



United Nations
Educational, Scientific and
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UNESCO's work on transboundary water cooperation in South East Europe

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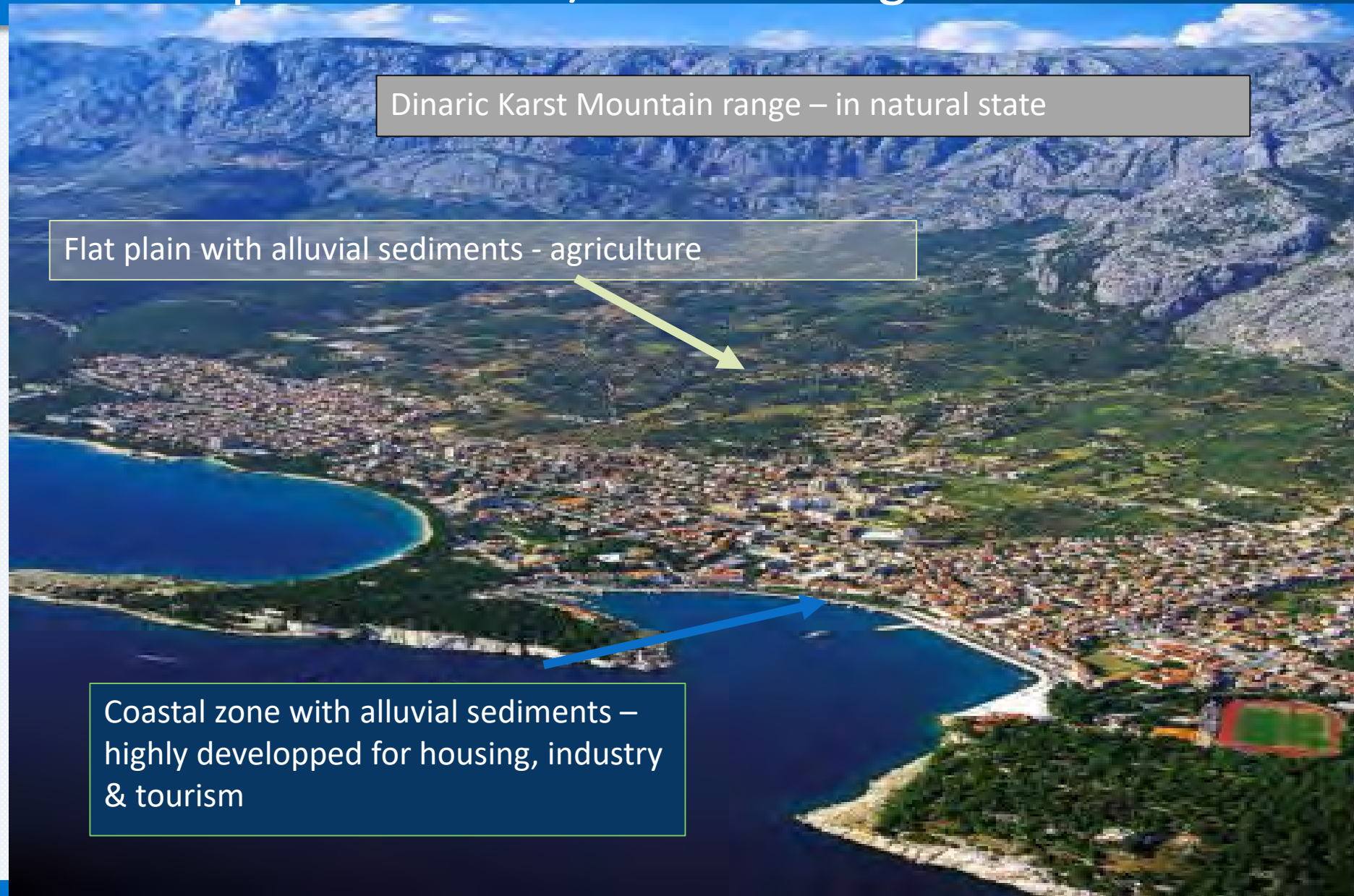


