



Water Contingency Management in the Sava River Basin

**Stakeholder communication
workshops with pilot actions analysis**

Output Number T3.3

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Version	Draft
Date	8.8.2022
Date (version)	

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2nd WACOM workshop in Bosnia and Herzegovina

Water Contingency management in the Sava river basin

On Thursday, July 14, 2022, between 9:00 am and 12:00 pm, the 2nd National Workshop of the WACOM Project was held through the online platform ZOOM.

The key challenge of the WACOM project is to improve transboundary coordinated response to accidental pollution and flooding on transboundary watercourses in the Sava River basin, which includes an analysis of the response in each country.

The third workshop, in a series of three, served as a simulation of a staff exercise in which we tested the tools and approaches developed for improved transboundary response and cooperation in the event of such disasters.

The second BA WACOM national workshop was attended by 39 participants. In addition to the organizers and project partners, representatives of the following institutions were also present:

- JU Vode Srpske, JVP Srbijavode
- Republički hidrometeorološki zavod Republike Srpske,
- Agencija za vodno područje rijek Save, BiH,
- Privredna komora Republike Srpske,
- Grad Banja Luka,
- Natron Hayat d.o.o.,
- Vodovod i kanalizacija Tuzla,
- Civilna zaštita opštine Gradiška,
- JP Luka Brčko,
- Federalna uprava civilne zaštite,
- Civilna zaštita grad Banja Luka,
- Federalno ministarstvo prostornog uređenja,
- Kantonalna uprava za civilnu zaštitu,
- Grad Bijeljina,
- Civilna zaštita grada Bijeljine,
- Županijska uprava civilne zaštite,
- Ravnateljstvo civilne zaštite PUCZ Osijek,

1 Agenda of the 2. National workshop of the WACOM project, 14. 7. 2022 (online)

Dnevni red 2. Nacionalne radionice projekta WACOM, 14. 7. 2022 (online)

08.45 – 09.00	Testiranje veze	
09:00 – 09:10	Dobrodošlica i predstavljanje učesnika	<i>Milan Novitović – Republička uprava civilne zaštite Republike Srpske</i>
09:10 – 09:20	Pregled aktivnosti WACOM projekta i aktivnosti Savske komisije	<i>Primož Banovec, Samo Grošelj</i>
09:20 – 09:30	Predstavljanje svrhe i koncepta komandno štabne vježbe	<i>Primož Banovec</i>
09:30 – 09:55	Prikaz provedene simulacije komandno štabne vježbe za incidentno zagađenje - Scenario vježbe - Učesnici vježbe - Hronologija komandno štabne vježbe - Ključni rezultati	<i>Haris Delić</i>
09:55 – 10:15	Prikaz provedene simulacije komandno štabne vježbe za poplave - Scenario vježbe - Učesnici vježbe - Hronologija komandno štabne vježbe - Ključni rezultati	<i>Danijela Ždrale</i>
10.15 – 10.30	Odmor	
10:30 – 11:00	Prezentacija WACOM alata	<i>Primož Banovec</i>
11:00 – 11:20	Poređenje pet vježbi provedenih u okviru WACOM projekta (Brežice, Slavonski Brod, Brčko)	<i>Robert Mikac</i>
11:20 - 11:45	Upitnici - online anketa Rasprava	<i>Robert Mikac</i>
11:45 – 12:00	Zaključak i dalji rad u projektu WACOM	<i>Primož Banovec</i>

2 Introduction

After a welcome by the project leader, Primož Banovac, UL of the Faculty of Civil and Geodetic Engineering, according to the agenda, the WACOM project, the project partners and the purpose and content of the project were presented.

2.1 Overview of the WACOM project and Sava Commission activities

The WACOM project builds on the activities and protocols of the International Commission for the Sava Basin, which respects various international protocols (on transboundary pollution, ICPDR - International Commission for the Protection of the Danube River) and builds on the logic of the EU Civil Protection Mechanism and takes into account the sovereignty of interventions in various countries.

Afterwards, Samo Grošelj (ISRBC) presented the legal framework and activities of the Sava Commission.

