESCO-IHE, Delft	Pieter van der Zaag	Maarten Hofstra; Zaki Shubber
	9:15-9:30	Introduction to SWIM-SM Project and Overview on the program. Logistic arrangements Arrange reporting teams for visits 1-11		Hosny Khordagui/ Mirella Batziania; Hendrike Clouting	Hendrike Clouting; Stefano Burchi
	9:30-9:45	Objectives and expected outputs from the study tour in the three countries The Netherlands, Spain and France.		Hosny Khordagui	
	Module 1: Presentations on the legal and institutional framework for water management in Europe			Chairperson: Zaki Shubber	Hendrike Clouting
	9:45-10:30	<i>Rule of law as a necessity for Integrated Water Resources Management (IWRM).</i> <u>Discussion</u>		Hosny Khordagui	
~ Coffee/tea break 10:30 - 11:00 ~					



11:00-11:45	<i>Scope and contents of legislation for the sustainable management of water resources and of the freshwater environment, including licensing and permitting, within the IWRM context.</i> <u>Discussion</u>	Room A2, UNESCO-IHE, Delft	Stefano Burchi	
11:45-12:30	<i>Types and levels of inspection and authority that should be given to inspectors by the water and environmental regulating authorities.</i> <u>Discussion</u>		Maarten Hofstra	
~ Lunch break 12:30 - 14:00 ~				
Module 2: Presentations on the compliance and enforcement in France and The Netherlands		Room A2, UNESCO-IHE, Delft	Chairperson: Zaki Shubber	
14:00-14:45	<i>Legal machinery for the enforcement of water resources legislation</i> <u>Discussion</u>		Stefano Burchi	
14:45- 15:30	<i>Institutional arrangements for the administration, monitoring and enforcement of water resources legislation</i> <u>Discussion</u>		Stefano Burchi	
~ Coffee/tea break 15:30 - 16:00 ~				
16:00 – 16:45	<i>Technical and administrative capacities needed for inspection, monitoring, measuring, recording and reporting for indicting non compliance and enforcement of water and environment legislations.</i> <u>Discussion</u>	Room A2, UNESCO-IHE, Delft	Maarten Hofstra	



Day	Time	Activity	Location	Facilitator	Other participants	
Day 2 - Tuesday 04.06.2013	Module 3: Presentations on capacity and methods for compliance and enforcement in water management		Room A2, UNESCO-IHE, Delft	Chairperson: Stefano Burchi	Hendrike Clouting	
	9:00-9:45	<i>Qualifications, training, experience and competence of inspectors, field and testing laboratory operators and prosecutors to ensure compliance and enforcement of water & environment legislations.</i> <u>Discussion</u>		Zaki Shubber		
	9:45-10:30	<i>Universally recognized and accredited methods of sampling, monitoring, measuring and reporting including the necessary precision, accuracy, reproducibility, sensitivity, and detection limit of the analytical monitoring and measuring methods.</i> <u>Discussion</u>		Hosny Khordagui		
	~ Coffee/tea break 10:30 - 11:00 ~					
	11:00-12:00	<i>Reliability and credibility of evidence of non compliance including routine inter and intra-calibration, maintenance and operation of monitoring systems, sampling gears and measuring instruments.</i> <u>Discussion</u>		Room A2, UNESCO-IHE, Delft	Hosny Khordagui	
	~ Lunch break 12:00 - 14:00 ~					
14:00 – 15:00	<i>Minimum acceptable Quality Assurance (QA) and Quality Control (QC) programs including blind samples, blanks, replicates, spikes in water and environment monitoring and inspection systems.</i> <u>Discussion</u>	Room A2, UNESCO-IHE, Delft	Hosny Khordagui			
~ Reception 16:00 - 17:00 ~						