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IBC webinar

7 July 2020

Common landscape in the SEE / Adriatic Region



- In the Adriatic Coastal Zone and adjacent Karst Mountains, groundwater is the main source of water supply for domestic use (including tourism), industry and agriculture.
- Groundwater resources are affected by the intense human activities and by the lack of adequate land use planning, and threatened by climate variability with increased frequency of extreme flooding and droughts.
- Water functions as the “bloodstream” of both nature and the economy. The hydrological setting in the Adriatic Region is characterized by strong interactions between surface water, coastal waters and underlying aquifers, underpinning natural and socio-economic processes.

- Unsustainable and insufficient wastewater and solid waste management
- Pollution from industry (heavy metals, acids, oils) and agriculture (nitrate)
- Lack of education / training in water resources management
- Lack of scientific knowledge exchange among stakeholders
- Lack of cooperation among stakeholders, institutes and initiatives at all levels
- Inadequate implementation and enforcement of legislation
- Lack of harmonization of national legislations among neighboring countries and the completion of the transposition of EU Directives

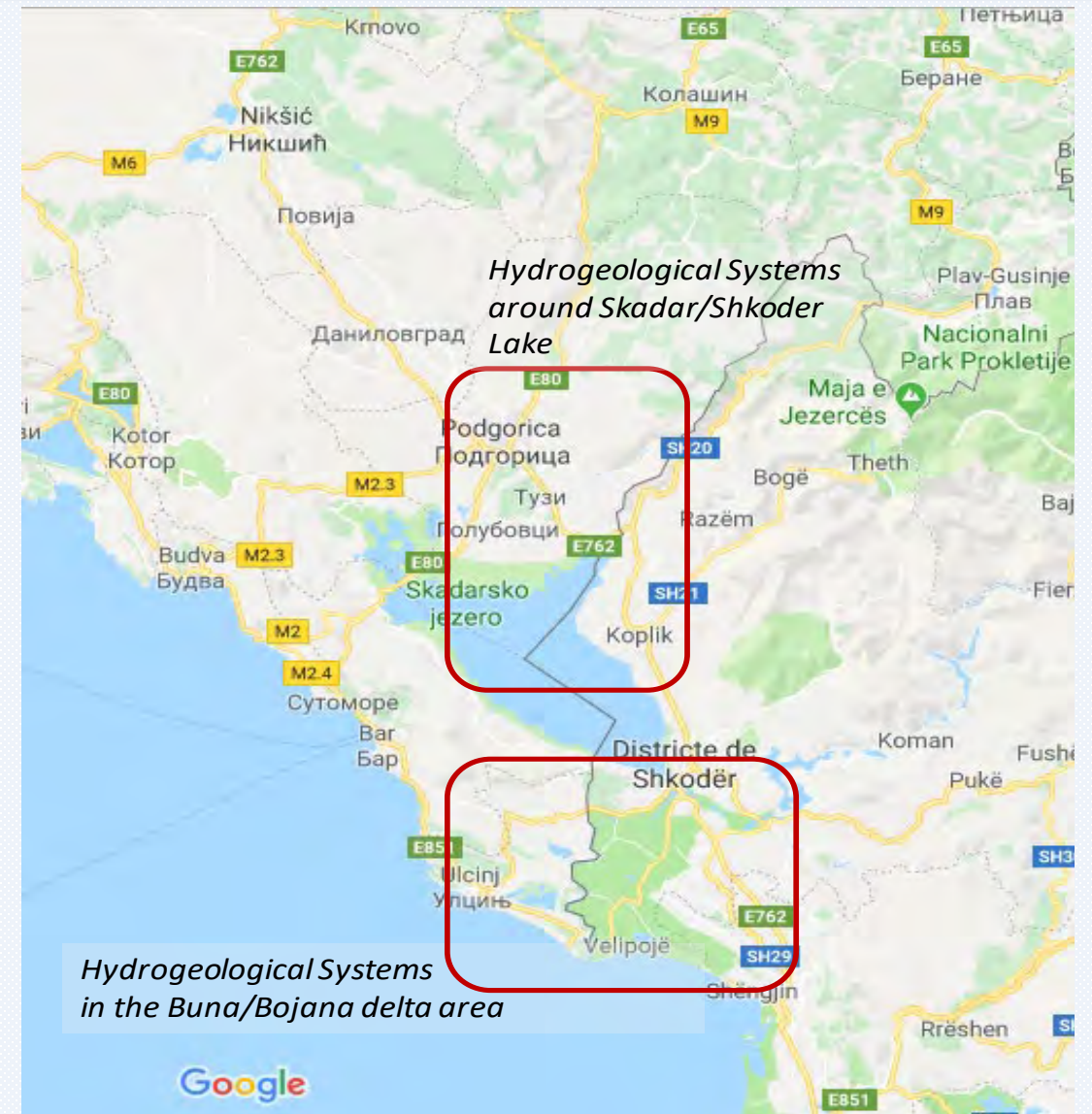
DRIN Corda pilot project

The pilot project aims to:

- provide the competent authorities of Albania and Montenegro with the tools for the operation and maintenance of the networks, consistent with requirements of the relevant EU legislation (WFD and GWD)- to implement (wherever deemed necessary and decided by the National Authorities) a systematic monitoring of groundwater resources state (quantity and quality) in the project focus area.
- provide proposal of transboundary groundwater monitoring programme for the focus area (hereafter: Program of monitoring the groundwater) in line with requirements of the provisions of the EU Water framework directive.

Geographical scope:

Lake Skadar/Shkoder and Buna/Bojana River delta



GDEs Aquatic Ecosystems

-  Inland marshes
-  Salt marshes
-  Salines
-  Estuaries
-  Coastal lagoons
-  Water bodies
-  Water courses

