WORLD METEOROLOGICAL ORGANIZATION
WORLD BANK GROUP
GLOBAL FACILITY FOR DISASTER REDUCTION AND RECOVERY

REGIONAL STAKEHOLDERS WORKSHOP TO IMPLEMENT THE WMO STRATEGY FOR SERVICE DELIVERY FOR NMHSs IN SOUTH-EAST EUROPE

TIRANA, ALBANIA, 17-21 OCTOBER 2016

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FINAL REPORT

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Introduction

The World Meteorological Organization (WMO) organized in collaboration with the World Bank Group (WBG) and the Global Facility for Disaster Reduction and Recovery (GFDRR) a regional workshop in Tirana (Albania) for the introduction and the implementation of the *WMO Strategy for Service Delivery (WMO-No. 1129)* to a wider number of members in South East Europe.

WMO published the *WMO Strategy for Service Delivery* to guide the National Meteorological and Hydrological Services (NMHSs) in the development and improvement of their capabilities in serving the user communities including the public. The Public Weather Services (PWS) Programme, which led the preparation of the Strategy, has run a number of in-country training workshops for the staff of NMHSs, following the publication of the WMO Strategy for Service Delivery and its Implementation Plan.

The workshop was scheduled for one week. Participants were NMHS staff members and stakeholders from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo (UNSCR 1244/99), the Former Yugoslav Republic of The Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania and Serbia. The first day of the workshop (17 October 2016) was dedicated to the Promotion of the Albanian Strategy for Service Development of NMHS. This wrap-up of the 2015 World Bank project in Albania acted as a recall of the concept of Service Delivery for the Albanian participants, while the participants from the other countries could get familiar with the concept of Service Delivery. This concept was subsequently followed on Day 2 to Day 5 (18 to 21 October 2016) in the Regional Stakeholders' Workshop to Implement the World Meteorological Organization Strategy for Service Delivery for National Meteorological and Hydrological Services in South-East Europe.

Staff from the participating NMHSs had the possibility to conduct a self-assessment in advance. The workshop allowed the determination of the current level of service delivery under the guidance of the WMO experts. Then the participants could identify the necessary resources to achieve the next higher level of service delivery. The result of the workshop was Action Plans for the different NHMSs. The plans contain actions and activities required to progress to higher levels of service delivery over the short, medium and long term time scales tailored to the specific NHMSs.

The WMO Strategy for Service Delivery (WMO-No.1129), which is aligned with the WMO Strategic Plan, was approved by the Sixteenth Congress (Cg-XVI, Geneva, May 2011). Subsequently an implementation plan was prepared and approved by the WMO Executive Council. The Strategy explains the importance of service delivery; defines the four stages of a continuous, cyclic process for developing and delivering services and the elements necessary for moving towards a more service-oriented culture; and describes practices to strengthen service delivery across the entire WMO.

The Strategy reflects the desire of WMO Members for a more uniform and structured approach to service development and delivery. The goal of the Strategy is to help NMHSs raise standards of service delivery in the provision of products and services to users and customers. The Implementation Plan provides a flexible methodology to help Members evaluate their current service delivery practices, and to serve as high-level guidance for developing more detailed methods and tools that will enable Members to improve their service delivery process.

The Strategy is adaptable to the unique needs of Members from both developed and developing countries, regardless of who the users are and whether the products and services delivered are public or commercial. The WMO Secretariat and WMO constituent bodies are responsible for facilitating and coordinating the implementation of the Strategy. WMO Members who have already implemented a formal quality management system (QMS) are more likely to be focused on meeting user needs and to consider this a key aspect of service delivery. For Members who have not introduced a QMS, implementing a service

delivery strategy along the lines described in the WMO Strategy for Service Delivery will be an excellent step towards improved organization-wide quality management.

For users who are sensitive to the impacts of weather and climate, the benefits of receiving high-quality services that fully meet their needs are wide-ranging. Members who provide high levels of service delivery through their public weather services (PWS) are likely to be viewed by their users and the organizations that fund them as a valuable return on the investment of public funds. This can help to ensure the sustainability of PWS.

The management of service-providing organizations must remain focused and committed to ensure that high-quality service delivery is achieved throughout their organizations.

To understand the concept of service delivery, one must understand what is commonly meant by “service”. This Strategy defines a service as a product or activity that meets the needs of a user or can be applied by a user. To be effective services should be credible, available and timely, dependable and reliable, usable and useful, expandable, sustainable, responsive and flexible and authentic (Figure 1).