The International Commission for the Sava Basin consists of 4 member countries and Montenegro. It deals mainly with management of water-related emergencies in the Sava River Basin, as well as sustainable water management, sustainable risk management (floods, droughts, accidents, etc.), regulation of international navigation and FASRB protocols. Current activities are aimed at controlling flood risk and establishing and improving a flood forecasting and warning system in the Sava River basin. The activities of the Sava Commission are also aimed at prevention and control of accidents, which allows early information of potentially affected riparian states (Protocol on Emergency Situations (draft) and the Emergency Accident Warning System (AEWS)). They also inform the public with the system for exchange of data and information on RBM, FRM and HMI and the database for FFWS: Sava GIS www.savagis.org) and Sava HIS www.savahis.org; their upgrade (APC and NAV module) is planned within the WACOM project.

2.2 Presentation of the purpose and concept of the table-top exercise

The purpose of the staff exercise is primarily that successful management of major disasters (e.g., transboundary flooding, accidental pollution) requires effective and coordinated action by institutions in all countries.

Knowledge of the disaster management mechanism in upstream countries improves the efficiency and effectiveness of the response in downstream countries (floods, extreme pollution)

It links both countries and sectors: disaster management, water management and navigation

It involves target groups, creating a broad platform needed for better prevention and response to floods and emergencies.

Objectives of conducting table-top exercises:

- 1) Test and verify the usability and adequacy of the proposed WACOM tools for coordination and communication during incidents in an international environment (headquarters in different countries in the Sava River basin). WACOM tools: Transnational Modeling Tool, Incident Coordination Tool, Situational Awareness Tool
- 2) Conduct several international staff exercises in the manner of table-top drills 3) Interactive staff exercise
- 4) Involve as many international target participants as possible (become critical
- 5) Evaluate existing and new proposals for disaster management approaches
- 6) Assess the acceptability of introducing new tools into international practice

7) Promote the conduct of staff exercises, create examples of best practices.

2.3 Presentation of conducted simulation of the table top exercises

The WACOM project objectives include execution of five table top exercises which simulate several emergency situations of accidental pollutions and floods:

•3x simulation of accidental pollution to Sava river

-SLO-HR – accidental pollution Zidani Most

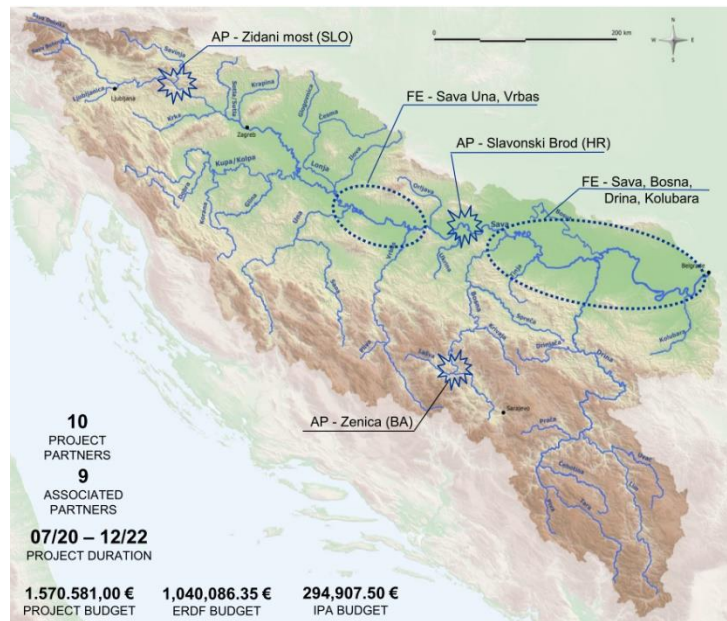
-HR-BIH – accidental pollution Slavonski Brod

-BIH-SRB – accidental pollution Zvornik(Drina)

•2x simulation of floods

-HR-BIH (river area: Una, Vrbas)

