Work package 5

Progress report

Project acronym:	**ImProDiReT**
Project full title:	**Improving disaster risk reduction in Transcarpathian region, Ukraine**
Grant agreement no.:	**783232**
Responsible:	**Sjirk Meijer**
Contributors:	**Tayisiya Symohko, Valentin Voloshin, Peter Glerum**
Document Reference:	**D5.11**
Dissemination Level:	**<PU >**
Version:	**Final**
Date:	**04/04/20**

History

Version	Date	Modification reason	Modified by
0.1	18-3-2020	Initial draft	Sjirk Meijer
0.2	25-3-2020	First reading and feedback	Peter Glerum
0.9	1-4-2020	Quality check	Edmunds Akitis
1.0	3-4-2020	Final reviewed deliverable	Peter Glerum

Table of contents

1 Introduction / Scope of Work package 5

The complex situation in Transcarpathia is addressed by using a multi-actor decision making method for these kinds of situations.

Basically, ImProDiReT consists of a development part, an application & test part and a dissemination part. In Sendai Framework terms the Understanding risk takes a prominent role in the development of solid, sound and sustainable hazard- and risk maps. A disaster risk awareness campaign uses the maps to inform and pave the way to have a dialogue with stakeholders. In that dialogue, the risks should be evaluated, and ways should be found to tackle problems. By using a multi-actor decision making methods the dialogue will end in actions, plans and/or agreements. The Solotvyno salt mine case is used both as test case as the situation with upmost priority of risks to be handled. The case provides during the run of a) the development of risk maps, b) the making of public awareness campaign and c) the development of the evaluation and decision making crucial new data to improve the products and methods. This improved processes, products and methods will be used for the whole of Transcarpathia. Also this will be evaluated so the used processes, products can be used in other regions.

1.1 Objectives of the work package

Based on the methods and products of the work package 1, 2 and 3 and the testing, refining and implementation in the Solotvyno case in Work Package the next step is to implement the developed methods and products in the Region of Transcarpathia. This to meet the following objectives:

Objective 1:

to show that the developed methods and product is a validated way to implement the first three steps of the Sendai Framework in a region in Ukraine. This enables to it being an example for other regions in Ukraine, but also for regions of the same scale in the Participating states of the Union Civil Protection Mechanism and the EU-neigbourhood policy countries.

Objective 2:

To offer the people living in Transcarpathia an action plan for safety challenges posed by economic development, urbanisation and climate change. It offers possibilities to raise the resilience to disasters of the region. Also, existing safety issues are addressed and taken care of.

Objective 3:

To make a concrete, sustainable action plan, in which all the actions taken in this project so far come together. The roadmap will go further on the results of understanding risk (WP 1 and 2), risk reduction governance (WP 3), lessons learned from Solotvyno case and give clear direction what should be done in the short term, mid-term and the long term. The action plan give clear directions in which investments in safety must be made possible. It contains clear defined goals, strong argumentation and is broadly support from stakeholders and the main solution partners. The action plan is in fact a short, mid- and long-term action plan for safety in the region.

1.2 Projected activities

To meet the objectives the activities in this work package use basically the same stages and steps as in work package 4. Where in work package 4 a road map was created to take care of the immediate and mid- and long-term problems of the Solotvyno Mining area, the sustainable action plan for Disaster Risk Reduction in Transcarpathia is a more generic plan based on the

same principles but covering more disaster types and more square kilometres, with border zones and numerous local governments.

Experience was gained in the Solotvyno case and refinements were made to the products and methods of work package 1,2 and 3 after evaluating work package 4 are input for this work package. This experience and validated products and methods are disseminated in this work package. But this work package offers also new challenges will arise and lessons will be learned. In Work package 6 these lessons will be evaluated and finally will be part of the overall result of ImProDiReT.

Because, as said, the activities in this work package are like those used in the Solotvyno case (work package 4), the description of the activities will highlight what is different and not replicate all. The same stage will be used with assessment, platform, consensus, community involvement, development of action plan.

