



Expert Facility Activity EFS-IL-1/WP1

Task 2: Monitoring non-point pollution training workshop report

SWIM and Horizon 2020 Support Mechanism

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Version	Document Title	Author	Review and Clearance
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THE SWIM AND H2020 SUPPORT MECHANISM PROJECT (2016-2019)

The SWIM-H2020 SM is a Regional Technical Support Program that includes the following Partner Countries (PCs): Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, [Syria] and Tunisia. However, in order to ensure the coherence and effectiveness of Union financing or to foster regional co-operation, eligibility of specific actions will be extended to the Western Balkan countries (Albania, Bosnia Herzegovina and Montenegro), Turkey and Mauritania. The Program is funded by the European Neighborhood Instrument (ENI) South/Environment. It ensures the continuation of EU's regional support to ENP South countries in the fields of water management, marine pollution prevention and adds value to other important EU-funded regional programs in related fields, in particular the SWITCH-Med program, and the Clima South program, as well as to projects under the EU bilateral programming, where environment and water are identified as priority sectors for the EU co-operation. It complements and provides operational partnerships and links with the projects labelled by the Union for the Mediterranean, project preparation facilities in particular MESHIP phase II and with the next phase of the ENPI-SEIS project on environmental information systems, whereas its work plan will be coherent with, and supportive of, the Barcelona Convention and its Mediterranean Action Plan.

The overall objective of the Program is to contribute to reduced marine pollution and a more sustainable use of scarce water resources. The Technical Assistance services are grouped in 6 work packages: WP1. Expert facility, WP2. Peer-to-peer experience sharing and dialogue, WP3. Training activities, WP4. Communication and visibility, WP5. Capitalizing the lessons learnt, good practices and success stories and WP6. Support activities.



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1 GENERAL INTRODUCTION

In the past years Israel has made progress in tackling point sources. Many waste water treatment plants have been built and there is a good licensing system for industry. Hence, non-point pollution sources are becoming more important and form together with the reduced flow of most rivers a major obstacle for reaching good ecological status. Furthermore the use of pesticides and herbicides in Israel is amongst the highest in the world. Still there is no good overview of major problems and also major non point pollution sources.

Monitoring of non-point source pollution is not yet a standard practice in Israel. Most monitoring focussing on point sources and a wider range of analyses is often limited to occasional monitoring. The problem of non-point pollution is however mostly related to run-off events and the effects on ecology may especially be felt during these run-off events but also at low base flow situations. Several studies have been conducted on non-point pollution sources, mostly by research institutes. Now is the time to step up monitoring of non-point pollution sources, starting with the identification of major related water quality problems and information needs.

Most rivers and streams in Israel have pronounced dry and wet seasons, feature incidental run-off events, and face also pollution by agricultural drainage water. The timing and positioning of measurements is therefore very critical and requires a first conceptual understanding of the application dynamics of agrochemicals, related pollution pathways and also the importance of soils and sediments as an agent, buffer and containment for pollution. The run-off of soil particles requires special attention. Also traffic and in general run-off from roads may constitute relevant non-point pollution sources that need further investigation.

In order to address the above, a training workshop was organised by LDK, the leading company in the SWIM-H2020 SM consortium, within the framework of the Expert Facility (EF) Work Package 1 (WP1) of the SWIM-H2020 SM; namely under task 2 of Activity No. EFS-IL-1. This particular training activity which took place between 10 and 12 July 2018 focussed on the above mentioned system characteristics and how with a better understanding of the system, a monitoring plan can be formulated. In combination with a field study trip it focussed on the introduction of methods and tools for monitoring of nonpoint source pollution, with focus on determining good chemical status of water.

2 OBJECTIVES OF ACTIVITY

The general objective of the workshop is to support the MoEP in its plans to engage in pilots and monitoring plans that focus on non point pollution sources.

Specific objectives of the course include:

- Learning the methodology for the development of a monitoring plan by means of the monitoring cycle and Water Framework Directive (WFD) policy as an example and how to determine the effectiveness of the monitoring plan.