Day	Time	Activity	Location	Facilitator	Other participants	
Day 3 - Wednesday 05.06.2013	Module 4: Presentations on reporting and monitoring		Room B1, UNESCO-IHE, Delft	Chairperson: Zaki Shubber		
	9:00-10:00	<i>Proper documentation of all aspects related to methods of monitoring, inspection, sampling, analyses and reporting.</i> <u>Discussion</u>		Maarten Hofstra		
	~ Coffee break 10:30 - 11:00 ~					
	11:00-11:45	<i>Area monitoring, citizen complaints and community involvement for better compliance with water and environment legislations.</i> <u>Discussion</u>	Room B1, UNESCO-IHE, Delft	Hosny Khordagui		
	~ Lunch break 12:00 - 14:00 ~					
	14:00-14:30	Overall knowledge and lessons learnt	Room B1, UNESCO-IHE, Delft	Hosny Khordagui		
	14:30-15:30	Group brain storming and discussion: what could be applied at home? Coordinated role of water officials, the environment inspectors and monitors and how they will complement the role of the prosecutors in enforcing water and environment legislation's.		Hosny Khordagui and Stefano Burchi		
	~ Coffee/tea break 15:30 - 16:00 ~					
	16:00-17:00	Feedback and evaluation by participants Certificates and closing of the workshop	Room B1, UNESCO-IHE, Delft	Zaki Shubber		



STUDY TOUR in The Netherlands						
Day	Time	Activity	Location	Facilitator	Other participants	
Day 4 - Thursday 06.06.2013 (Visit 1)	8:30-10:15	Travel from Delft to Lelystad	Delft > Lelystad			
	10:30-12:30	Visit of the Ministry of Infrastructure and the Environment of the Netherlands (Rijkswaterstaat Lelystad) (http://www.rijkswaterstaat.nl/en/) Welcome and coffee	Smedinghuis Lelystad, Zuiderwagenple in 2	Mr. Ruud Staverman, Mr. Onno Epema (Rijkswaterstaat)	Guide from UNESCO-IHE: Hendrike Clouting	
	10.30-10:40	Word of welcome and short introduction of the Rijkswaterstaat Centre for Water Management (WMCN)		Mr. Ruud Staverman		
	10.40-11:10	Presentation on emission control <u>Discussion</u>		Mr. Rob Berbee		
	11:10-11:40	Presentation on Water Quality Monitoring in The Netherlands <u>Discussion</u>		N.N.		
	11.40-12:00	From sample to result: Introduction of the laboratories		Mr Onno Epema		
	~ Lunch break 12:00 - 13:00 ~					
	13.00-14:30	Tour of the (chemistry and hydrobiology) laboratories Tour of the WMCN	In 2 groups: switch at 13.45	Mr Onno Epema Mr Ruud Staverman		
	14.30-14:45	Closing words		Mr. Ruud Staverman		
	15:00-16:00	Travel back to Delft	Lelystad > Delft			



Day	Time	Activity	Location	Facilitator	Other participants
Day 5 - Friday 07.06.2013 (Visit 2)	8:30-9:30	Travel from Delft to Dordrecht	Delft > Dordrecht		
	10:00-10:20	Visit of water board Dutch Delta and a pumping station (http://www.wshd.nl/) Welcome and presentation on Water board <u>Discussion</u>	Dordrecht, Nederwaard 1	Mr. Wim van Rietschoten	Guide from UNESCO-IHE: Maarten Hofstra
	~ Coffee and tea ~				
	10:20-10:40	Presentation on water quality and monitoring <u>Discussion</u>		Mr. Harold de Ruiter	
	10:40-11:00	Presentation on permission <u>Discussion</u>		Mrs. Janine Veenstra	
	11:00-11:20	Presentation on enforcement <u>Discussion</u>		Mr. Robert Vink and Mr. Eric Kuindersma	
	11:30-12:00	Visit of museum Kinderdijk			
	~ Lunch break 12:00 - 13:00 ~				
	13:00-15:00	Visit of museum Kinderdijk			
15:00-16:00	Travel back to Delft		Lelystad > Delft		



STUDY TOUR in Spain					
Day	Time	Activity	Location	Facilitator	Other participants
Day 6 - Saturday 08.06.2013	19:10	Travel from Amsterdam to Sevilla Leave from the Hotel in Delft at 14:00	Amsterdam > Sevilla		
	22:00	Arrival in Sevilla, transfer to hotel			
Day 7 - Sunday 09.06.2013 ~ Free day ~					
Day	Time	Activity	Location	Facilitator	Other participants
Day 8 - Monday 10.06.2013 (Visit 3, 4 + 5)	9:30-10:00	Introduction to field visits in Spain Program and objectives, brief introduction to water governance in Spain, competences and decision making in IWRM	Sevilla	Guide from UNESCO-IHE: Nora Cauwenbergh	
	10:00-11:30	Visit to New Water Culture Foundation Introduction to legal framework and evolution in Spain. Discussion with legal expert on legislation, control and enforcement.			
	11:30-12:00				
	12:00-13:30	Coffee break			
Discussion / debate on implementation of IWRM and enforcement in Spain - presentation of cases of non-compliance and community involvement					
~ Lunch break 13:30 - 16:00 ~					
	16:00	Travel from Sevilla to Cordoba (140km)	> Cordoba		
	18:00	Optional – Visit of the Mezquita de Cordoba – Visit of the historic center of Cordoba	> Cordoba		