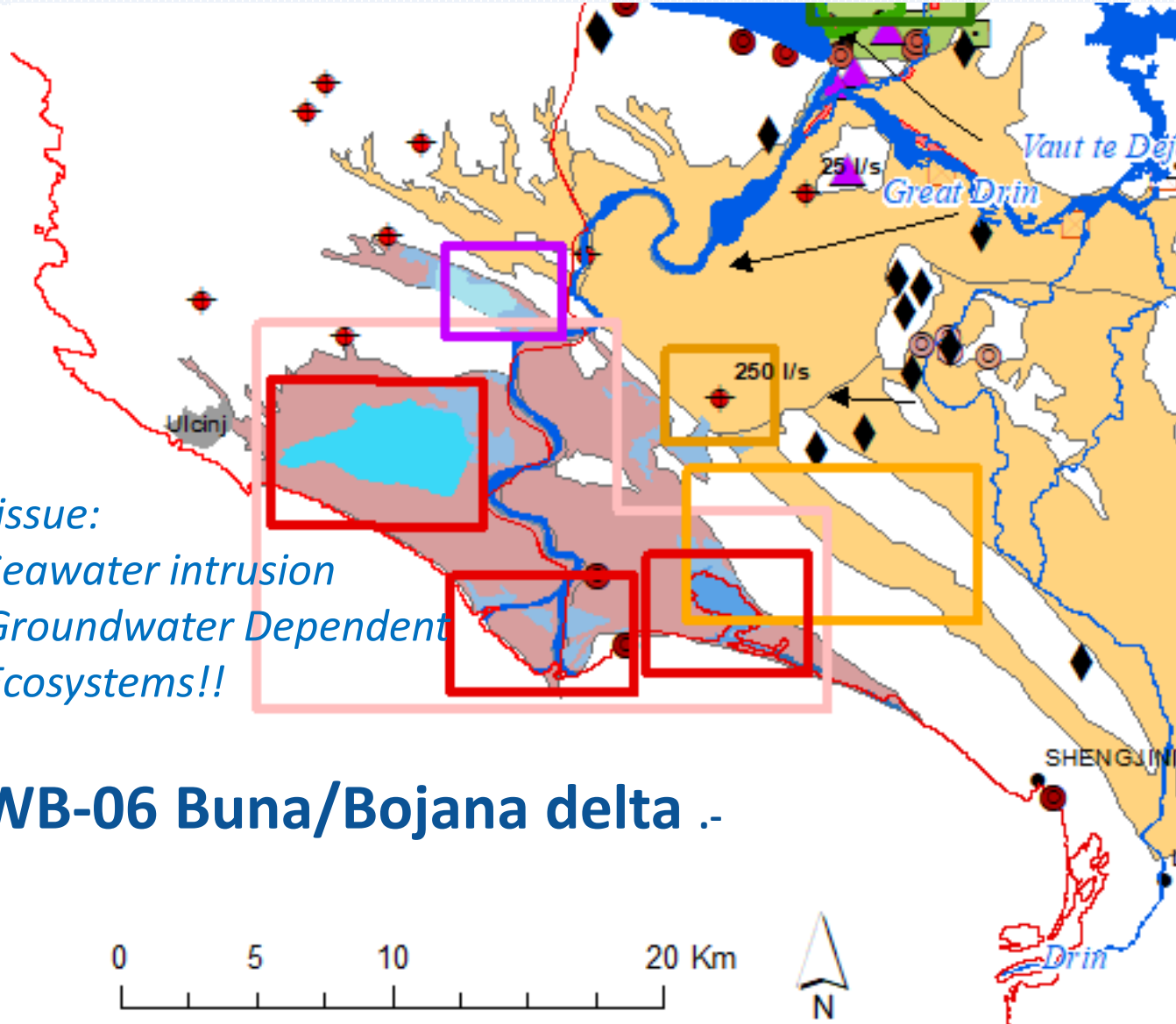
GWBs Monitoring Zones

-  GWB-01 Cijevna
 -  GWB-01 Moraca river
 -  GWB-01 Podgorica
 -  GWB-01 Seepage to lake
 -  GWB-02 GW Withdrawal
 -  GWB-02 Seepage to lake
 -  GWB-03 GW Withdrawal
 -  GWB-04 Spring discharge
 -  GWB-05 Pollution
 -  GWB-06 GDEs
 -  GWB-06 Seawater intrusion
- ## GWBs
-  GWB-01 Zeta Plain
 -  GWB-02 Koplík-Skoder plains
 -  GWB-03 Trush-Zadrima plains
 -  GWB-06 Buna/Bojana delta

Key issue:

- *Seawater intrusion*
- *Groundwater Dependent Ecosystems!!*

GWB-06 Buna/Bojana delta .-



LEGEND

-  Country border
 -  Towns_Mne_Clip
 -  Lakes
 -  Rivers
- ## Industry
- ### Industrial Activity
-  Aluminium industry
 -  Food-processing industry
 -  chemical industry
 -  pharmaceutical industry
 -  plastic production
 -  Landfills_and_Dumpsites
 -  Mining
 -  WWT_Plants
 -  Supply wells
 -  Unspecified Industry; Unspecified Industries
 -  Mechanical Industry
 -  Chemical Disposal Site
 -  Landfills and Dumpsites
 -  Mining
 -  Pollution Hot Spot
 -  gas station

