



# Recommendations and lessons learned

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# Management of urban water monitoring, developing stormwater risk planning and early warning service -project

## FACTS BRIEF

**Time:** 2016-2019

**Budget:** 752 000 €

**Funding:** Finnish Ministry of Forestry  
and Agriculture, cities of Turku and Pori



## Project goals at different levels

create co-operation with the Chinese collaborators

promote co-operation between authorities, research  
organisations and companies

develop methods and practices for the management  
of stormwater and stormwater flood risks



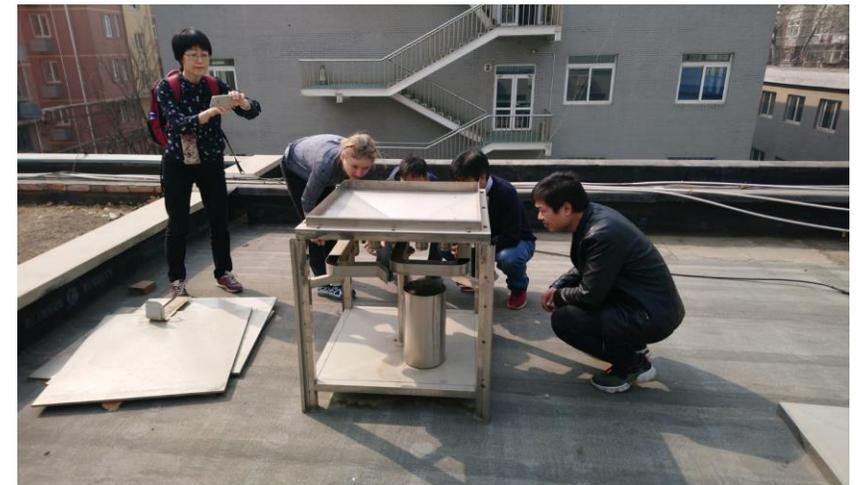
# Creating co-operation with China

## **Successes**

- Co-operation of high level authorities enabled good contacts with the Chinese
- The companies got a chance to demonstrate their expertise, which may result in new business opportunities in the future

## **Challenges**

- The scales, terminology and philosophy of Chinese stormwater systems are different – hard to make sure we understand each other
- The main export markets of the participating companies in Nordic and European countries
- For small companies it is very difficult send people to China, even when the trip is payed by the project



# Co-operation between authorities, research institutes and companies

Was seen by many as the most important result of the project!

## ***Successes***

- created new scientific co-operation between Finnish research institutes – in international projects there is normally not many Finnish partners
- companies got to know the possibilities and limits of their own products better
- companies felt they improved their contacts and visibility, through which some of them have already got new business opportunities

## ***Challenges***

- the communication of the research results to the cities
- managing the entity of the work and in building mutual understanding of the goals of the project



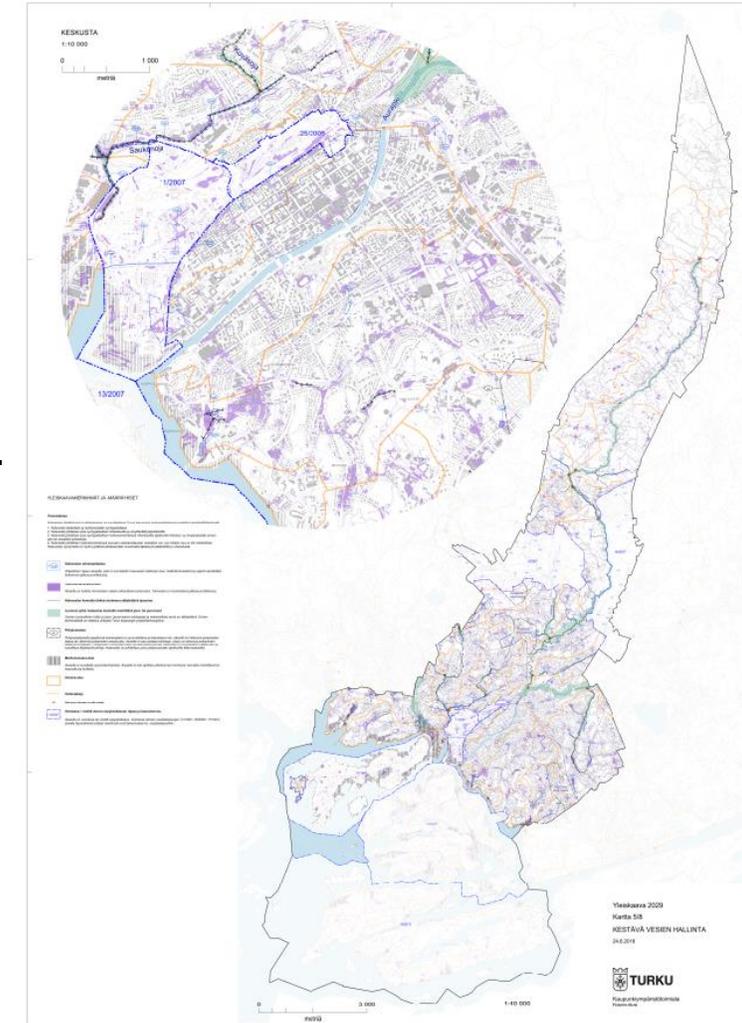
# Developing methods and practices for the management of stormwater and stormwater flood risks

## **Successes**

- Flood risk maps and stormwater models were developed for cities of Turku and Pori
- Improved understanding of the limitations and potential of different modelling approaches
- It was shown that a validated model allows the comparison of cost-efficiency of different stormwater management design alternatives
- The monitoring activities improved the understanding of the flow and pollutant dynamics in the pilot catchment

## **Challenges**

- Limited budget did not allow development of new solutions, rather development, validation, testing and comparison of existing solutions.





# Policy recommendation 1: Low impact developments should be promoted to reduce and retain storm runoff.

- Low impact developments should be promoted to reduce and retain storm runoff, as their potential for reducing flood risks is high.
- To achieve high cost efficiency, optimized selection, placement and dimensioning is required. This requires better integration of monitoring and modelling in the planning process.
- It is important to note, that costs can and should be shared between property owners and the municipality. Respective costing models are used in other EU countries and might be adapted and adopted in Finland.







# Policy recommendation 3: Monitoring of urban water quality and quantity should be carried out in order to fill-in the data gaps.

- Monitoring of urban water quality and quantity, should be carried out in order to fill-in the data gaps and enable the production of validated high-resolution models.
- The data is also needed to develop solutions that minimize pollutant transport environmental risks associated to stormwater runoff.
- As the available monitoring technologies are costly, planning of monitoring schemes needs to be planned carefully.
- In a mid-term perspective, more cost-effective solutions should be developed, including easy to measure proxies for main pollutants borne by stormwaters.



**Thank you!**