Day	Time	Activity	Location	Facilitator	Other participants	
Day 9 - Tuesday 11.06.2013 (Visit 6)				Nora Cauwenbergh		
	9:45-12:45	Travel from Cordoba to Daimiel village	Cordoba > Daimiel			
	13:00	Visit to Daimiel (River Guadiana) with representatives of irrigation association and Water Observatory from the Botin Foundation (focus on overabstraction) Presentation of the case on overexploitation of the groundwater table and several intents of control and enforcement + final negotiation with end users to enforce new pumping regulations	Daimiel	Mr Manuel Bea		
	11:30 - 12:15	Visit to the Daimiel Water Center - Introduction to the water problems in the region and preparation of the field visit		Dr. Manuel Bea		
	12:15- 14:00	Tour around the area: Tablas de Daimiel National Park - farming: consequences of groundwater overexploitation and illegal water use	Tablas de Daimiel			
	~ Lunch break at the Meson de la duquesa with representatives of the Guadiana river basin organization 14:00 - 15:30 ~					
	16:00	Visit to Guadiana River Basin Organization Welcome by the president of the RBO; Presentation of the panel (water authorities, irrigator, legal and GIS experts).	Ciudad Real	D. José Díaz Mora (president)		
	16:15 - 17:00	Presentation on GIS / remote sensing for control of groundwater abstraction + presentation of a case study from monitoring till court sentence		Dr. Manuel Bea		
	17:00 - 18:00	Roundtable: "New technologies as a data source for better water governance" with: - Representative(s) of the Comisaría de Aguas of the RBO: D. Timoteo Perea Tribaldos, D. Samuel Moraleda Ludeña. - Representative of academia (applied research): Dr. Salomón Montesinos Aranda - Representative of Irrigators Association of Daimie: D. Jesús Pozuelo - Representative of Prosecutor's office		D. Samuel Moraleda Ludeña Dr. Salomón Montesinos Aranda D. Jesus Pozuelo		
	18:30-20:30	Travel from Daimiel to Madrid by bus, arrival at hotel	Madrid			



Day	Time	Activity	Location	Facilitator	Other participants
Day 10 - Wednesday 12.06.2013 (Visit 7 + 8)	10:00-13:30	Visit of the Tajo River Basin Organization – Presentation of competences and case studies + debate - focus on pollution and monitoring networks	Madrid	Nora Van Cauwenbergh	
	10:00	Welcome by the president of the Tajo RBO		Dr. Miguel Antolín (President)	
	10:15	Introduction to the basin, and information on the ‘Hydraulic Public Domain’, legal framework for monitoring and control in the basin.		D. Gabino Liébana (Head of the Environmental Management and Hydrology Area)	
	10:45	Presentation of water quality monitoring network (focus on urban supply/industrial pollution) + discussion on procedures and competences necessary for good quality monitoring and enforcement. Presentation of an infringement case: procedures from monitoring to court		D. Javier Díaz Regañón (Head of Hydraulic Public Domain Area)	
	11:30	Coffee break		D. Antonio Yañez (Head of Water Quality Area)	
	12:15	Visit to the laboratory and Hydrologic Information Automatic System (SAIH) room and discussion on RBO relations with users and other stakeholders			
	13:00-13:45				
~ Lunch break at Casa del Campo (10’ walk from RBO) 14:00 - 15:30 ~					
15:30	Travel from Madrid to Rivas Vaciamadrid (35km)				
16:00-18:30	Field visit to monitoring station SAICA in Rivas-Vaciamadrid Site visit to the monitoring station with representatives of the Guadiana River Basin Organization		Madrid	Tajo RBO representative (tbc) Guest lecturer: Elisa Vargas Lucia Rodriguez	