- Learn from dialogue with experts from other basins and from their experiences, aided by practical methods.
- Active practicing of the theoretical part through group work assignments and its application on pilot case.
- Discuss appropriate indicators proposed by the consultant for monitoring non-point source pollutants and recommended thresholds and joint selection of the indicators for a pilot stream to be selected by the partners.
- Introduction of the required parameters or determinants for calculating the selected indicators following best practices for hydro-environmental monitoring and data requirements to measure the parameters/ indicators and corresponding measurement options (in situ, laboratory).
- Discuss missing regulations and enforcement tools to be agreed upon with the partners
- Conduct a field visit to learn first-hand about the situation in a selected section of a river basin proposed by the partners¹.

3 EXPECTED RESULTS OF ACTIVITY

- Provisional proposals for monitoring of typical non-point pollution problems in the Kishon River Basin (or sub basin) with information needs, monitoring strategy and proposed set-up of the monitoring network , with indicators.
- Increased awareness of translation of information needs into monitoring strategy and monitoring network design
- Familiarization with traditional and innovative methods for measurements.
- Identification of missing regulations and enforcement tools

4 PROFILE OF THE PARTICIPANTS

A total of 31 participants attended the workshop, including 9 representatives from local authorities, 5 from Universities and research institutes. A total of 7 experts were present from the National Park Authority that conducts most of the monitoring in Israel, which constitutes most of the experts engaged in monitoring in Israel. There was 1 representative from a NGO's (see also annex 8.2).

¹ Initially, the Gedora basin was selected by the partner organisation. However, during and after the training, the partners chose to change to the Kishon river basin, for which a monitoring plan case study was later separately elaborated (Fiselier, 2018).



5 EVALUATION OF THE EVENT

Two categories of indicators have been used to evaluate the workshop: i) evaluation indicators, reflecting the quality of the workshop logistics/ organisational aspects (See section A below) and the assessment of the technical quality of the workshop (See section B below), as perceived by the participants, ii) impact indicators, reflecting the direct impact of the workshop (See Section 6 below). The indicators and associated ratings are presented in Tables 5-1, 5-2 and 6-2 respectively. Tables 5-3 provide the specific remarks made by the non-key expert on the workshop (Section C below).

A. Organizational, administrative and planning issues before and during the event

Table 5-1: Organization, administrative and planning issues before and during the event.

A. ORGANISATIONAL, ADMINISTRATIVE AND PLANNING ISSUES BEFORE AND DURING THE EVENT	Number of Replies				Total Replies	Rating of the Average Score (max = 4)
	EXCELLENT	GOOD	AVERAGE	POOR		
Efficient logistics: location of venue and interpretation	4	4	1	2	11	2,91
Smooth flow of programme, efficient handling of emerging needs and attentiveness to participants concerns	3	6	0	1	10	3,10
Presentations correspond and contribute to the planned objectives	6	4	0	0	10	3,60
Clarity, coverage and sufficiency of concepts, objectives, anticipated outputs	3	7	0	0	10	3,30
The materials distributed were helpful	2	3	1	0	6	3,17
Efficient and effective facilitation	4	3	1	0	8	3,38
Overall rating of the event	2	5	1	0	8	3,13

Overall, the event was well appreciated.

B. Feedback on technical aspects by participants:

Table 5-2: Feedback on technical aspects by the participants

	B. FEEDBACK ON TECHNICAL ASPECTS	No. of replies
B1	Coverage of the event In your opinion did the event cover (tick one of the following):	
	All the topics necessary for a good comprehension of the subject nothing more	6
	Some topics covered are not necessary	4
	Some additional topics should be included	1
	No reply	0
	Total Replies	11
B2	Level of difficulty	
	Difficult	2
	Adequate	7
	Elementary	2
	No reply	0
	Total Replies	11
B3	Length of the training In your view the workshop duration (tick one of the following):	
	Longer than needed	0
	Sufficient	10
	Shorter than required	0
	No reply	1
	Total Replies	11