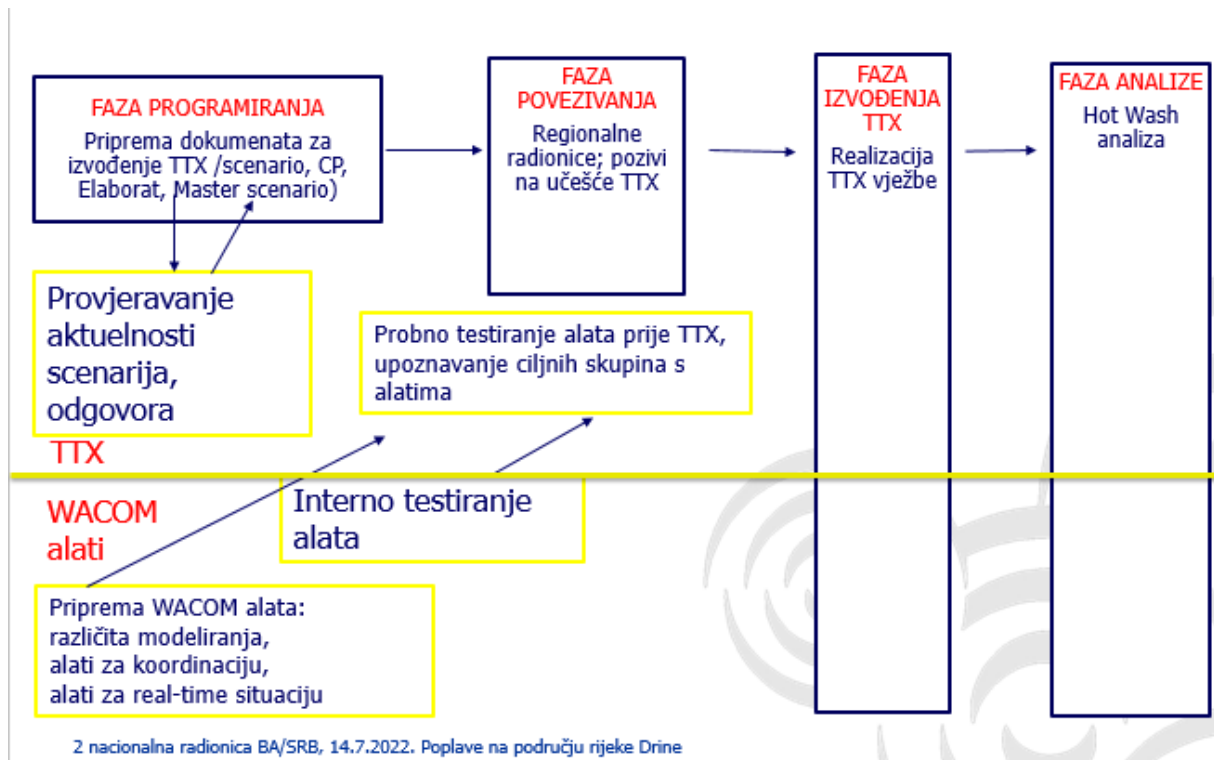
-BIH-SRB (river area: Drina, Sava)



Picture 1: five table top exercises were executed

2.3.1. Phases of preparation for conducting the simulation of the TTX exercise

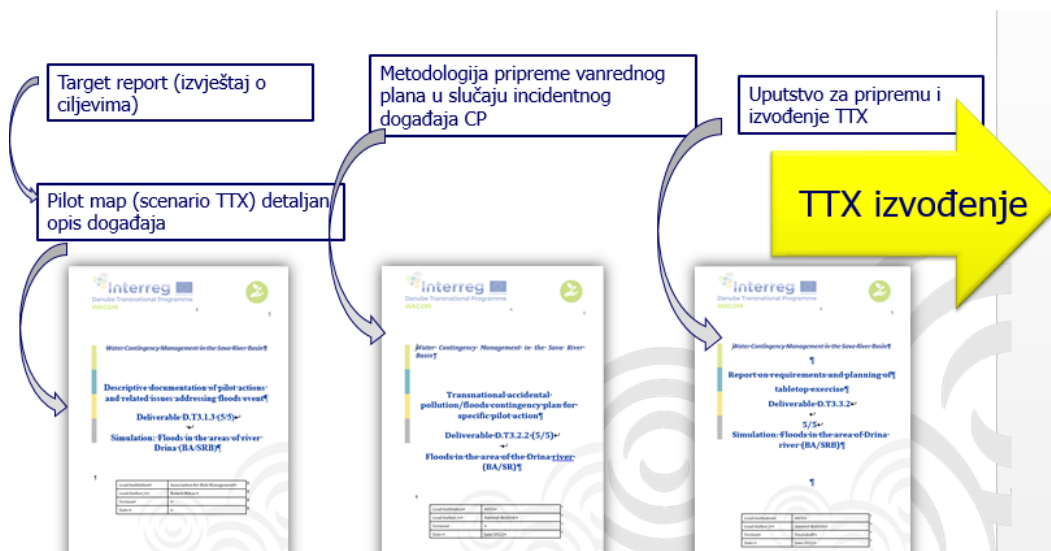
Preparation for conducting the simulation of the TTX exercise was performed in several different phases: preparation phase, execution phase, analysis phase (as shown in Picture 2).