5.1 stakeholder and solution partners assessment (interviews).

The goal of this activities is to get a thorough understanding of the different stakeholders and solution partners, like municipalities, districts, State Emergency Service. This understanding will be established through conducting interviews with (local) partners, key stakeholders and ministries. It will focus mainly on the roles, responsibilities and possibilities the stakeholders & solution partners have. The results of the interviews are gathered and validated by in a first session of a platform which will be established based on the findings of the interviews, workshop. This workshop is the first of a series of workshops. These series will form a Platform.

5.2 Finding consensus on the hazards and risks in Transcarpathia.

The activities in this stage have the goal to find common ground, facts and basic assumptions on which future decision making can be founded. In other words, it forms the solid foundation of the roadmap. Besides that, Work package 1 can test and verify its methodology used by presenting its hazard and risk maps in the second platform meeting and it will be then again input for risk awareness (work package 2). The exact content of the platform meetings is part of the methodology developed in work package 3. The first activities below will be conducted in work package 1. The third is also dependent on the work package 3.

5.3 involvement of communities

The ultimate stakeholders are the communities in the region. The involvement of them in disaster risk reduction is crucial. The aim of this stage is to get them involved. For that the information level should be brought on an equal level. From this stage the Solotvyno platform for risk reduction will be extended with a delegation from the communities. By involving them in the action plan the discussion will get more depth, meaning and practical use.

5.4 Action plan to Disaster Risk Reduction in Transcarpathia

Developing an action plan for Disaster Risk Reduction with short, mid and long term planning, including who is doing what. The goal is that the action plan has a broad support and leads to real actions. Because of the implications the solution partners have finally to agree on the road map. Because this will be in the end a political decision by the solution partners ImProDiReT will go as far as making the concept agreement on the action and an obligation to put effort in getting agreement.

2 Progress

The flow of the work package is described by actions. Each action as a description, a goal and has results.

2.1 Actions

12-3-2018 → 14-3-2018 Kyiv (kick off meeting)

Meeting with representation of State Emergency Service **Goal:** getting full support of SESU by giving them a role in project **Result:** The SESU showed reluctance to be part of the project. This was expressed by creating administrative barriers. Project should write letters and they would reply likewise. Letters for support were written, but no answer was received other then it was in procedure.

Internal meeting with Work packages 1,2,3 **Goal:** Set the directions and the end goals for work package 5 and the contribution of the other work packages to this goal. **Results:** It was a first introduction of the work package leaders of 1,2 and 3 to the situation in Solotvyno and Transcarpathia. Result is that we shared the outcome of work package 4 and 5

3-2018 → 6-2018

Stakeholder and solution provider mapping **Goal:** have an overview of the institutions involved and map their role in the project and their stance towards the project and towards possible outcomes. **Results:** see deliverable 5.1. Challenging is the diversity of stakeholders

27-6-2018 Uzhgorod

Meeting with Stakeholders in Uzhgorod **Goal:** Further introduction of project and its team to stakeholders in Transcarpathia. **Result:** See deliverable 5.4. Enthusiastic and critical response. Data made available for the project. Noticeable is the cooperation of the regional SES. Especially for work package 1.

Press conference together with Deputy governor **Goal:** visibility of project **Result:** see deliverable 6.2. message was support and strengthening existing structures.

30-7-2018 → 2-8-2018 Kyiv

Work together with IGS-NASU on expectation for the hazard and risk maps for Transcarpathia. **Goal:** Discuss the outcome of the research done by IGS-NASU. What quality and how to use them.

Results: opinions shared and agreed. The hazard and risk map of Trancarpathia to be made together with MSFS in WP 1.

3-8-2018 → 7-8-2018 Uzhgorod

Interviews with several stakeholders in Uzhgorod

Goal: to get a situational overview of the state of play and opinions on the future for both Solotvyno as Transcarpathia.