**Additional remarks made**

B4	What is the most valuable thing you learned during the workshop (knowledge or skills)? <i>1. Different sources of pollution. 2.To identify non-point sources of pollution.3.Knowledge.4.Bringing all stakeholders together around the same table and communicate.5.I understand the concept of non-point source pollution and the possibilities of monitoring them and the complexity involved with it.6.To think about all the monitoring array methods.</i>	
	Total Replies	6
B5	How do you think that the current event will assist you in your future work on the subject? <i>1. More understanding of rivers. 2.Understanding non point pollution sources.3.Provide large basic knowledge for understanding the concept.4.Provides a structural way of thinking on stream monitoring.5.It will help the ministry and river authorities in developing a monitoring plan.6. We will change the monitoring system not only yearly also to think again what is necessary.More parameters of pesticides and hormones.</i>	
	Total Replies	6
B6	Please indicate whether (and how) you could transfer part of the experience gained from the event to your colleagues in your country? <i>1.Bij adding monitoring stations to our monitoring plan.2.We plan to continue meeting with the group, trying to coordinate between authorities, data and monitoring plan.3.Professional meetings. Participate in monitoring programs.4.If we will develop a monitoring plan we will try to involve different partners in the implementation of the monitoring.5. We will do brainstorming with relevant people. We need more cooperation.</i>	
	Total Replies	5
B7	What did you like most about this event? <i>1. It was excellent.2. Presentations and free discussion with our guest from the EC.3.Coordinating with other organisations, the opportunity to share data and understand more.4.Discussions.5.Day 3 in the field.6.Maybe describe some monitoring programs from other countries and the logic behind that program.7.The presentations were good and I like the statistics for the full array monitoring.</i>	
	Total Replies	7
B8	What needs to be improved? <i>1. Watershed planning, monitoring and assessing data.2.To my opinion, it lacked the introduction to the system in The Netherlands. How things work there as a concept, Its so different from what happens here.3.Fit it better to Israeli conditions.4. To see more examples.</i>	
	Total Replies	4



C. Remarks by the trainer

A set of 9 criteria; B1-B9 (See table below) were also assessed by the trainer as table 5-3 below

Table 5-3: Assessment by the trainer

B1	Efficient and effective performance and interaction by participants: All went smoothly and there were active discussions on a variation of topics. In Day 3 we however experienced a power failure and were forced to shorten the last practical sessions and do them outside in the park.
B2	Efficient and effective cooperation and team spirit. Most people present know each other and this added to the discussions. The presentations from Israel were important for stimulating discussion on typical issues in Israel.
B3	Level of achievement of planned objectives: good, overall the received information and examples from other countries were well received, as well as the examples from Israel, to which the participants could much easier relate. However, because of changes in the program (see footnote 1) there was less focus on working on a monitoring plan for one of the sub-basins.
B4	Did the event contribute to helping participants practice skills or gain knowledge related to course concepts: yes.
B5	What worked well during the event; discussion within the group.
B6	What didn't work well and why: Filling in the questionnaires and evaluation forms; at the very end of the workshop fewer people remained, and more response would have been possible if these documents would have been translated into Hebrew.
B7	What components/concepts did participants seem to understand well: the importance to combine the monitoring of water quality with monitoring of land use and application dynamics of pesticides, and to have a basic understanding of the system and pollution pathways before drafting a monitoring plan.
B8	Were there any components/concepts that participants appeared to not understand: statistical concepts were a little difficult for some of the participants.
B9	What aspects of the event could be improved and what to be kept: more examples of monitoring plans and a better explanation of the (water) system of the Netherlands, so some of the Dutch examples can be understood better.



6 ANALYSIS OF THE RESULTS OF THE TRAINING COURSE

The training succeeded to mobilise a number of organisations that are implicated in monitoring as indicated in Table 6-1 below.

Table6-1 : Workshop participation/ demographics

Total No. of participants actually attending	31
Total No. of participants Planned to attend	25
Planned No. of participants/Actual No. of participants	124%
% of the participants from local authorities, drainage and river authorities	30%
% of drainage and river authorities that were represented (%)	20%
Gender balance (% of women participants)	25%
NGO representation: No. of participants from NGOs	1

It should be noted that most monitoring is done by the National Parks Authority, a governmental organisation, and that the experts engaged in monitoring were almost all present. In addition there were 5 representatives from universities and research institutes that engage in monitoring.

A training questionnaire was distributed to test the level of knowledge of the participants in the various subject of the training. The quiz was designed around 6 topics:

The results of the quiz are analysed in table 6-2 below:

Table6-2: Evaluation of the results of the quiz

Subject	%correct
water systems	84%
EU water framework	54%
monitoring cycle	79%
pesticides	71%
monitoring costs	82%
minimal detectable change	50%

The quiz was filled in by a limited number of participants, that were present on the third day and consists mainly of experts that are already involved in monitoring. Some struggled with the English language. Overall the scores indicated that the workshop was well received and organized. Overall the participants indicated that they gained new knowledge especially on how to set up a monitoring plan, based on system understanding and the monitoring cycle which is also reflected in the training results. Statistical concepts such as Minimum Detectable Change posed more problems.