Picture 2: Phases TTX

Documentation for the preparation and execution of a TTX exercise simulation

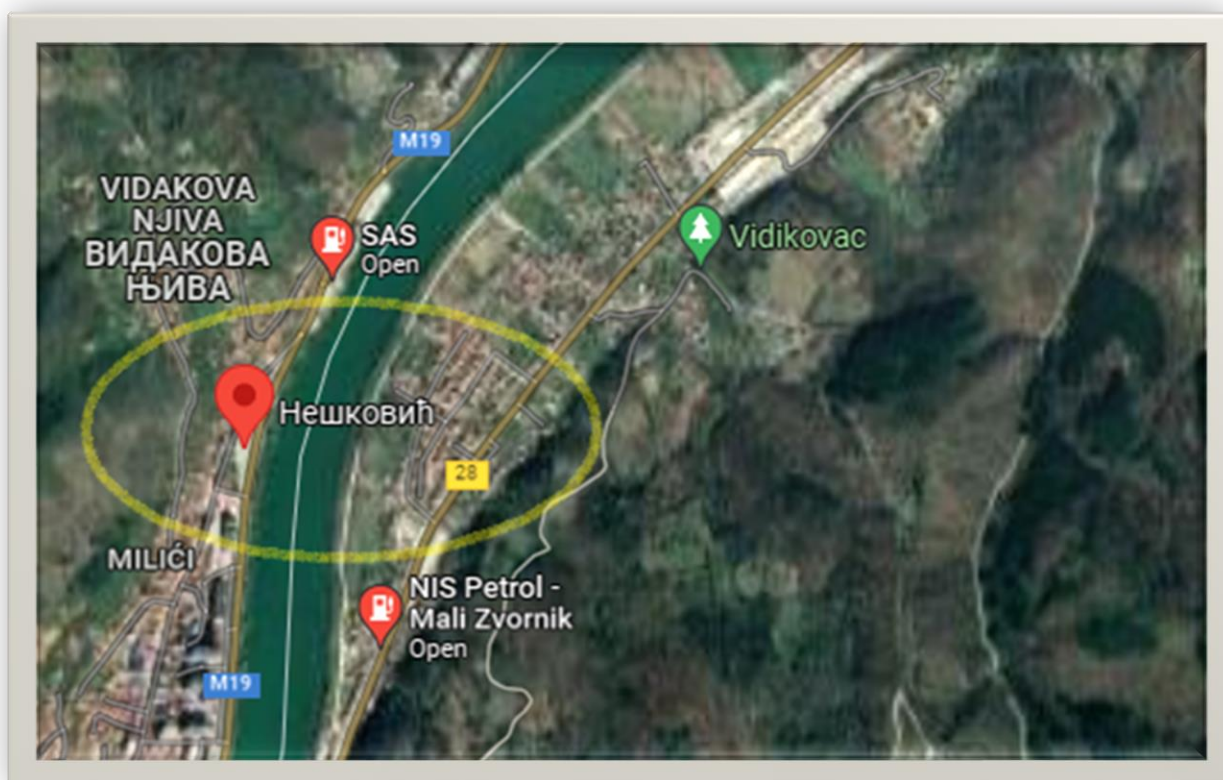
Documents prepared within the WACOM project serve as the main documents which define details on preparation and execution of the table-top exercise of simulation of accidents. The four documents were prepared for each of the five table top exercises which simulate several emergency situations. The four documents are: Scenario, Contingency plan, Elaborat and Master Scenario Event List.



Picture 3: four documents prepared for each of the five TTX

2.3.2. Execution and key steps of the TTX simulation

- 1) Introduction to scenario, MSEL and WACOM tools



Picture 4: Scenario of the accident

Description of the accident event:

- Pollution; caused by fuel leaking from a parked tank truck
- The capacity of the tank truck tank is 42,000 liters

The area of the accident:

- The plateau next to the Nešković Gas Station in Milići (BiH), the left bank of the Drina River, with an accident on the right bank to Mali Zvornik (SRB)
- The border area between Bosnia and Herzegovina and the Republic of Serbia.