Result: in deliverable 3.1 the interview results are presented. For work package 5 the interviews gave extra insight in situation in Solotvyno, especially the perspective of the different heads of department, environmental inspection and regional SES.

24-1-2019 → 29-1-2019 Uzhgorod

Second meeting of the Transcarpathian Risk Reduction Platform

Goal: draft a joined plan how to proceed with the projected investment plan for Transcarpathia.

Result: The level of cooperation between the directorates is more political than expected. Willing to give openness is in words not in actions.

Internal meeting with ADRZ

Goal: draft a joined plan how to proceed with the projected investment plan for Transcarpathia.

Result: The level of cooperation between the directorates is more political than expected. Willing to give openness is in words not in actions.

4-3-2019 → 5-3-2019 Uzhgorod

internal meeting with ADRZ

Goal: draft a joined plan how to proceed with investment plan.

Result: The Transcarpathian Disaster risk reduction platform is not yet a sustainable forum. We need to find a common factor, so sectoral interests get less important.

project meeting with consortium partners

Goal: come with a solution for the differences in approach for the Transcarpathian hazard and risk maps. The MSFS has problems incorporate outside data in their (GIS)-model.

Result: The hazard and risk maps will be made based on a survey among the administration of the districts in Transcarpathia. ARDZ will help them to do the translation of the survey, organize the distribution and collection. A formal letter will be made to accompany the survey.

Press briefing

Goal: maintain the outside pressure on the project and informing public about what project is doing. Both for the whole of Transcarpathia and the situation in Solotvyno.

Result: see deliverable 6.1. The hazard and risk maps of IGS-NASU are the most relevant for work package 4, but also the landslide maps of Transcarpathia that are part work package 5. MSFS presented the risk awareness campaign for Solotvyno and Transcarpathia. Announcement of the establishment of the Transcarpathian Disaster Risk Reduction Platform.

4-2019 → 9-2019

Presidential elections, parliamentarian elections, appointment new governor

The elections crippled the ministries as they were transformed and merged under new political leaders. The old governor and deputy governor were for some time powerless and the wait for the new governor was long.

Results: stakeholders started sitting on their hands. Not moving. No access to political leadership and stand still of the work at the highest level.

15-4-2019 → 17-4-2019 Solotvyno

Meeting of the Transcarpathian Disaster Risk Reduction Platform

Goal: presentation of the decision-making app made by TUDelft and presentation of the hazard and risk map by IGS-NASU

Result: The hazard and risk maps of IGS-NASU were received with big interest. The app was also well received, but also concerns were raised on how to make this sustainable.

4-6-2019 Uzhgorod

Third meeting of the Transcarpathian Disaster Risk Reduction Platform

Goal: getting input for the functionalities of the decision-making application made by TU Delft

Result: see deliverable 5.7, a workshop was held and valuable input was created for the decision-making application

14-7-2019 Uzhgorod

Water management workshop

Goal: in this workshop different stakeholders involved in the prevention and preparedness for floods and the response to it where invited to discuss learning points from the recent flooding and formulate improvements to mitigate future floodings.

Results: see deliverable 5.9 and 5.10. The workshop concluded that improvements could be on volunteer involvement, waste management, detailed weather forecasting and updating the flooding mapping

16-9-2019 → 17-9-2019 Uzhgorod

Risk Awareness workshop for decision makers

Goal: based on hazard and risk maps, experience and scientific knowledge by MSFS a two day workshop should raise the level of risk awareness for decision makers.

Results: see deliverable 2.3. The risk awareness workshop for decision makers was in competition with other events, like the policy meetings organised by the new governor. Noticeable was the presence of the greatest sceptic who changed position and now was fully endorsing the project.

9-2019 → 2-2020

A new governor was appointed in August 2019. He had to be informed on the whole of the regional policies and based on that appoint new deputy governors. This took about three months. In January 2020 the 'new' governor was fired by the president. The newly appointed deputy-governor became acting governor and had to become acquainted with the policies around disaster risk reduction.