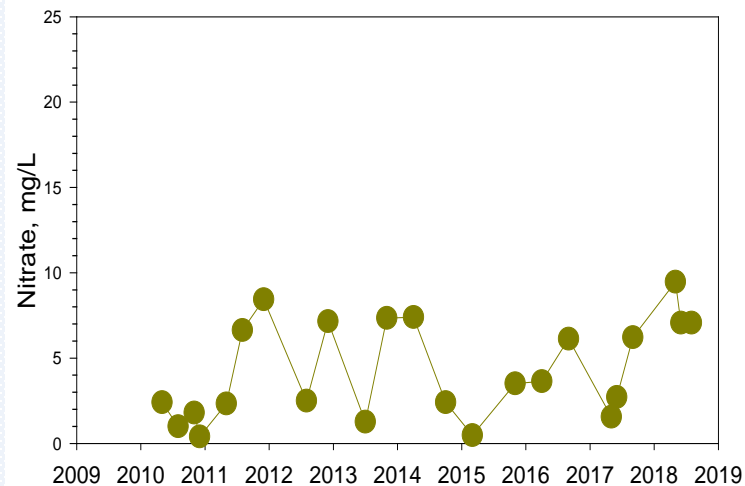


Environmental assessment

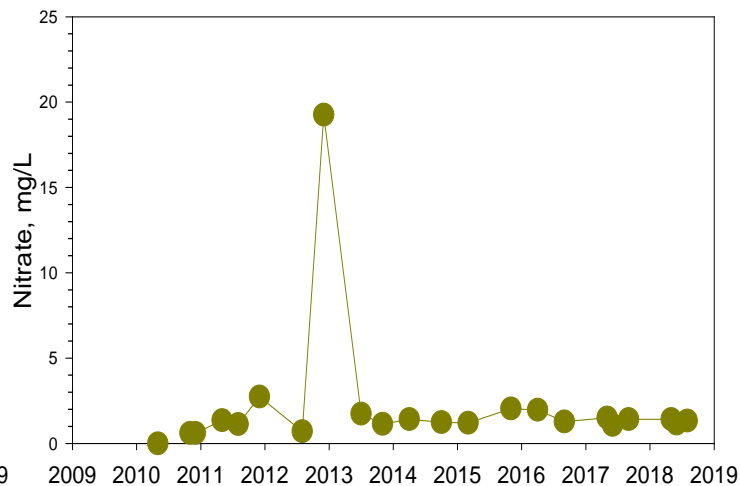
Groundwater quality in The Kopic and Trush aquifers