Event time:

- The accident happened on the night from Saturday to Sunday, October 20, 2021.
- at 2 a.m., autumn, outside temperature is 9.0 °C., weather conditions: precipitation

Impact of accidents and vulnerable groups:

- The Drina River (the site of the accident and downstream), the impact on people, flora and fauna, and the surrounding coastal areas on both sides/banks of the Drina River (in Bosnia and Herzegovina and the Republic of Serbia)

2) The beginning of the event (Pollutions)).

- October 20, 2021. at 2 a.m., autumn

3) Communication, reporting,...

4) Use of WACOM tools 5) Preparation of report and reporting of planned activities (ICS 209).

6) AEWS reporting 7) Completing, supplementing ICS 207 reports (organising staff).

8) Design of press releases for the public

9) Completion of activities and transition to "rehabilitation phase".

10) Questionnaires for the participants

11) Analysis and HOT WASH

2.4. Table top exercises analyses

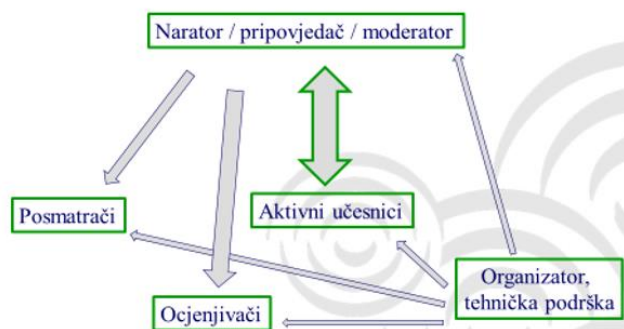
Participants were invited to actively participate in the interactive story of the accident and to participate in describing the expected sequence of events and activities that their facility's team would perform during the actual rescue.

The exercise is conducted in such a way that all participants follow the main narrative of the story by the narrator of the exercise, even if they would not be familiar with it in the real case. Participants also observe the activities or reactions of all other participants. This is the only way that each participant can better understand and evaluate new approaches and the use of assistive devices in conducting the exercise.

Each participant responded in accordance with best practices and in accordance with any innovations resulting from the use of WACOM tools as part of the protection and recovery plan.

During the exercise, participants will become familiar with and use WACOM tools, and evaluation of the usefulness of these tools will be an important element in the final evaluation of the exercise.

Some participants were not actively involved and had the role of monitoring and overseeing the implementation of the TTX, they provided ongoing analysis of activities, and identify deviations from the planned implementation plan or existing procedures.



Slika 4: Key actors of TTX

HOT WASH analyses

Immediately following the completion of the exercise, a "hot wash" analysis must be conducted, allowing all participants to provide comments that will be discussed in the "After Action" report. The following questions will be answered as part of the analysis:

1. Each HQ gives its brief opinion on the conducted exercise:
 - What was done well?
 - What was not done well and what are the reasons for that?
 - Were there any surprises? Very important for lessons learned
 - Were the objectives of the exercise met? If not, why not?
2. Individual questionnaires for all TTX exercise participants
3. Questionnaires for evaluators, in order to obtain their opinion

2.4 Comparison of five table-top exercises carried out within the WACOM project (Brežice, Slavonski Brod, Brčko)

Main conclusions and hot wash

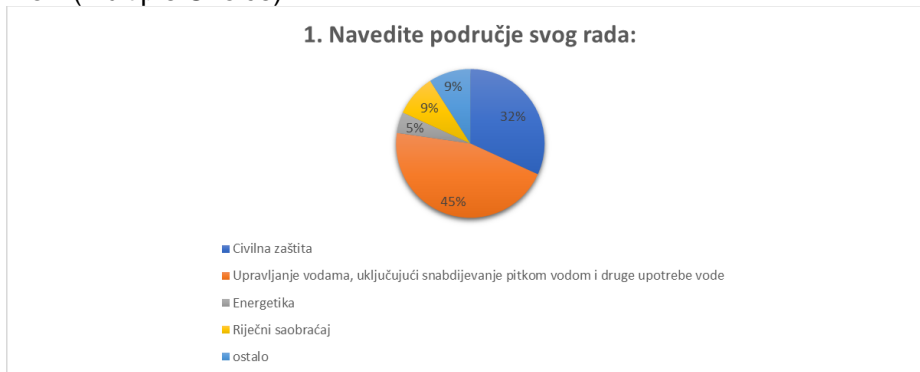
- Very well organized workshop. Unfortunately, we lacked project partners/representatives of official institutions from Serbia.
- All participants actively participated in the realization of the exercises
- The discussion was of high quality and showed the situations that need to be resolved within Bosnia and Herzegovina, but also outside the borders
- Technical solutions developed within the WACOM project can be very useful in real situations
- The workshop served as a model for following workshops