Results: stakeholders were awaiting of new leadership. Informal meetings were possible but official statements couldn't be done.

13-11-2019 → 15-11-2019 Uzhgorod

Fourth Meeting of the Transcarpathian Disaster Risk Reduction Platform

Goal: Setting the needed actions on Transcarpathian risk reduction and make arrangements on the management of the iTysa application post project

Result: see deliverable 5.8. The civil security department of the regional government wants to be in the centre of the iTysa management. This together with the water directorate. Inventorying of possible and existing actions on disaster risk reduction didn't happen. It was agreed that the representatives of the directorates would send them per e-mail. (which didn't happen even after urging)

1-2020 → 3-2020

After waiting for projects to be delivered. It was decided that based on the regional development plan, the water management workshop and the separate discussion with stakeholder to make a suggestion of an action plan and use this as leverage for reaction. With stakeholders.

Goal: Create a shared list of actions/ possible investment. This shared list can be embraced by the governor and use as blue print for further actions

Result: deliverable 5.9 and 510 are made. Deliverable 5.9 is the draft action plan, which was confronted with the directorates and adjusted to 5.10.

3 Deliverables

3.1 General overview

During the start of the project an inconsistency was observed between the timeline in the description of the project and the GANTT chart. In principle, with the description as leading, the deliverable should be ready 8 month before projected and logical possible. This was corrected in the first technical report on WP5.

Even with the corrected deadlines it seemed not feasible to deliver most of the reports in time. This had to do with the environment in which the work package had to act but had also to do with the dependency on other work packages.

In the end of the project, ImProDiReT was confronted with the measures against the COVID-19 pandemic. We projected a last meeting of the Transcarpathian Platform for Disaster Risk Reduction at the end of March. This to bring the draft road map for Disaster risk reduction from draft to final. This meeting didn't happen, so it was decided to make the draft road map the final road map.

ARDZ, partner in ImProDiReT, have shown great interest to make this result of the project sustainable and after the COVID-19 crisis ARDZ still plans to organise a meeting of the platform as it is established in the project to discuss this report.

3.1.1 Dependency on other work packages

Work package 1 had to deliver hazard and risk maps as input for work package 5. The project plan assumed that the methodology used for the Transcarpathian and the Solotvyno risk assessment would be similar. This was, however, not feasible. The dynamics proved to be divergent. While in the Solotvyno case the political reality in Kyiv was the most determining factor, in the whole of Transcarpathia the bureaucracy of the local administration which has to juggle with ambition, lack of resources and short-term gains/ long-term gains, was the most determining.

For the mapping it was overseen that the hazard and risk maps of Transcarpathia had to be separately delivered from work package 1 although the maps were presented in the platform meetings according to the time plan.

3.1.2 Platform meetings

In total we have had five meetings of the Transcarpathian Disaster Risk Plaform. Four of them are selected as deliverable and submitted. The structure as was encompassed in the project proposal was followed and the four most relevant meetings are presented as deliverable.

3.2 Specific overview of deliverables

Deliverable 5.1:	Stakeholder and Solution partner map for Transcarpathia.
Due date:	30-4-2018 (delayed 8 month) 31-10-2018
Submitted:	1-7-2018
Rational:	The stakeholder and solution partner map for Transcarpathia was submitted in time. According to the corrected deadlines.

Deliverable 5.2:	Hazard map for Transcarpathia

Due date:	31-10-2018 (delayed 8 month) 30-6-2019
Submitted:	05-03-2020
Rational:	Hazard map for Transcarpathia was used in the Transcarpathian Risk Reduction Platform meetings. It was however submitted late. See general paragraph above.

Deliverable 5.3:	Risk map for Transcarpathia
Due date:	31-10-2018 (delayed 8 month) 30-6-2019
Submitted:	05-03-2020
Rational:	Hazard map for Transcarpathia was used in the Transcarpathian Risk Reduction Platform meetings. It was however submitted late. See general paragraph above.

