

# CROATIAN METEOROLOGICAL AND HYDROLOGICAL SERVICE D H M Z

<http://meteo.hr>

Twitter: @DHMZ\_HR

*ANNUAL REPORT 2018/2019*

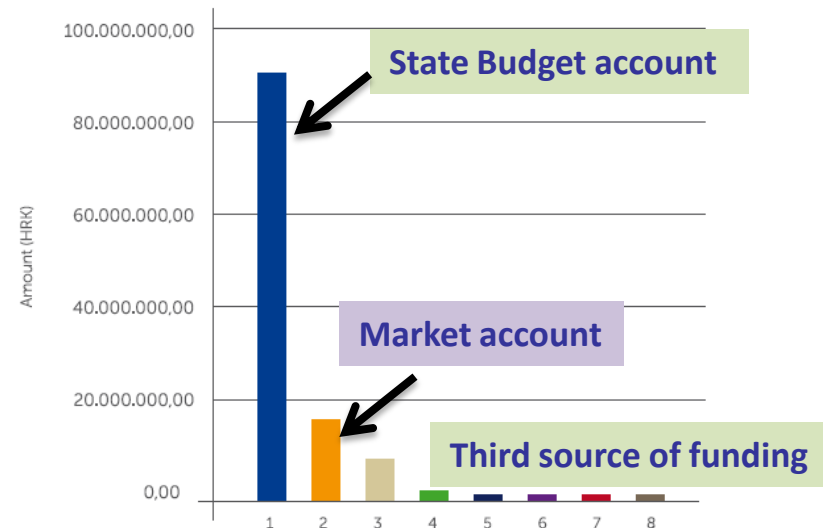
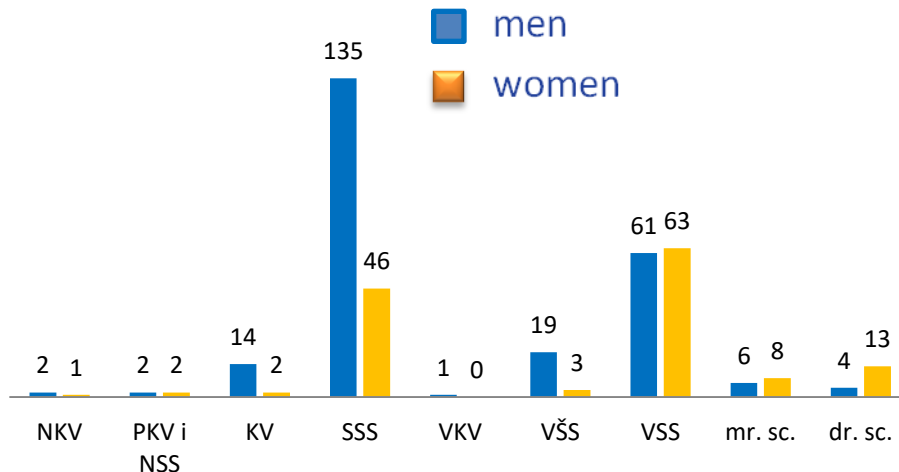
# Resources and legal framework

DHMZ – activities under the vigilance of the Ministry of Environment and Energy

375 employes (65% men, 35% women)

Total budget (~15 M€)