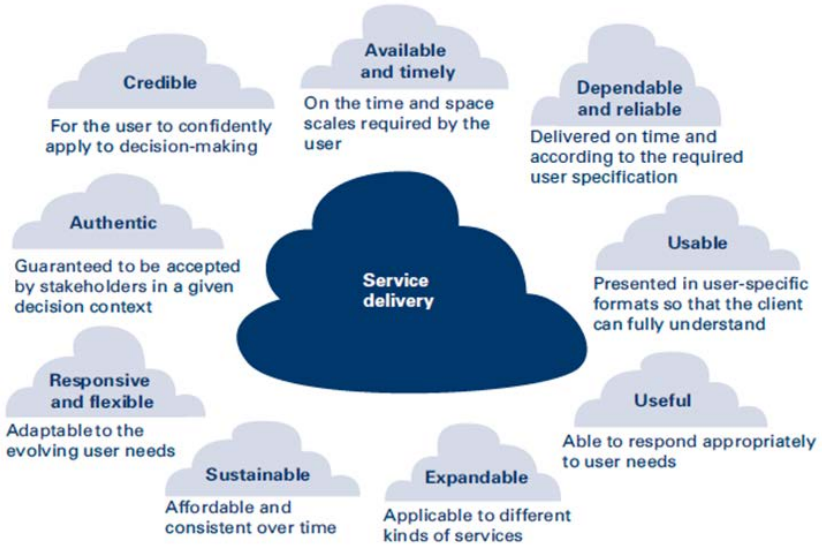

Figure 1: Effective service delivery (WMO, 2014)

The Strategy describes a continuous cycle of four stages, which define the framework for service delivery (Figure 2).

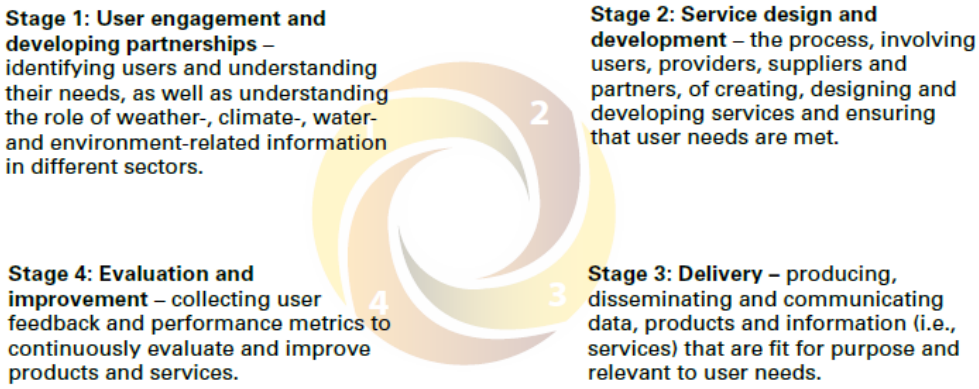

Figure 2: The four stages of a continuous, cyclic process for developing and delivering services (WMO, 2014).

Furthermore the strategy identifies six elements that describe the activities required for high-quality service delivery and the transition towards a more service-oriented culture (Figure 3).

Figure 3: Six elements of the WMO Service delivery strategy for moving towards a more service-oriented culture (WMO, 2014)

The management of service-providing organizations must remain focused and committed to ensure that high-quality service delivery is achieved throughout their organizations.

The Implementation Plan for the Strategy has been developed to help all Members assess and improve their service delivery irrespective of their current level and capacity. The key element of the implementation of the strategy at national level is the Service Delivery Progress Model (SDPM). Current levels of service delivery can be assessed either by the service providers themselves or with external assistance. The assessment should be made with the help of the SDPM which shows the type of activities and behaviors that are appropriate for service providers with a certain level of service delivery development. The SDPM guides Members on the actions and activities required to progress to higher levels of service delivery over the short, medium and long term.

Milestones for the implementation of the Strategy are set for the short term (2 years), medium term (6 years) and long term (10 years).The key deliverables resulting from the implementation of the Strategy over the short term will be:

1. an assessment of the current level of service delivery
2. putting in place the necessary action plan to start improving service delivery
3. an assessment of the resources required to implement the action plan

Other changes may require a series of actions over medium or long timescales, so it is important that they are documented and tracked through to completion. Over the medium term, the Implementation Plan aims to help a certain percentage of Members gain at least one level in their service delivery development and to document the process and share lessons learned with other Members. Over the long term, the aim of the Strategy is to develop or strengthen a service culture and facilitate the mainstreaming of service delivery in the programs and activities of Members' service providers, resulting in a tangible improvement in the user's perception of their services.