7 CONCLUSIONS & OVERALL ASSESSMENT

Below is an overall evaluation of the training workshop. It can be concluded that most of the expected outcomes of the workshop (as planned in the design phase) have been achieved. Table 7-1 below, describes how the planned objectives and outcomes were achieved.

Table7-1 : Level of achievement of training objectives and outcomes

Planned Objectives/outcomes as defined prior to the workshop	Have they been achieved?	Remarks (as applicable)
Learning the methodology for the development of a monitoring plan by means of the monitoring cycle and WFD policy as an example and how to determine the effectiveness of the monitoring plan.	Yes, the following presentations were given: On WFD and the monitoring cycle On system functioning and conceptual monitoring models.	
Learn from dialogue with experts from other basins and from their experiences, aided by practical methods.	Yes, most experts and some researchers active in monitoring were present and engaged in discussions. There was also a presentation on the new water typology and related ecological objectives with discussions on how to achieve these.	
Active practising of the theoretical part through group work assignments and its application on pilot case.	Partly, due to a power shortage part of the intended group work could not be done as planned at the end of day 3. Discussion were however helpful.	.
Discuss appropriate indicators proposed by the consultant for monitoring non-point source pollutants and recommended thresholds and joint selection of the indicators for the pilot stream.	Yes, but with a shift in focus towards parameters that are also important to achieve ecological good status. The parameters for chemical monitoring do not lead to much discussion, but what are appropriate threshold levels for fine sediments, or salinity do.	
Introduction of the required parameters or determinants for calculating the selected indicators following best practices for hydro-	Yes, with also attention to the need for monitoring application dynamics.	



Planned Objectives/outcomes as defined prior to the workshop	Have they been achieved?	Remarks (as applicable)
environmental monitoring and data requirements to measure the parameters/ indicators and corresponding measurement options (in situ, laboratory).		
Discuss missing regulations and enforcement tools to be agreed upon with the partners	Partly, the licensing system for point solutions is adequate. There is not much in terms of policy and guidelines for buffer zones etc. Also lacking is an emission registration system on farm level.	
Conduct a field visit to learn first-hand about the situation in the selected section of the river basin.	Yes, in day 3 there was a field visit to 8 locations with different pollution problems.	

Overall the workshop was a success, well received by participants and probably will result in more cooperation between the staff of the drainage authorities and activities to involve more volunteers. Especially the opportunity to discuss amongst each other the possibilities of stakeholder involvement in stream monitoring and management were considered very valuable and will have follow-up. It was good that there was a mix of examples from other EU-countries and examples from Israel.



8 ANNEXES

8.1 AGENDA

The workshop took three days. The first day focused on general concepts, the second on the design of monitoring programs and the third was a field day.

Day 1 (Tuesday, 10 July 2018)		
The basics, WFD, monitoring objectives and needs.		
09:00 - 09:15	Welcome and opening remarks – Deputy Director General, Ministry of Environmental Protection	
09:15 - 09:30	Welcome & Objectives of the Course Introduction to Day 1	Session 1.1.a introduction
09:30 - 10:00	<u>Information needs in water management</u> - EU Water Framework Directive - river basin characterisation and risk assessment - DPSIR approach for identifying pressures for development of monitoring plan - Specific characteristics of non-point pollution sources	Session 1.1.b. water policy and information
10:00 - 10:45	<u>Developing monitoring networks using the monitoring cycle approach</u> - steps in the monitoring cycle - conceptual understanding of the water system	Session 1.2. monitoring cycle and Conceptual models
10:45 - 11:15	Coffee break	
11:15 - 11:30	<u>introduction into the case study area : Kishon river basin by Sharon Nissim</u> - pressures; types of non-point source pollution - what substances might be expected	Session 1.1.c introduction to the study area
11:30 - 12:30	<u>Know the system: how to design the monitoring network</u>	Session 2.1. Monitoring strategies
12:30 - 13:30	Lunch	
13:30 - 14:15	<u>Example:</u> " Identification of phosphorus contribution areas in the Kinneret watershed, with an emphasis on the Upper Jordan river" by Dr. Oren Reichman from Migal - group discussion: what strategy is applied and is it applicable in the case of the study area?	
14:15 - 15:00	<u>Monitoring considerations and strategies</u> - types of networks with examples, emission abatement and monitoring	Session 2.1. Monitoring strategies