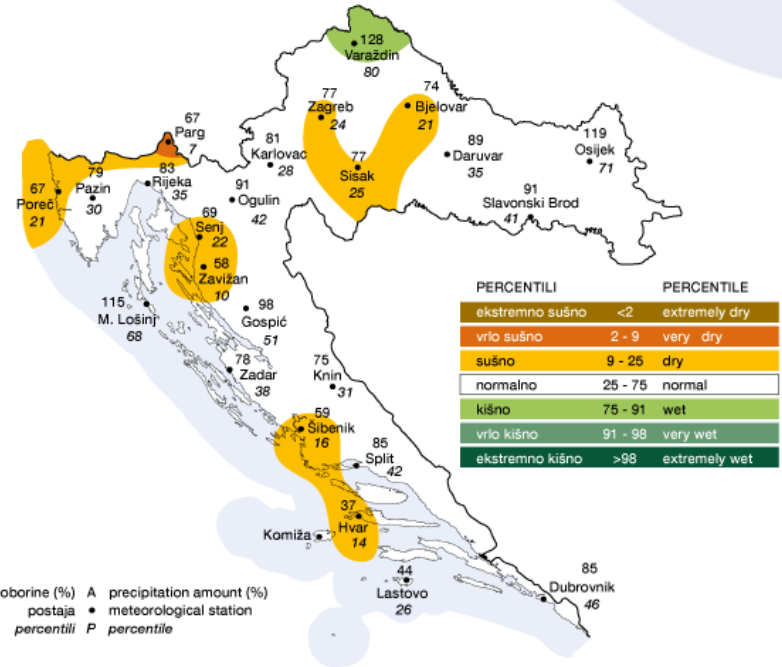
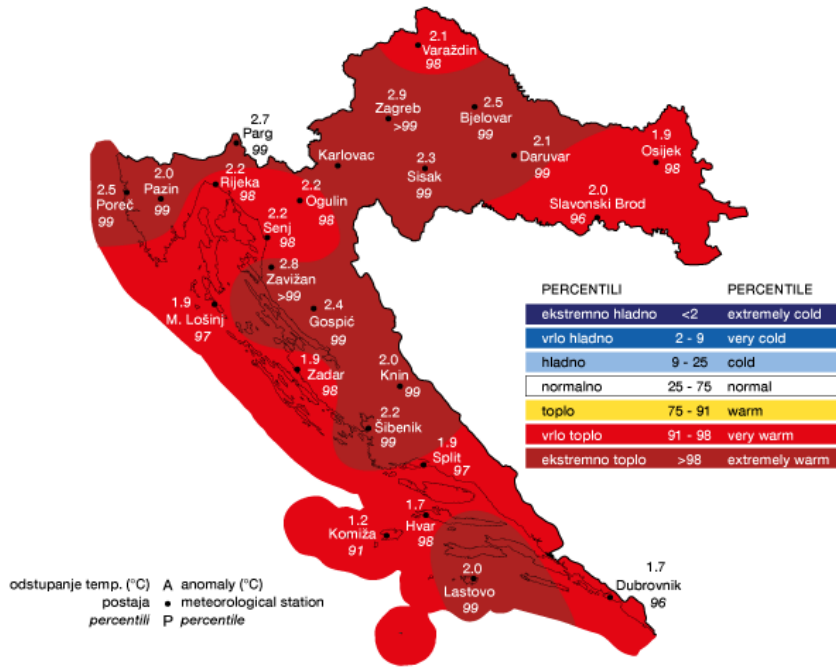
DHMZs employes by professional qualifications



**New *Law on meteorological and hydrological activities* in the Republic of Croatia is accepted by the Parliament and the Government in July 2019**