The objective of the workshop was to work with the participants on an assessment of the current capabilities in service delivery of their NHMSs. The current practices were systematically reviewed against the definitions provided in the SDPM. The answers to the questions of each of the six strategic elements enable to determine the current status of the service delivery processes in the SDPM in an objective way. The user needs and requirements were collected by the participants in advance or during the stakeholder presentations. The gaps between the current service delivery level of the NHMSs and the user needs and requirements were identified. The second objective was to determine how the participating NMHSs could improve their capacity for moving to a higher level in the SDPM, and to guide them in the preparation of the Action Plans on how to develop that capacity and build the necessary resources and expertise. The results of the workshop form the baseline for the development of the South East European NHMSs to achieve a modernization to service-focused organizations.

Recall of the 2015 Service Delivery Workshop in Albania

Welcome addresses by Mr Fatos Hoxaj, Director, Institute of Geosciences, Energy, Water and Environment (IGEWE) and PR of Albania with WMO, Ms Haleh Kootval, WMO and Ms. Tahseen Sayed, Country Manager, World Bank Group opened the Workshop.

Day 1 of the Workshop was dedicated to the recall of the outcomes of the project *Support development of a service delivery strategy and investment plan for the Albania Institute of Geosciences, Energy, Water and Environment*. The project was carried out under the technical assistance grant on Reducing Risk and Building Resilience of the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR).

The objective of the project was to support IGEWE to develop a service delivery strategy that includes capacity development and investment plans to achieve modernization to a service-focused NMHS. Despite the completed procurement of modern equipment and technology under AL-DRMAP (World Bank), a strategic plan of IGEWE for their activity and future development and accompanying technical design and specifications for a modern weather, climate and hydrological forecasting delivery systems was missing. The development of the strategy provided IGEWE with a clear vision. The strategy includes capacity development and an investment plan to achieve modernization to a service-focused NHMS.

Andreas Schaffhauser and Georg Pistotnik (ZAMG) presented the work carried out by ZAMG during four missions to Albania in autumn 2015 in close cooperation with IGEWE. The presentation started with a detailed description of the WMO service delivery Strategy, which served as an introduction to the Regional Stakeholder Workshop for the Implementation of the Strategy.

Afterwards the required work steps for the assessment of the service delivery capacities and the development of the Action plan were explained in detail. They can be summarized as follows:

- Identification of prerequisites, capacities and operational procedures;
- Current status of handling of observation data including its storage and exchange as well as the processes of developing weather forecasts warnings, flood forecasts and risks assessment;
- Compilation of a list of services and products;
- Systematic review of all practices against the definitions provided in the SDPM (joint assessment of the current stage of service delivery);
- Organization of a user workshop for the identification of user needs and requirements;
- Meetings with stakeholders, users and customers;
- Meetings with the Aviation Met Service (Albcontrol) and the Military Met Service;
- Identification of the gaps between the current service delivery level of IGEWE and the user needs and requirements;
- Development of the action plan for improved service delivery based on the gap analysis; and
- Development of the investment plan and capacity building measures.

The resulting action plan includes cost estimates for the investments needed to achieve the desired short-, medium- and long-term goals as well as projections of the required annual budgets of IGEWE. Finally the recommendations for the further development of the Albanian Met Services were presented.

The presentation of the approach and the outcomes served as an introductory example for the implementation of the WMO Strategy for Service Delivery for NMHSs in South East Europe.

The Day 1 program was complemented by three additional presentations. The presentation by Petrit Zorba (IGEWE, Head of the Department of Climate and Environment) included an outline of the current meteorological and hydrological instrumentation in Albania, an explanation of the data transmission and storage facilities, and considerations on climate change in Albania.

Gerrit Bodenbender (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ) and Amparo Samper Hiraldo (IGEWE) presented new efforts in establishing hydrometeorological early flood warning systems in Albania. Both endeavors are still in their initial stage, but are very promising to improve the accuracy and timeliness of the prediction of high water levels in rivers within the next couple of years, thus potentially enhancing the response time for disaster management units.

Figure 1: The opening of the Workshop. Welcome addresses by Mr Fatos Hoxaj (Director IGEWE, PR of Albania with WMO), Ms Haleh Kootval (WMO) and Ms. Tahseen Sayed (Country Manager, World Bank Group).