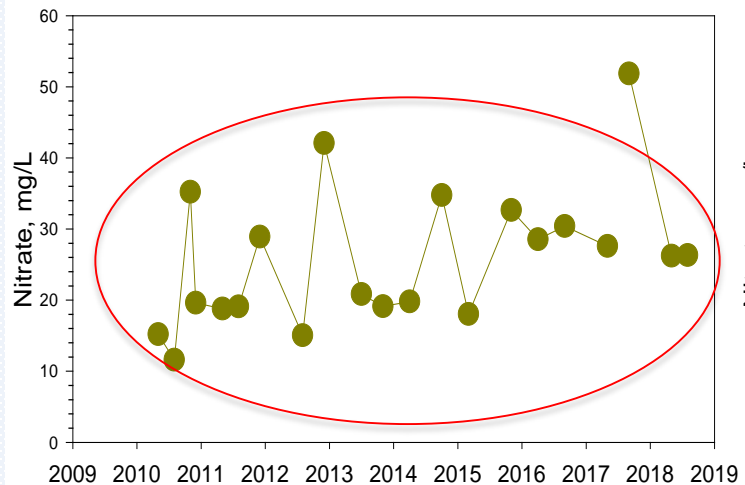
Kisha e Madhe - Shkodër



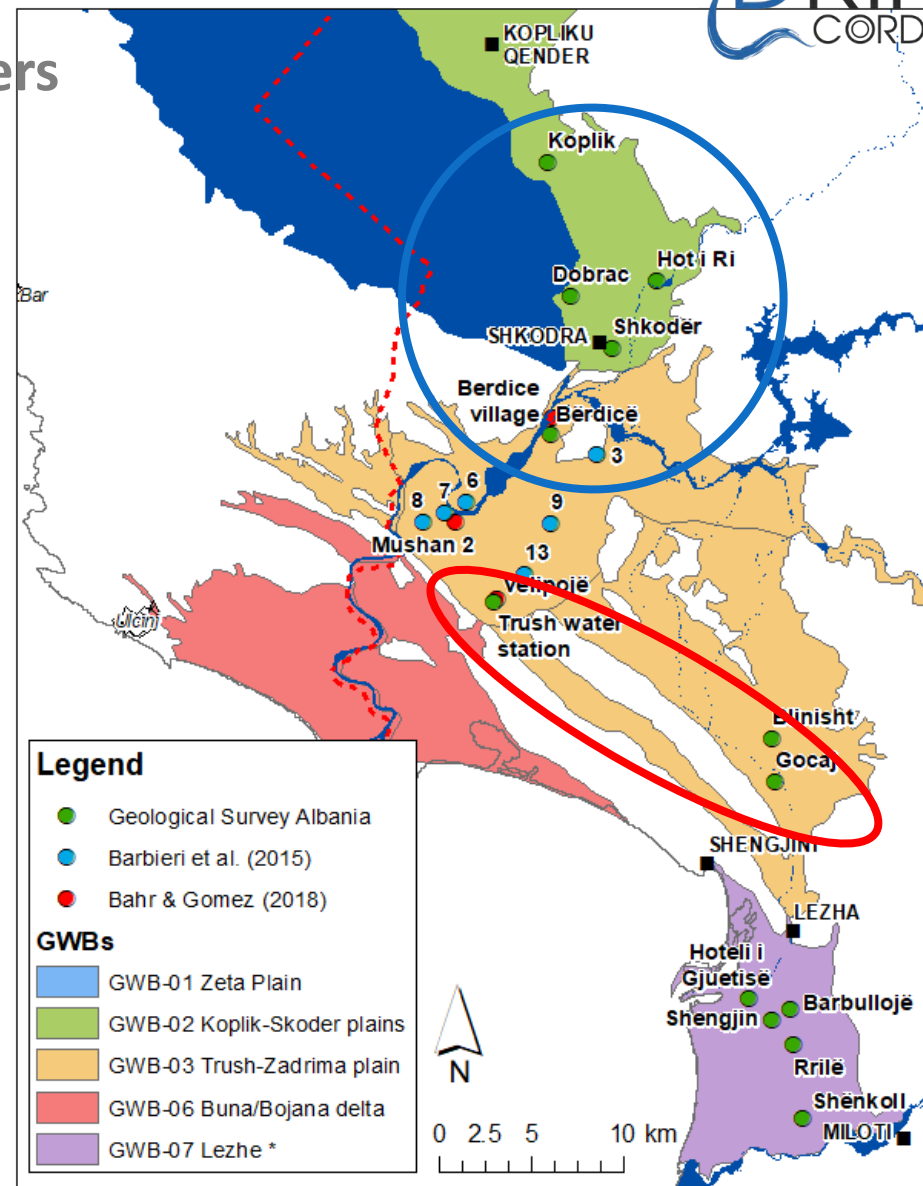
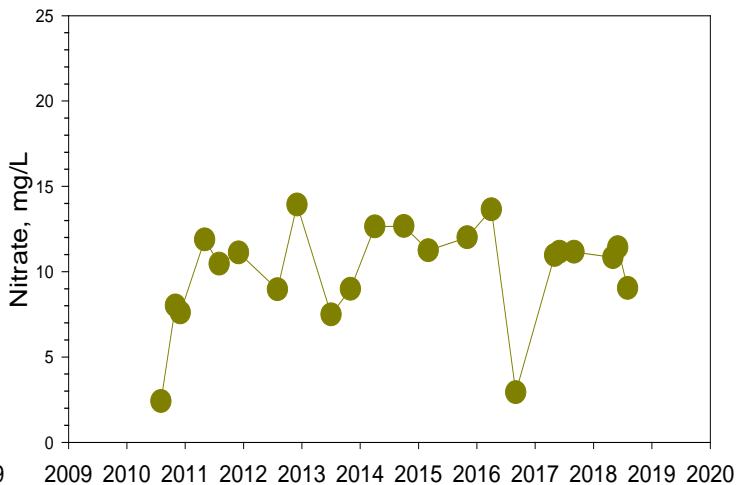
Bore - hole, Hot i Ri