# WEATHER

## Summer 2019



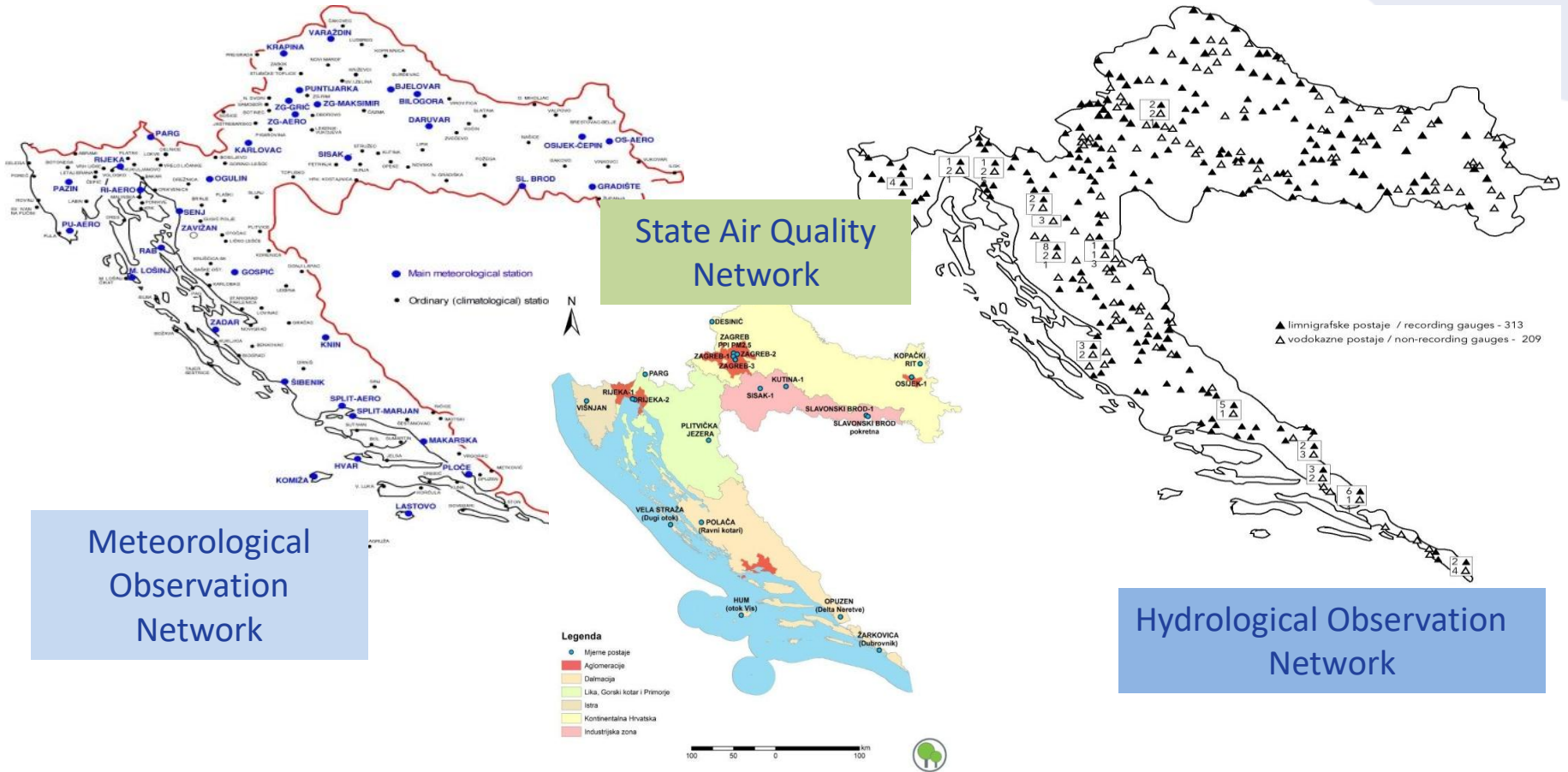
Air temperature anomalies  
**VERY TO EXTREMELY WARM**

and

Precipitation amounts  
**NORMAL AND DRY**

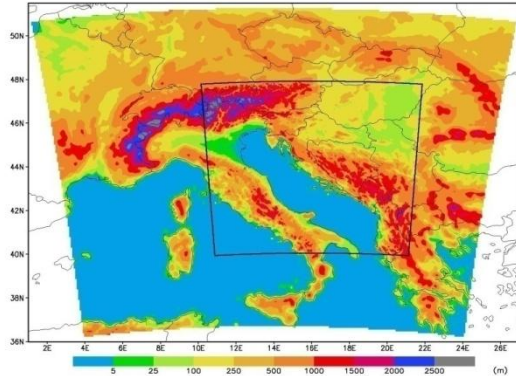
# Observations and measurements

Monitoring of meteorological, phenological and hydrological parameters, air and precipitation pollution