STUDY TOUR in France					
Day	Time	Activity	Location	Facilitator	Other participants
Day 11 - Thursday 13.06.2013	<i>TRAVEL TIMES</i>	Travel from Madrid to Paris Arrival at Paris airport; transfer to hotel by bus	Madrid > Paris		
Day 12 - Friday 14.06.2013 <i>(Visit 9)</i>	8:45-17:00	Presentation of the French water legislation Reviewing of the administrative means of controls and penalties over water users Organization and implementation of the water regulation at local level	Paris	Dr. Jacques Sironneau, French Ministry of Ecology, Sustainable Development and Energy) Dr. Michel Ripoché, French Ministry of Ecology, Sustainable Development and Energy)	
Day 13 - Saturday 15.06.2013			~ Free Day ~		
Day 14 - Sunday 16.06.2013			~ Free Day ~		
Day 15 - Monday 17.06.2013 <i>(Visit 10)</i>	8:45-12:00	Practical aspects of control and investigations by the ONEMA Officers.	Paris	Pierre Boyer, ONEMA/National Office for Water and Aquatic Ecosystems)	



		Implementation of the penal policy led by the Ministry of Justice related to the preservation of the environment (water and aquatic ecosystems)		Claire Donnizaux, Ministry of Justice	
	12:00 to	Travel to Marseille			
Day	Time	Activity	Location	Facilitator	Other participants
Day 16 - Tuesday 18.06.2013 (Visit 8)	8:45-17:00	Local and practical experiences in the same fields in coordination with the public prosecutor, followed by a coastal sea control operation.	Marseille/DREAL/DDTM13	Patricia BRUCHET	
Day 17 - Wednesday 19.06.2013	<i>TRAVEL TIMES</i>	Departure from Marseille			



6. List of Participants

N	Title	First Name	Last Name	Position	Organisation name	Address
ALGERIA						
1	Mme	Houda	BENHABILES	Chef de Bureau	Ministère des Ressources en Eau Algérien	303 Hai el Badr Bachedjerah Alger 16000 Algérie
2	M	Nacer Eddine	BOUDJEMLINE	Chef de bureau	Ministère des Ressources en Eau	200, Rue Mohamed Belouizdad – Alger , 16009.
3	M	El Houcine	HOUICHER	Ingénieur d'Etat	Ministère des Ressources en Eau	03, Rue de Caire Kouba Alger-Algérie
4	Mme	Amal	MENDES	Chef de bureau de la protection du Domaine Publique Hydraulique.	Ministère des Ressources en Eau - Algérie	Bt SONATRO, 6 rue Rachid Agoulmine . Kouba – Alger- Algérie
EGYPT						
5	Mrs	Asmaa Nour Aly Ismail	ELFELAL	Director of the Department of freshwater quality	Egyptian Environmental Affairs Agency, Ministry of State for Environmental Affairs	56 Mohamed Salah Nasef street –Elmaryoteia – Elharam –Giza
6	Mr	Emad Mohamed Mahmoud Khalil	IBRAHIM	Director of works – Environmental unit	Ministry of Water Resources and Irrigation	78 EL Shrouk buildings – behind Al Ahly Club- Nasr city- Cairo- Egypt
7	Mr	Mohamed	FADLY	Prosecutor	Egyptian public Prosecution	53 Tout ankh amon st. Tanta, Gharbbiyya governorate
8	Mr	Mahmoud	AI HAWWARY	Prosecutor	Egyptian public Prosecution	54 Tout ankh amon st. Tanta, Gharbbiyya governorate
ISRAEL						
9	Dr Mrs	Dekel	AMIR SHAPIRA	Pollution Prevention	Ministry of Environment Protection	5 Kanfay Nesharim Jerusalem Israel
10	Mrs	Hanna	FRENKEL	Legal Advisor	The Governmental Authority for Water and Sewage	14, Hamasger street, Tel – Aviv, 61203, P.O.B 20365, Israel
11	Mrs	Sharon	NUSSBAUM	Director of Enforcement and Information Department	Israel Water Authority	13 Derech Yerusalim st Rehovot Israel 76630
JORDAN						