3 Analysis of the questionnaire results

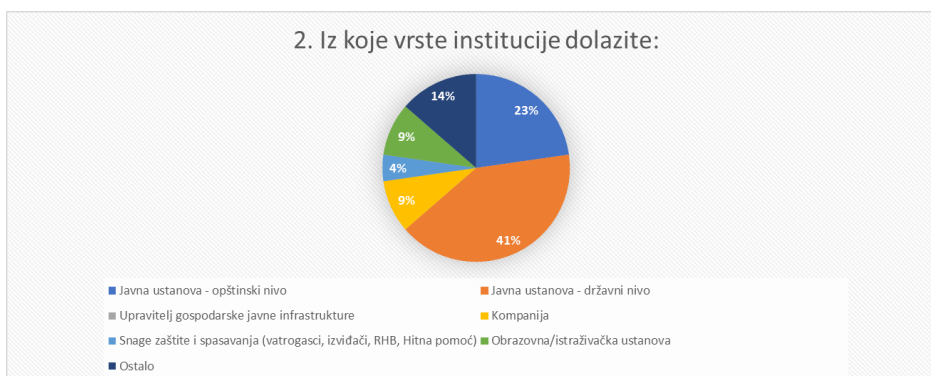
Since the discussion took place online, we prepared a questionnaire in advance that participants completed via polls (ZOOM survey) in the hope of getting a greater response and better results. 25 workshop participants took the survey and answered 10 questions. The questions and analysis of the responses are presented below:

Questionnaire for the 2. national workshop WACOM in BiH

1. Specify the professional area of your work(Multiple Choice):



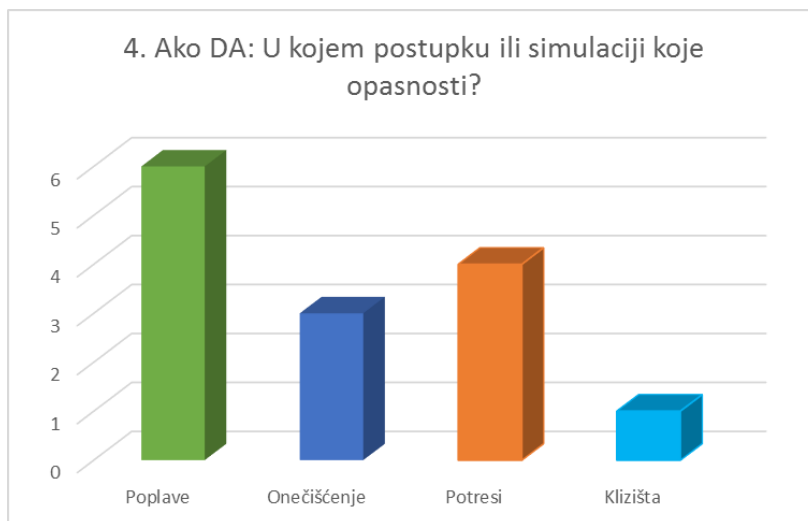
3. What type of institution do you come from: (Multiple Choice)



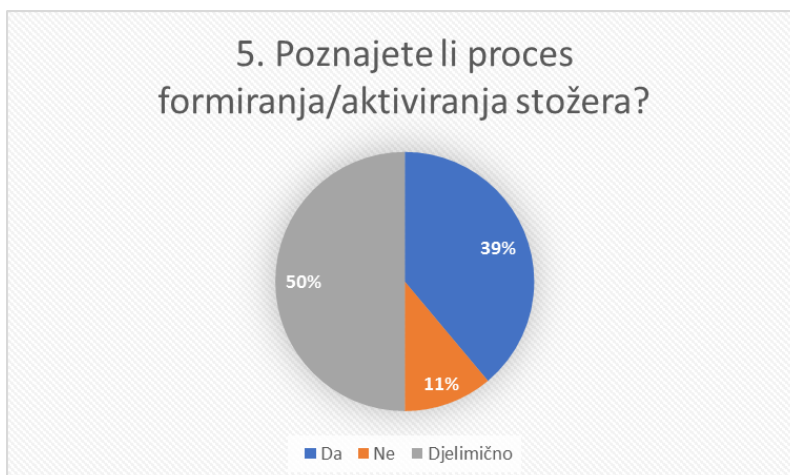
3. Have you ever participated in a command and staff exercise? (Single Choice)