Deliverable 5.4:	Leaflet for inhabitants Transcarpathia
Due date:	31-1-2019 (delayed 8 month) 30-9-2019
Submitted:	06-03-2020
Rational:	The leaflet was only in made in a digital format and distributed to stakeholders. The political, bureaucratic situation in Transcarpathia appeared to be such that direct communication by the project to the public was not preferable. Also, in the end the project couldn't take responsibility for the content.

Deliverable 5.5:	Minutes of 1st Platform meeting
Due date:	30-6-2018 (delayed 8 month) 28-2-2019
Submitted:	20-12-2018
Rational:	In the autumn of 2018, the ARDZ managed to establish a platform for disaster risk reduction. The platform was established by the deputy governor. In the first meeting foremost the project was presented and possible sources of data and information were identified.

Deliverable 5.6	Minutes of 2ndt Platform meeting
Due date:	30-11-2018 (delayed 8 month) 31-7-2019
Submitted:	26-02-2020
Rational:	In the second platform we focused on creating an incentive to be actively participating in the project and platform meetings. We used the possibility for grant or loans based on the outcome of this project.

Deliverable 5.7	Minutes of the fourth Platform meeting (in Grant Agreement: Minutes of 3rd Platform meeting)
Due date:	31-03-2019 (delayed 8 month) 30-11-2019

Submitted:	25-02-2020
Rational:	Deliverable 5.7 is described as minutes of the third platform meeting. Actually, it was the fourth meeting. In the third meeting the results of the interviews were presented. In the fourth meeting we had discussions on strategy, water and waste management in the light of recent floodings. We presented a call for an inventory of possible projects to be included in the investment scheme.

Deliverable 5.8	Minutes of 4th Platform meeting
Due date:	30-6-2019 (delayed 8 month) 28-02-2019
Submitted:	25-02-2020
Rational:	The meeting focussed on the decision-making model, how to develop it further and how to make it sustainable.

Deliverable 5.9:	Road map for Transcarpathia
Due date:	28-2-2019 (delayed 8 month) 31-10-2019
Submitted:	3-4-2020
Rational:	A draft road map is made based on the inputs from the several meetings. The first and foremost action identified is to institutionalise the Platform for Disaster Risk Reduction in Transcarpathia in line with the United Nation's Sendai Framework for Disaster Risk Reduction.

Deliverable 4.10	Final road map for Transcarpathia
Due date:	30-4-2019 (delayed 8 month) 31-12-2019
Submitted:	3-4-2020
Rational:	We projected a last meeting of the Transcarpathian Platform for Disaster Risk Reduction at the end of March 2020. This to bring the draft road map for Disaster risk reduction from draft to final. This meeting didn't happen, so it was decided to make the draft road map the final road map.

4 Conclusions

4.1 General

Work package 5 was as said in the introduction to the deliverable a more bureaucratic steered work package. The endorsement of the project by the regional government was primary based on the situation in Solotvyno (work package 4) and in the beginning time was needed to bring on the aspect that the project had also objectives for the whole of Transcarpathia.

The work package was also dependant on the effort of the (deputy) governors in charge. This was felt immediately after the first round of the presidential elections a regime change was foreseen and the (deputy) governor(s) started refraining from actions. In first instance the project was not dependent on their endorsement because the project was already on the road. However, it seemed that on the formal site a deadlock was encountered. The formal justification to participate in the project seemed to be fading. Luckily, some of the participants still were enthusiastic and getting more motivated. Especially the decision-making tool using an app was embraced as it would solve some multisectoral issues.

Also, the multidisciplinary workshop on the learning points from the flooding in 2019 was valued high. It delivered new insights in the waste problems and the low risk awareness of inhabitants toward flooding. Even when they encountered on a almost yearly bases.

The flip coin of the success of the application was that the interest in the more strategical project fiches started to diminish. We received no response on our several requests to come with projects to be used in the end result. In the end we decided to use the output of the water management workshop, the developed regional development plan and our perceptions gained during the multiple meetings and interviews.

