



# SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

**Title: Training Monitoring of non-point source pollution**

**Presented by: Roel Knobens, Royal HaskoningDHV**

**Ministry of Environmental Planning, 10-12 July 2018, Tel Aviv Israel**

This Project is funded by the European Union



# Introduction to the training NPS monitoring

Context

Objectives of training

Target group & who is who?

Training program

# Introduction to the training NPS monitoring

## Context

“Sustainable Water Integrated Management & Horizon 2020 - Support Mechanism (SWIM-H2020 SM)”

Expert Facility (EF) Work Package 1 (WP1) of the SWIM-H2020 SM; namely under task 2 of Activity No. EFS-IL-1, which aims at supporting the country in its enhancement of the management of the natural water system (rehabilitation and preservation of the resources) through ecosystem approaches in IWRM

Contributes to the implementation of the “Main Policy Points of the Long Term master Plan for the National Water Sector (LT-MP-NWS)”.

# Introduction to the training NPS monitoring

## Objectives of training

- Capacity building of relevant authorities in the development and implementation of plans for monitoring nonpoint-source pollutants in streams
- Training will build on case study Gedora river basin as an example for other basins
- Training will include the determination of indicators/thresholds and introduction to IT and other technologies such as the use of remote sensing, aerial photography, drones and others
- The scope of monitoring for water management is limited in this training to the non-point source pollution. The focus will be on chemical status of rivers.
- **Focus is on developing an approach how to define an appropriate monitoring network.**
- Examples of nonpoint sources pollution networks from other countries and other regions in Israel will be discussed.

# Introduction to the training NPS monitoring

## Target group

Ministry of Environmental Protection (MoEP), drainage authorities and stream authorities, Ministry of Agriculture, Nature and Parks Authority etc.)

Introduction round of participants: is the target group represented?

# Introduction to the training NPS monitoring

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	<b>Session 1.1.a introduction</b>
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	<b>Session 1.1.b.water policy and information</b>
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	<b>Session 1.2. monitoring cycle and Conceptual models</b>
10:45 - 11:15	Coffee break	
11:15 - 11:30	<u>introduction into the case study area : Gedora basin</u> - pressures; types of non-point source pollution	<b>Session 1.1.c introduction to the study area</b>
11:30 - 12:30	<u>Assignment (group work)</u> - identify information needs and monitoring purposes for case study area	
12:30 - 13:30	Lunch	

# Introduction to the training NPS monitoring

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> - <b>types of networks with examples, emission abatement and monitoring</b>	<b>Session 2.1. Monitoring strategies and Know the system</b>
15:00 - 15:15	tea break	
15:15 - 15:30	<u>Example:</u> Netherlands National Monitoring network Effects of regulation of minerals	<b>Session 1.2b: Example NL mineral network</b>
15:30 - 16:00	Wrap-up and conclusions of day 1: matching information needs and	

# Introduction to the training NPS monitoring

	<b>Day 2 (Wednesday, 11 July 2018)</b>	
	<b>Considerations in designing a monitoring network and related data handling, and analysis</b>	
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 - <b>relation monitoring and modelling</b>	Session 2.1a. design introduction Session 2.2b. network design, determinants  - xxxx - yyy
09:45 - 10:30	<u>Example:</u> "Monitoring Agricultural Non Point Source Pollutants on a Watershed Scale" by dr. Aura Moshe and dr. Roey Aguzi from the Ministry of Agriculture	Can this still be confirmed
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	<b>session 2.2.c Example National Pesticides Monitoring network</b>
11:45 - 12:30	<u>Assignment (group work):</u> - determine which pesticides might be relevant in crops in study area - discussion and joint choice of indicators for study area	
12:30 - 13:30	Lunch	



# Introduction to the training NPS monitoring

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	<b>session 2.2d. How: methods of sampling and analysis and Frequency and confidence levels, Cost of monitoring</b>
14:45 - 15:00	tea break	
15:00 - 16:00	<u>Data-analysis &amp; reporting</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	<b>Session 2.e.Proposal for treshholds Session 2.2.f Data handling and reporting</b>

# Introduction to the training NPS monitoring

## *Application in the case study area of the Gedora Basin*

	Day 3 (Thursday, 12 July 2018)
	Field visit in the morning and working session on designing a monitoring network in the afternoon
09:00 - 12.30	Field visit of case study area Gedora basin - attention for: major/dominant pressures - demonstration of Nitrate App - discuss site selection criteria - discuss applicability of sampling techniques
time to be set	meeting at the river Authority office in Haifa
12:30 - 13:30	Lunch
13:30 - 13:45	looking back to field trip: what is learnt? Observed?
13:45 - 14:00	introduction to program of day 4
14:00 - 14:30	<u>Group work:</u> Drafting monitoring plan for case study area - confirming information needs - final choice of monitoring strategy
14:30 - 15:00	<u>Group work:</u> Network design - final choice on number of sites, mapping locations - final choice of determinants and indicator thresholds
15:00 - 15:15	coffee break
15:15 - 16:00	<u>Group work: Organisation</u> - who is taking samples, who will perform analyses, what techniques are used - who is data-analysis and reporting - standard operational procedures and forms - final discussions on unsolved issues - emitting regulations or standards, enforcement tools
16:00 - 16:30	Evaluation and closing down