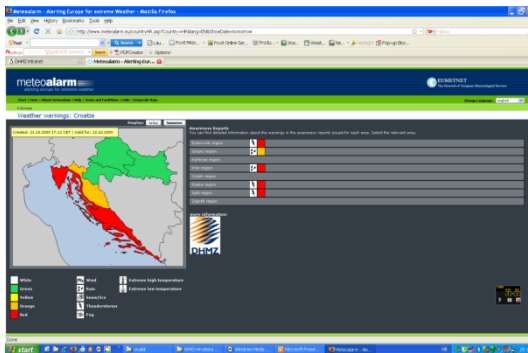


# Forecast/NWP

## ALADIN/ALARO/HR



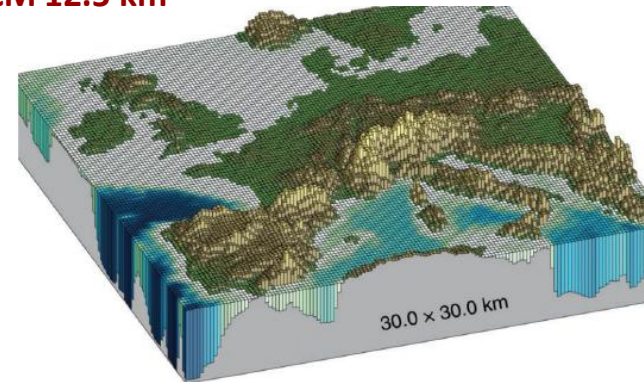
- ✓ Horizontal resolution: 4 and 2 km
- ✓ Vertical levels: 73
- ✓ Forecast range: 72 hours
- ✓ Run: 00, 06, 12, 18 UTC



METEALARM warnings  
complemented with  
coastal wind warnings

- ✓ New web portal meteo.hr
- ✓ Twitter: @DHMZ\_HR
- ✓ INCA nowcasting system was implemented
- ✓ Visual Weather software (IBL)
- ✓ Specialized web portals and apps  
(Nautical Information Service – nIS;  
HRT meteo; ANEMOALARM)

## RegCM 12.5 km



- ✓ Contribution to the EURO-CORDEX initiative

# Modernisation

- ✓ Modernisation of the National Weather Observation Network in Croatia – METMONIC
- ✓ Expansion and Modernisation of the National Network for Continuous Air Quality Monitoring – AirQ
- ✓ Improvement of Non-Structural Measures of Flood Risk Management in the Republic of Croatia - VEPAR

**Regional Development Fund** within Operational Programme  
Competitiveness and Cohesion 2014 – 2020 (85%)  
**Environmental Protection and Energy Efficiency Fund**  
– national component (15%)

**Ministry of Environment and Energy**

- ✓ Calibration laboratory
  - Accreditation for temperature, pressure, relative humidity gauges calibration as well as air quality analysers and gas mixtures concentration calibration
  - As a member of EURAMET presented their QMS to Technical Committee for Quality

# Modernisation of the National Weather Observation Network in Croatia – METMONIC

The key components of the project are:

Modernization and *improvement of surface meteorological measurements*

Modernization and *improvement of upper-air meteorological measurements*

Modernization and *improvement of the meteorological radar network*

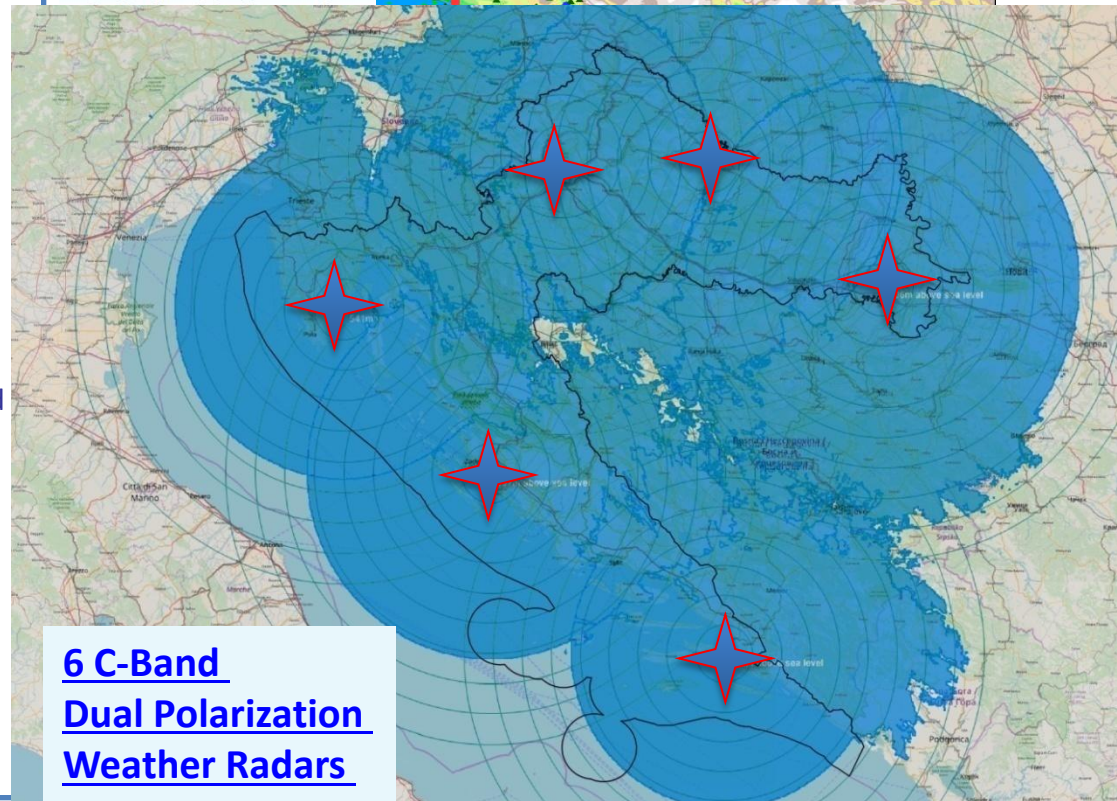
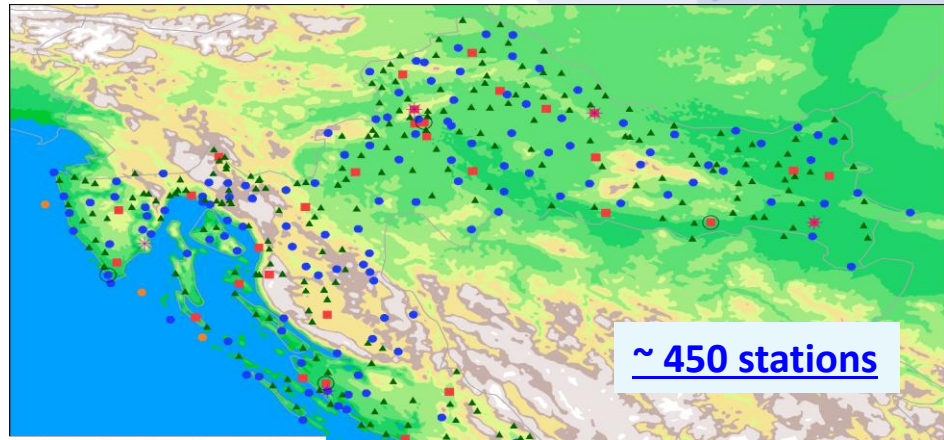
*Establishment* of a measurement system of *meteorological-oceanographic buoys*

**Enhancement and modernization** of the system for receiving, processing, controlling and storing data and ensuring **data availability**