Regional Stakeholders Workshop to Implement Strategy for Service Delivery for NHMSs in South-East Europe

The workshop started with the discussion and agreement on mission objectives, mission scope, sectors to be studied, responsibilities of each party, and the anticipated outcome of the workshop.

Participants from NMHSs were invited to prepare in advance by consulting their national stakeholders and compiling a presentation including the stakeholder's positions and views, in particular on the following: 1) how the sector is impacted by the weather; 2) how they get information and services from NMHSs; and 3) what improvements in services they require.

In addition, the participating NMHSs were asked to prepare a list of the most important stakeholders in their respective countries and list the requirements from each stakeholder.

The following sections contain a summary of the short presentations given by the participating NMHSs.

Summary of the presentations given by the participating NMHSs

Mandates and duties of NHMSs

In most countries of southeastern Europe, meteorology and hydrology are handled under the NHMSs, with two notable exceptions in Romania and Albania.

The duties in Romania are divided between the National Meteorological Administration (NMAR), the National Institute of Hydrology and Water Management (NIHWM), and the National Water Administration "Apele Române". NMAR and NIHWM are located at the same address and, despite their formal separation, have close collaboration. The hydrological duties are split: NIHWM is responsible for operational hydrological forecasts and nation-wide flood warnings, next to a strong scientific focus on the development of mathematical and numerical rainfall-runoff models, whereas the National Water Administration "Apele Române", which was not represented at the workshop, is charged with the operation of the gauging station network and the downscaling of short-range forecasts and warnings to the eleven river basins of Romania.

In Albania, on the other hand, the meteorological landscape is fragmented. Meteorological duties are divided between (or, rather, run parallel by) the Institute of Geosciences, Energy, Water and Environment (IGEWE) at Tirana Polytechnic University, the air-traffic control agency Albcontrol, and the Military Meteorological Service. Despite the longer operational experience of the two latter institutions, IGEWE was elected the national representing weather service of Albania a few years ago. The hydrological competence is concentrated at IGEWE, which has in addition a strong background on geology and seismology.

A focus on seismology is also present at both hydrometeorological services of Bosnia-Herzegovina. In neighboring Montenegro, the Institute of Hydrometeorology and Seismology of Montenegro (IHMS) was formed in 2012 by a fusion of the Hydrometeorological Institute and the Seismological Observatory. Last but not least, the Federal Hydrometeorological Service (FHMS), one of the two services within the state of Bosnia-Herzegovina, also hosts a center for astronomy.

The mandate of the various NHMSs is defined by law. The centerpiece is usually the Law on Meteorological and Hydrological Activities, but duties may additionally be influenced by various other laws, depending on individual characteristics of the legislation and the scope of the institute's duties. In recent years, existing national laws were also increasingly aligned with laws and regulations of the European Union, even in those states, which are not EU members yet.

These mandates usually include, but are not limited, to the following:

- Establishment, maintenance and development of a network of stations for the observation, measurement, analysis, processing, archiving and publishing of meteorological, hydrological, ecological and agrometeorological data
- Production of timely and reliable operational meteorological and hydrological forecasts and warnings of dangerous phenomena to preserve life and material goods from natural and man-made hazards and disasters, and to mitigate their consequences
- Production, collection and dissemination of high-quality meteorological, hydrological, ecological and agrometeorological information, analyses and studies
- Control, monitoring and assessment of the quality of air, surface and ground water quality, and soil on the basis of physical, chemical, biochemical and radiological parameters
- Monitoring and assessment of the climate and analysis of extremes
- Support of economic development, environment protection and quality of life
- Raising awareness of citizens

In the section dedicated to the joint assessment the issued products, services and stakeholders of the individual NHMSs are listed in detail, as far as the respective institutes provided the relevant information.

History

The first organized meteorological measurements in southeastern Europe date back to the 19th century or even earlier, e.g. to 1770 in Romania (Iaşi), to 1848 in Serbia (Belgrade), to 1860 in Bulgaria (Ruse), to 1868 in Albania (Durrës) and to 1892 in Bosnia-Herzegovina (Sarajevo; then still under Austro-Hungarian rule). 27 meteorological stations were already operated in the Kingdom of Serbia in 1857, turning the Serbian station network into the densest of Europe at that time.

The oldest National Meteorological Services of southeastern Europe were established in 1884 in Romania, in 1888 in Serbia and in 1890 in Bulgaria. An additional focus on hydrology and the start of organized hydrological measurements were fostered around 1920.