N	Title	First Name	Last Name	Position	Organisation name	Address
12	Eng M	Ra'ed	ABU-HASAN	Director of the Environment Directorate for Governorates of Ajloun and Jerash	Ministry of Environment	Jordan – Ajloun Governorate P.O. Box 250
13	Miss	Nassra Zead Hamdan	AL MASALHAH	JURIST	JORDAN VALLEY AUTHORITY	JVA-P.O.BOX2769 AMMAN 11181 JORDAN
14	Mrs	Nisreen	EL-BANNA	Section head of drinking water	Water Authority	8th circle Industrial area Khansa Street
15	Mr	Abbas	KALBOUNEH	Director	Water Authority of Jordan	Amman- Jordan Eskan Abu Enseer
LEBANON						
16	Mr	Abdallah	AHMAD	Magistrate in the Lebanese State Council membre au département du contentieux de l'Etat	Ministry of Justice	Ministry of justice, Fourn elchoubak, Beirut-Lebanon
17	Mr	Wahib	DAOURA	Judge at the state council, and legal advisor for the Ministry of Environment	Ministry of Justice	Kfarhazir – Koura – North Lebanon – Lebanon
18	Mrs	Mona	FAKIH	Water Director	Ministry of Energy and Water	Courniche Elnahr m Beirut-Lebanon
19	Mr	Youssef	KASSAB	Director of waste water pumping stations and treatment plant of the inland and coastal area of Saida district.	Saba Makhlouf for trading and contracting	General Khalil Building, Lowayzeh, Baabda, Mount Lebanon, Lebanon
MOROCCO						
20	DR M	Salah Eddine	DAHBI	CHEF DE DIVISION DOMAINE PUBLIC HYDRAULIQUE	AGENCE DU BASSIN HYDRAULIQUE DU LOUKKOS	BP 616 Tétouan
21	M	Mohamed	MAKBOUL	CHEF DE DIVISION LEGISLATION DE L'EAU	DIRECTION DE LA RECHERCHE ET DE LA PLANIFICATION DE L'EAU	Amal 2 AV Ahmed Ben Bassou N° 69 Sidi Bernoussi Casablanca Maroc
22	M	Jamal Eddine	TIKA	CHEF DE DIVISION DOMAINE PUBLIC HYDRAULIQUE	AGENCE DU BASSIN HYDRAULIQUE DU SEBOU	Villa n°1, Hay Zineb, Quartier Dokarat Fès Maroc
PALESTINE						
23	Mr	Islam	ABU ZAYYAD	Director of Legal Affair	Ministry of Local Government	Jerusalem



N	Title	First Name	Last Name	Position	Organisation name	Address
24	Ms	Majeda	ALAWNA	DIRECTOR OF WQ REGULATION DEPT.	PWA	Ramallah , West Bank
25	Mr	Murad M.A.	MADANI	Legal Advisor	MINISTRY OF ENVIRONMENT AFFAIRS	AL BIREH HAY AL SHARAF A P.O. BOX 3841
26	Mrs	Hala	MUJAHED	Legal Consultant	Palestinian Water Authority	Beta Hanina - East Jerusalem PO Box 21672
TUNISIA						
27	M	Ezzedine	BERZINE	Sous Directeur des Consultations Juridiques et du Contentieux	Direction de la Législation et des Affaires Juridiques, Ministère de l'Equipe ment et de l' Environnement	11, rue du 2 mars 1934, la Goulette, Tunis
28	Mme	Mouna	SFAXI	Ingénieur Principal, Contrôle et suivi des Milieux Environnementaux	ANPE	Centre Urbain Nord 15 rue 7051, Cité Essalem 2080 Tunis
EXPERTS						
29	Mr	Hosny	KHORDAGUI	SWIM-SM TEAM LEADER		
30	Mr	Stefano	BURCHI	NK- Expert		
31	Ms	Mirella	BATZIANIA	Event Coordinator		
32	Mrs	Hendrike	CLOUTING	Lecturer in Environmental Planning and Management	UNESCO-IHE	
33	Mr	Maarten	HOFSTRA	Senior Advisor Policy Analysis and Water Governance	UNESCO-IHE	
34	Ms	Zaki	SHUBBER	Lecturer in Law and Water Diplomacy	UNESCO-IHE	
35	Ms	Nora	VAN CAUWENBERGH	Lecturer in Water Resources Planning	UNESCO-IHE	