Grudë - Fushë - Koplík

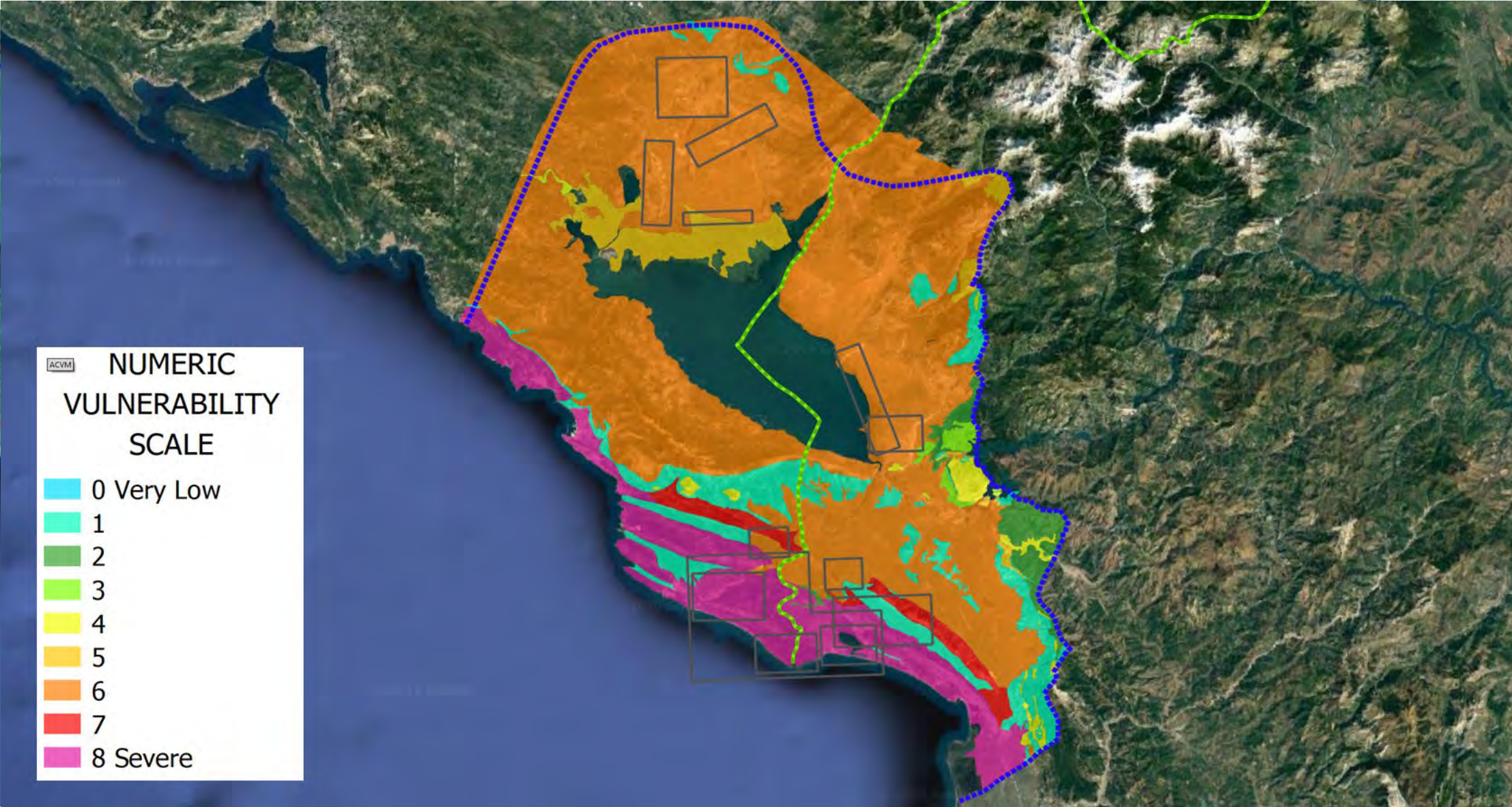
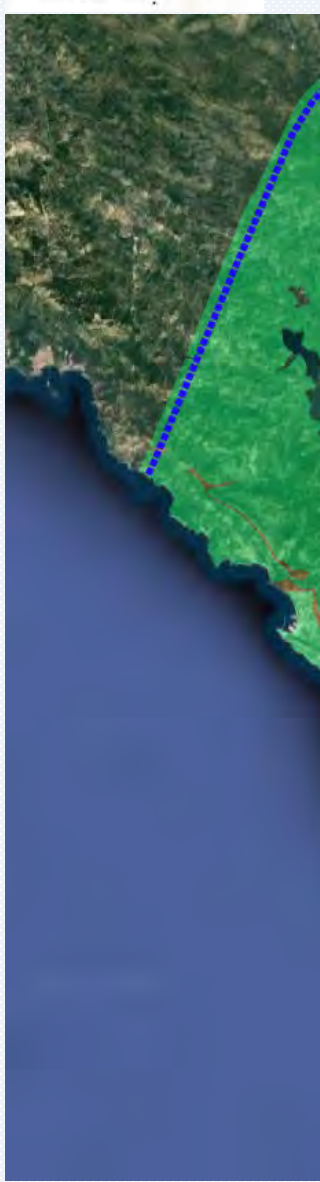