Improvement of the meteorological *calibration laboratory*

Improvements in monitoring of **trace elements** in the ecosystem

~ 45 mil EUR



# Expansion and Modernisation of the National Network for Continuous Air Quality Monitoring – AirQ

The key components of the project are:

Modernisation of *air quality measuring stations*

Establishment of *air quality modelling system*

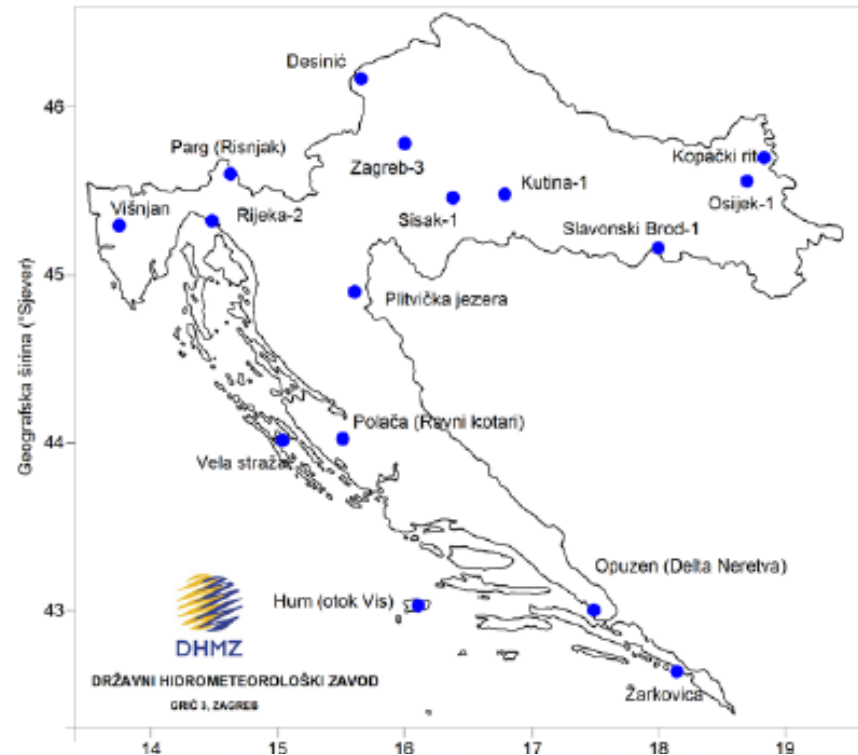
Acquisition of *laboratory equipment* for analysing chemical content of the atmosphere, aerosols and precipitation

Acquisition of *equipment for ensuring traceability and quality of measurements*

Upgrading of *IT infrastructure*

~ 15 mil EUR

## AIRQ projekt - modernizacija mjernih postaja





# Improvement of Non-Structural Measures of Flood Risk Management in the Republic of Croatia - VEPAR

The key components of the project are:

Modernization of hydrological measuring stations,

Develop or improve the network flood forecasting mathematical models,

Develop or improve the study of flood risk management,

Acquire the necessary equipment for more efficient operational flood protection,

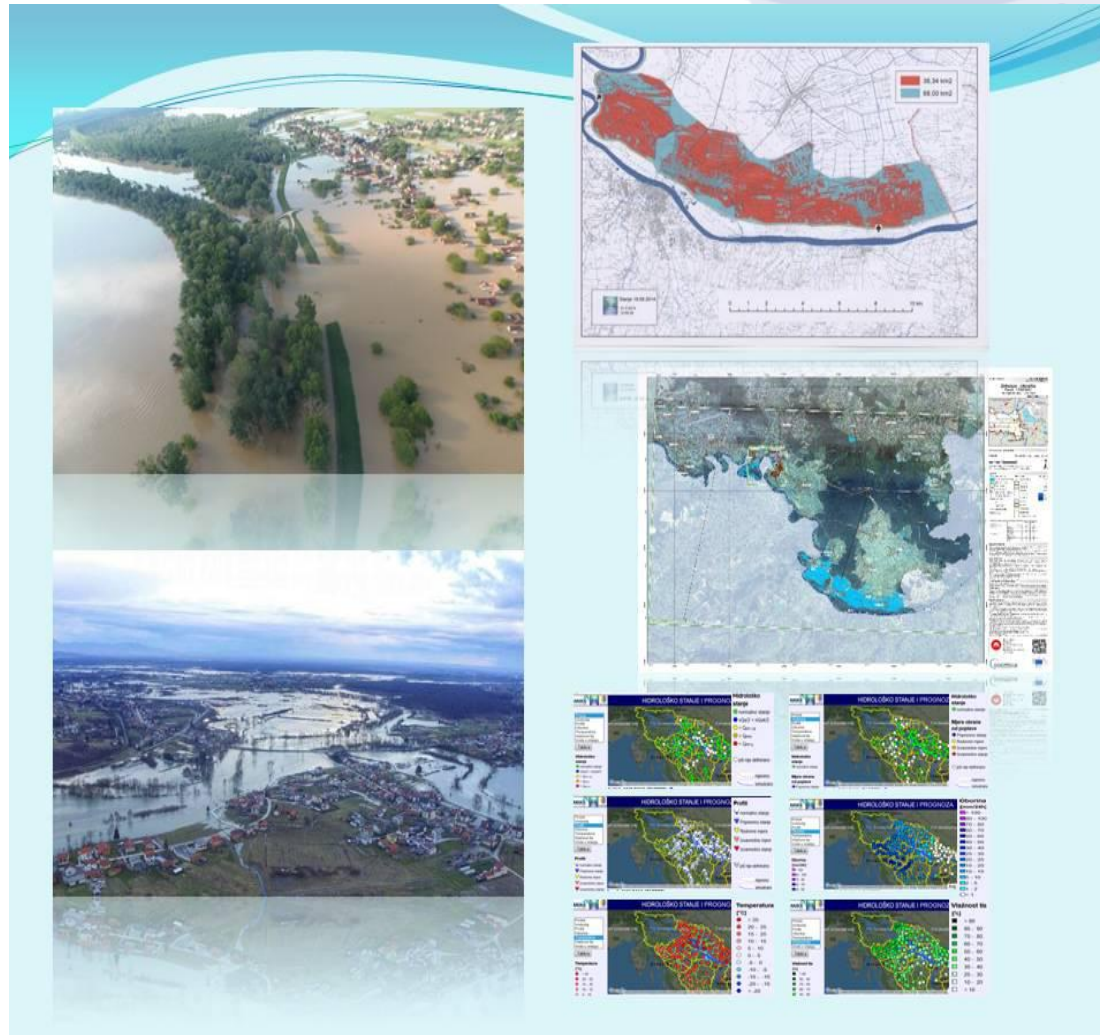
Educate and inform the public about flood risks, and carry out other activities that will comprehensively improve non-structural flood risk management measures in the Republic of Croatia.



DRŽAVNI HIDROMETEOROLOŠKI ZAVOD  
CROATIAN METEOROLOGICAL AND HYDROLOGICAL SERVICE

~ 33 mil EUR

Croatian Waters



## Relocating to a *new building*

- ✓ the headquarters project is being developed, it is nearly finished
- ✓ we expect to secure the funding next year

### Zagreb



### Split – Marine Meteorological Centre



# Promotion Activities



Twitter:  
@DHMZ\_HR



Workshop with  
Croatian amateur  
meteorologists

Participation in  
creation of ECMWF  
communication  
strategy



2019



Calendar for 2019  
with WMO photo  
entries, new one is  
in progress



Support to 22  
national meeting  
and completion  
of GLOBE schools



Monograph about  
research activities  
in DHMZ



Participation at  
Zagreb Energy  
Week

Participation at  
Festival of Science



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*Thank you!*