4.2 Project flow

4.2.1 Stakeholder and solution partners assessment (interviews)

In the summer of 2018 series of interviews were done. It resulted in an overview of what the perceptions of what the state of play is in Transcarpathia. Several issues are unresolved, like old sludge deposits of gold mines, chlorine tanks, pipelines, mudflows, soil degradation and so on. Also, it appeared that there is no central overview of the risks. The regional SES has the best overview using "passports" with which they assess hazards.

4.2.2 Finding consensus on the hazards and risks in Transcarpathia.

In the sectoral divided a consensus seemed more informing each other about the hazards and risks in their line of field. The platform should be the stage to inform build a common view. The project started to fuel this process by providing products like the hazard and risk maps. The decision-making application, iTysa, made by the TU Delft proofed to be incentive to work more closely together.

4.2.3 Involvement of the community

In the water management workshop, we invited several representatives of communities in Transcarpathia. Interestingly the community leaders are well connected to the directorates in regional government in Uzhgorod.

In the platform meetings it was conceptual to far stretched to also invite people from the communities. Our priority was to have the stakeholders at the level of the regional government involved. Seen the well-connected directorates this was not an immediate risk to the project.

4.2.4 Road map to Disaster Risk Reduction in Solotvyno

It proved to be difficult to share projects outside the bureaucracy of the regional government. So, it was decided in the project to make a selection of projects that can be offered to the regional government of Transcarpathia. This selection was in first instance in draft discussed in bilateral meetings with the stakeholders.

The selection is based on the water management workshop, the regional development strategy, suggestions done in platform meetings and the mentioned bilateral meetings. The project managed to develop a road map, based on our own experiences during the platform meetings, the water management workshop and the regional development agenda. The road map offers the regional government to institutionalise the Transcarpathian Platform for Disaster Risk Reduction. Also, the road map clearly shows that based on the actions identified earlier two specific multi-disciplinary programs can be developed. One for water related events and the other for Landslide prevention and early warning.

4.3 Objectives

Work package 5 had three objectives. They are completely and partly met. Below a summarisation of the achievements related to the objectives.

> ***Objective 1:*** *to show that the developed methods and product is a validated way to implement the first three steps of the Sendai Framework in a region in Ukraine. This to make it possible to work as an example for other regions in Ukraine, but also for regions of the same scale in the Participating states of the Union Civil Protection Mechanism and the EU-neighbourhood policy countries.*

A road map is made based on the Sendai framework. See deliverable 5.10. The project fiches in the road map are related to the four priorities of the framework. It can be used as an example, but preferably it has to grow more mature. Ideally the road map should get an update in a year. Using the road map made in the project as a test version. The second version can be used as an example. This one of the recommendations of the project.

> ***Objective 2:*** *To offer the people living in Transcarpathia an action plan for safety challenges posed by economic development, urbanisation and climate change. It offers possibilities to raise the resilience to disasters of the region. Also, existing safety issues are addressed and taken care of.*

This is closely related to objective 1. The project had to work with regional governmental partners which were crippled by leadership issues due to the presidential elections and subsequent changes of the governor and his deputies. Despite this the project was able to present the iTysa application which was broadly accepted as the tool for communication with the public on risks and hazards.

> ***Objective 3:*** *To make a concrete, sustainable action plan, in which all the actions taken in this project so far come together. The road map will go further on the results of understanding risk (WP 1 and 2), risk reduction governance (WP 3), lessons learned from Solotvyno case and give clear direction what should be done in the short term, mid-term and the long term. The action plan give clear directions in which investments in safety must be made possible. It contains clear defined goals, strong argumentation and is broadly support from stakeholders and the main solution partners. The action plan is in fact a short, mid- and long-term action plan for safety in the region.*

See objective 1 and 2. The products of the project, like the hazard and risk maps, the iTysa application and the projects identified by stakeholders, are incorporated in the roadmap.