Despite the political turmoil and destructions during the Second World War and again during the Balkan War in the 1990s, the NHMSs survived and continued to play an important role. The NHMS of Yugoslavia was split into several individual NHMSs with the breakup of this country, often preserving regionalized structures that had already been in place. International networking and collaborations increased especially after the end of the communist era.

Many nations joined the World Meteorological Organization (WMO), the European Center for Medium-Range Forecasting (ECMWF), the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) or the EUMETNET framework. In 2015, the NHMSs of Serbia, Montenegro, the Republic of The Former Yugoslav Republic of Macedonia, Albania, and both hydro-meteorological services of Bosnia-Herzegovina formed the South-East European Consortium for Operational weather Prediction (SEECOP). Table 1 provides an overview of memberships in international organizations.

Organization	Albania	Bosnia-Herzegovina	Bulgaria	Croatia	Kosovo (UNSCR 1244/99)	Republic of The Former Yugoslav Republic of Macedonia	Moldova	Montenegro	Romania	Serbia
WMO (year of entry)	1957	1994	1952	1992	2000	1993	1994	2007	1948	2001
ECMWF			(x)	x	x	(x)		(x)	(x)	X
EUMETNET			(x)	x		x	(x)	x	(x)	x
EUMETSAT			x	x					x	(x)
SEECOP	X	x				x		x		x

Table 1: Memberships of southeast-European countries in the most important international meteorological organizations.

Hydrometeorological station networks

Table 2 illustrates the numbers of meteorological and hydrological stations in the countries of southeastern Europe, as far as they were provided by the respective NHMSs. A scaling by the country size can better reveal the different emphasis of instrumentation in the individual countries (Table 3). Differences are considerable and can only partly be explained by different geographical and morphological conditions (e.g., flatlands versus mountains). Though the incomplete information does not allow a comprehensive assessment, it is obvious that a higher and more homogeneous station density across different countries would be beneficial. This aspect was also directly addressed by some of the NHMSs participating in this workshop. Those NHMSs which do not yet operate own radar (or radar network) also expressed the desire of purchasing, installing and operating a radar.

Station type	Albania	Croatia	Kosovo (UNSCR 1244/99)	Montenegro	Romania	Serbia
Meteorological stations (total)	124		9	19		84
Meteorological stations (automatic)			3	9	160	28
Rain gauges			61			450
Hydrological stations (total)	16	510	27	51	ca. 900	74
Hydrological stations (automatic)		85	7			62
Weather radar sites	1	2	0	0	8	2
Radiosonde sites	0	2	0	0	1	1
Agrometeorological stations					55	

Table 2: Number of meteorological and hydrological stations.

Station type	Albania	Croatia	Kosovo (UNSCR 1244/99)	Montenegro	Romania	Serbia
Meteorological stations (total)	232		1210	727		922
Meteorological stations (automatic)			3629	1535	1490	2767
Rain gauges			178			172
Hydrological stations (total)	1797	111	403	271	ca. 265	1047
Hydrological stations (automatic)		666	1555			1250

Table 3: Station density normed by the country size in km^2 per station (i.e., lower numbers indicate a higher station density).

Dissemination of products

The requested lists of dissemination channels were incomplete and did not shed much light on special, outstanding, particularly innovative or otherwise remarkable solutions. However, the obtained lists suggested that the following means of dissemination to customers were the most important ones:

- Webpage (either public or in a password-protected area)
- FTP
- Email
- SMS
- Phone
- Following Service-Level Agreements (SLAs), e.g. via defined documents

In addition, mobile app solutions are in operational use in the Federation of Bosnia and Herzegovina and in a testing phase in the Republika Srpska. The National Institute of Meteorology and Hydrology (NIMH) in Bulgaria operates a soundproof and fully equipped studio for live broadcasts of weather forecasts which are provided to radio and TV stations.

An increasing number of observational data and forecasts are freely accessible to the public on the respective webpage of almost all NHMSs. A detailed list of products and stakeholders for each individual NHMS, as provided, will be presented in the section on the joint assessment of the current stage of Service Delivery.

User feedback and improvements requested by users

Information on procedures to provide feedback to NHMSs, and on the content of this feedback, was often scarce in our workshop, with the most notable exceptions of Serbia and Croatia.