15:00 - 15:15	tea break	
15:15 - 15:30	<u>Example</u> : Netherlands National Monitoring network Effects of regulation of minerals	Session 1.2b: Example NL mineral network
15:30 - 16:00	Wrap-up and conclusions of day 1: matching information needs and strategy	

Day 2 (Wednesday, 11 July 2018)		
Considerations in designing a monitoring network and related data handling, and analysis		
09:00 - 09:15	Introduction to day 2: topics and objectives	
09:15 - 09:45	<u>Designing a monitoring network</u> - where: number of sites, location - what: determinants, packages - when: frequency, period of year - relation monitoring and modelling	Session 2.1a. design introduction Session 2.2b. network design, determinants
09:45 - 10:30	<u>Example</u> : "Monitoring Agricultural Non Point Source Pollutants on a Watershed Scale" by dr. Orah Moshe and dr. Roey Aguzi from the Ministry of Agriculture	
10:30-10:45	Plenary discussion on proposed indicators - how are choices made? Evaluation of network?	
10:45 - 11:15	coffee break	
11:15 - 11:45	<u>Example</u> : Netherlands National Pesticides monitoring network and another example on catchment basis	Session 2.2.c Example National Pesticides Monitoring network
11:45 - 12:30	<u>Biological indicators (by Yaron Hershkovitz Tel-Aviv University)</u> : - water types of Israel - present ecological state of waters -ecological thresholds	
12:30 - 13:30	Lunch	
13:30 - 14:30	<u>Designing and operating the monitoring network:</u> - how: traditional and innovative methods of sampling and analysis - who: organisation - evaluation of network efficiency	Session 2.2d. How: methods of sampling and analysis and Frequency and confidence levels, Cost of monitoring
14:45 - 15:00	tea break	



<p>15:00 - 15:30</p>	<p><u>Data-analysis & reporting& communication</u> - validation tools - proposal for calculation of indicators and thresholds reporting following best practices for hydro-environmental monitoring and data requirements to measure the parameters/ indicators and corresponding measurement options (in situ, laboratory) - (public) disclosure with new techniques</p>	<p>Session 2.e. Proposal for thresholds Session 2.2.f Data handling and reporting</p>
<p>15:30 - 16:00</p>	<p><u>introduction into the case study area : Kishon river basin by Sharon Nissim</u> - pressures; types of non-point source pollution - what substances might be expected</p>	

<p style="text-align: center;">Day 3 (Thursday, 12 July 2018)</p>		
<p style="text-align: center;">Field visit in the morning and working session on designing a monitoring network in the afternoon</p>		
<p>09:00 - 12.30</p>	<p>Field visit of case study area Kishon basin - attention for: major/dominant pressures - demonstration of mobile measuring devices - discuss site selection criteria - discuss applicability of sampling techniques</p>	
<p>time to be set</p>	<p>meeting at the river Authority office in Haifa</p>	
<p>12:30 - 13:30</p>	<p>Lunch</p>	
<p>13:30 - 14:00</p>	<p>Looking back to field trip: what is learnt? Observed?</p>	
<p>14:00 - 15:30</p>	<p><u>Group work:</u> Discussion and drafting monitoring objective for major non point pollution issues in the case study area - confirming information needs - discussion on monitoring strategy; -discussion on network design and organisation</p>	<p>session putting monitoring together 3.1/3.2.; pilot plan</p>
<p>15:30 - 16:00</p>	<p>Evaluation and closing down</p>	<p>Training questionnaires to be filled in</p>