Dobraç - Shkodër





Step 1: Mapping vulnerability



ACVM

NUMERIC VULNERABILITY SCALE

0	Very Low
1	
2	
3	
4	
5	
6	
7	
8	Severe



Steps forward

Collaboration with the local Geological Surveys

Equip two wells in each country. Selection of the necessary equipment.

Field testing for 3 months.

Capacity Building on the methodologies for the design and operation of groundwater monitoring network.

Projects implementation



Phase 1

DRIN

Focus on alluvial aquifer
(Sub-ecosystem 1)

Demonstration of state-of-the-art groundwater quality monitoring tools and capacity building
Pilot 2 sites near Lake Skadar/Shkoder and Buna/Bojana Delta

2018 - 2020

Phase 2

MedProgramme

Focus on coastal aquifers along Adriatic coast
(Sub-ecosystem 2)

In-depth assessment of hydrogeology and interaction between groundwater, surface water and ecosystems; capacity building and multi-country governance

Proposed: Buna/Bojana aquifer & wetlands
2020-2025



Phase 3

DIKTAS

Focus on Dinaric Karst aquifers in Balkan
(Sub-ecosystem 3)

Implementation of Strategic Action Plan to strengthen multi-country cooperation, governance frameworks and institutional capacity

2020-2025



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DRIN Pilot Project



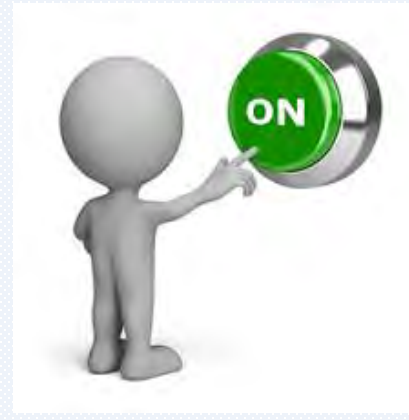
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Intergovernmental
Hydrological
Programme



**Thank U
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