4. If YES: In which procedure or simulation of which hazard? (Short Answer)



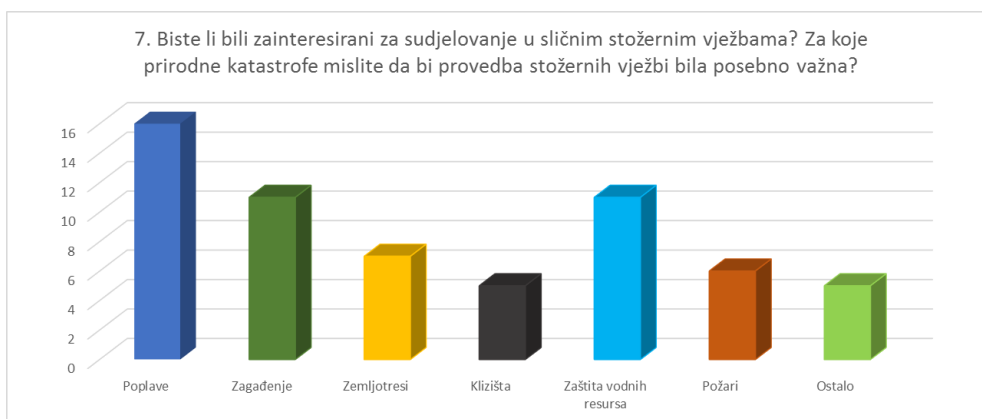
5. Do you know the process of formation/activation of headquarters?? (Single Choice)



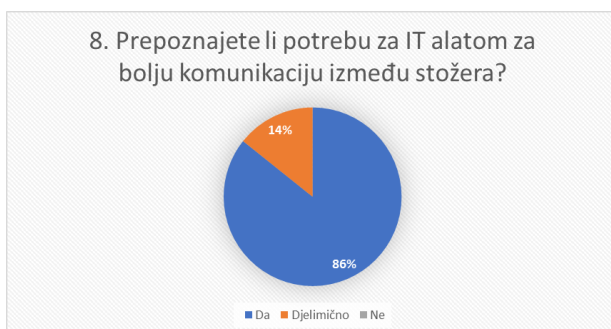
6. In your experience, what is the communication between the activated HQ in the event of a complex response involving multiple HQs? (Multiple Choice)



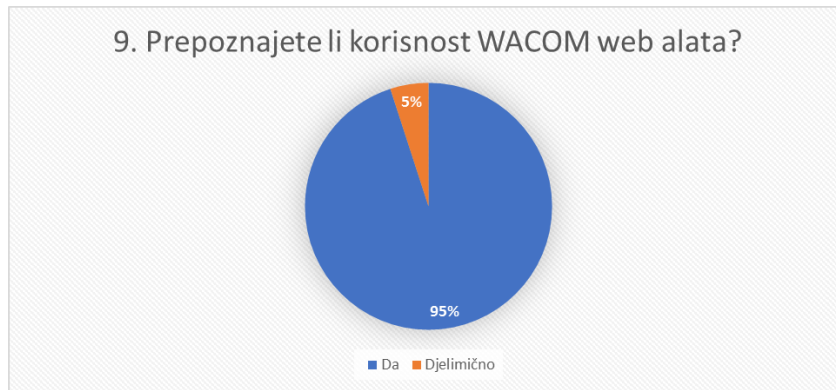
7. Would you be interested in participating in similar staff exercises? For which natural disasters do you think conducting staff exercises would be particularly important. (possibility to select multiple answers) (Multiple Choice)



8. Do you recognize the need for an IT tool for improved communication between headquarters? (Single Choice)



9. Do you recognize the usefulness of WACOM web tools?? (Single Choice)



10. Your comments and suggestions: (Long Answer)

Answers:

- In comparison with practical exercises, command and staff exercises, especially those of high complexity (transnational, different sectors), are not carried out enough..
- The need to conduct multiple staff exercises
- The need to continue the project
- Since this is my first project, it is my starting point for the others. I like how it works and hope and look forward to future projects together. All the best!
- To include the local self-government units as much as possible in such and similar activities.
- More TTX.
- The project is very useful, WACOM tools are quite applicable and can be used for wider purposes.

Excellent approach of the implementer and project participants, support for the continuation of the project and necessary activities, in order to facilitate action in actual real situations