8.2 LIST OF PARTICIPANTS

COUNTRY	TYPE OF INSTITUTION (please use the options provided*)	TITLE (Mr/Ms)	FIRST NAME	LAST NAME	POSITION/ FUNCTION	ORGANISATION/ INSTITUTION	EMAIL	SIGNATURE DAY 1	SIGNATURE DAY 2	SIGNATURE DAY 3
Israel	GOVERNMENT AGENCIES	Mr.	Guy	Reshef	Head water quality division	Israel water authority	guyrzo@water.gov.il	x		
Israel	LOCAL AUTHORITIES	Mr.	Jonathan	Raz	River ecologist	Yarkon River Authority	jonathan@yargon.org.il	x	x	
Israel	LOCAL AUTHORITIES	Mr.	Gadi	Boord	River ecologist	Yarkon River Authority	gadi@yarkon.org.il	x		
Israel	LOCAL AUTHORITIES	Ms	Rakefet	Koralia-Roth	Head of industry and infrastructure	Kishon River Authority	rakefet@kishon.org.il	x	x	x
Israel	LOCAL AUTHORITIES	Mr.	Alon	Ben Meir	Inspector	Kishon River Authority	alon@kishon.org.il	x	x	x
Israel	GOVERNMENT AGENCIES	Ms	Avital	Lavon	Head of instruction area	Ministry of Environmental protection	avitalla@sviva.gov.il	x	x	x
Israel	GOVERNMENT AGENCIES	Mr.	Yomvah	Sever	Inspector	Nature Park Authority	gouvals@npa.org.il	x	x	
Israel	GOVERNMENT AGENCIES	Mr.	Hillel	Glassman	Inspector	Nature Park Authority	hillel@npa.org.il	x	x	x
Israel	LOCAL AUTHORITIES	Mr.	David	Pargament	G.M.	Yarkon River Authority	david@yarkon.org.il	x	x	
Israel	GOVERNMENT AGENCIES	Mr.	Alon	Zask	Deputy DG	MOEP	Alonz@sviva.gov.il	x		



Israel	GOVERNMENT AGENCIES	Ms.	Tahel	Yashfe	Horizon-Swim	MOEP	tahely@sviva.gov.il	x		
Israel	GOVERNMENT AGENCIES	Mr.	Aki	Uzan	Ecologist	Nature Park Authority	avi-uzan@npa.org.il	x		
Israel	ACADEMIA AND RESEARCH INSTITUTES	Ms	Oren	Reichmann	Researcher	Tel hai	reichmann@migal.org.il	x		x
Israel	LOCAL AUTHORITIES	Mr.	Refael	Bariah		Kishon DA	refael@rnkishon.co.il	x		
Israel	NGOs REPRESENTATIVES	Mr.	Orit	Skutelsky	Ecologist	SPNI	orit.skutel@gmail.com	x		
Israel	GOVERNMENT AGENCIES	Mr.	Amir	Erez	Head of Water and stream division		amirer@sviva.gov.il	x	x	x
Israel	LOCAL AUTHORITIES	Ms	Sharon	Nissim	GM	Kishon River Authority	Sharon@kishon.org.il	x	x	x
Israel	GOVERNMENT AGENCIES	Mr.	Dekel	AmirShapirce	Pollution prevention		dekel@sviva.gov.il	x	x	
Israel	ACADEMIA AND RESEARCH INSTITUTES	Mr.	Yaron	Hershkovitz	Researcher	Tel-Aviv.Univers.	yaronhe@gmail.com	x	x	x
Israel	GOVERNMENT AGENCIES	Ms	Dana	Milstein	Aquatic ecologist	INPA	dana@npa.org.il	x	x	x
Israel	LOCAL AUTHORITIES	Ms	Mira	Renan Kol	Env.Department		mira@galil-elion.org.il	x	x	
Israel	GOVERNMENT AGENCIES	Mr.	Ronen	Zhavi	Central district wastewater	Ramla	Ronent@sviva.gov.il	x	x	x
Israel	GOVERNMENT AGENCIES	Ms	Eti	Natan	Waste water and streams		etin@sviva.gov.il	x	x	



Israel	ACADEMIA AND RESEARCH INSTITUTES	Mr.	Roey	Egozi	Researcher		regozi@moag.gov.il	x	x	x
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Israel	GOVERNMENT AGENCIES	Mr.	Idan	Barlev	Supervision	Nature Park Authority	idanb@npa.org.il	x	x	x
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	GOVERNMENT AGENCIES	Mr.	Youval	Sever	Stream inspector	Nature Park Authority	youvals@npa.org.il	x	x	
Israel	LOCAL AUTHORITIES	Mr.	Tal	Ratner	Educational and environment unit	Kishon drainae and stream authority	tal.rnkishon.co.il	x	x	
Israel	ACADEMIA AND RESEARCH INSTITUTES	Mr.	Yaron	Beer-Shlevin	Researcher	IOLR	yron.beeri-sh@oezan.org.il		x	