The Republic Hydrometeorological Service of Serbia (RHMS) seems to have the most advanced way of dealing with customer feedback. It follows a quality management standard (ISO 9001:2008 and SRPS ISO/IEC 17025: 2006) which obliges it to hold formalized dialogues with its customers, to conduct surveys, to record complaints, and to take corrective and preventive action. After the catastrophic floods in May 2014, the civil protection agency requested training of local emergency staff using the forecast and warning products of RHMS. It also expressed a wish to downscale the warnings from district level to municipality level and to increase the number of stations whose data are available in real-time. These wishes may also be merged with plans to move to impact-based forecasts and

warnings, which are already in place at RHMS. The general public expects weather forecasts for more cities, with a longer forecast horizon and in more detail.

The Meteorological and Hydrological Service of Croatia (DHMZ) did not elaborate on the design of feedback channels for their customers, but provided a detailed wishlist from stakeholders as manifold as civil protection, governmental institutions, the energy sector, marine authorities, national media and the public, which can be subsumed as follows:

- Need for 24-hour disposal of DHMZ forecasters for additional advisories
- More user-defined forecast products, possibly in form of more and free of charge applications for mobile phones and tablets
- More observational data, complete remote sensing coverage and improved regional short-range numerical model output
- Involvement of DHMZ forecasters in specific tasks which are performed by National Protection and Rescue Directorate teams

A possibility for customers to provide feedback by email, phone and face to face was mentioned by the representative of the Federal Hydrometeorological Service (FHMS) of Bosnia-Herzegovina. A user survey has recently been conducted but not yet evaluated by the National Institute of Meteorology and Hydrology (NIMH) in Bulgaria. Customer feedback was also received in the Republic of The Former Yugoslav Republic of Macedonia, but no details on the procedure were given. The other countries did not provide any information.

Presentations by stakeholders

Stakeholders who were present at the workshops gave short presentations on their activities. They explained how their activities and duties are impacted by weather, how they get information and services from NMHSs, and what improvements in these services they require.

Bulgarian National Radio (BNR) obtains weather reports, forecasts and warnings from the National Institute of Meteorology and Hydrology (NIMH). The BNR representative demonstrated two of the audio files which are produced in a specially equipped cabin at NIMH and sent to BNR. This service is regularly scheduled and is extended to a provision of additional audio files or phone consultation if special circumstances require it. Both parties emphasize their satisfaction with the good quality of this cooperation.

Representatives from the Civil Protection Agencies of the Republic of The Former Yugoslav Republic of Macedonia, the Republika Srpska (one of the two such entities of Bosnia-Herzegovina) and Montenegro presented their legal framework, organization and operational duties. In each of these countries, Civil Protection is directly subordinated to the respective Government. Tasks and duties slightly vary across countries; e.g. in Bosnia-Herzegovina, the clearing from remaining mines is still a big issue in the aftermath of the 1990s Balkan War, which is reflected by an own department and an own director's assistant responsible for demining. However, in general the responsibilites of Civil Protection are very similar in each of these countries. Many of their tasks are directly or indirectly related to meteorological or hydrological hazards, and cooperation with the respective NHMS is formalized and narrow.

Details on the cooperation with the Institute of Hydrometeorology and Seismology of Montenegro (IHMS) were given by the representative of the Montenegrin Civil Protection Agency. It obtains scheduled weather bulletins three times a day. In case of hazardous weather, warnings are also transmitted from IHMS, the bulletins are updated 3-hourly or even more frequently, and consultation on the phone is arranged.

Joint Assessment of the Current Stage of Service Delivery

The next section contains the list of products and services, the stakeholder list and the joint assessment of the current stage of service delivery of the individual NHMSs. The available information was often incomplete, though. The initial plan was to let each NHMS conduct a full self-assessment according to the SDPM during the Workshop in Tirana. However, due mainly to time constraint and some other national considerations, most participants only completed the assessment according to the first strategy element of the SDPM, the evaluation of user needs.

Starting point for the assessment was the products and services of the NHMSs for the following key sectors:

- Civil protection, emergency response units;
- Agriculture;
- Infrastructure (energy, road authorities, transport, marine);
- Water sector (water agencies, water administration);
- Media (public and private), social media and general public;
- Public authorities (government, regional, local, municipalities) and international organizations, Research and Universities;
- Insurance sector;
- Health and Environment;
- Tourism, outdoor activities; and
- Aviation.

The current practices of the NHMSs were reviewed systematically sector by sector against the definitions provided in the SDPM. Guidance was provided for each of the stages of the SDPM. The answers to the questions of each of the six strategic elements justify the current status of the service delivery processes in the SDPM in an objective way.

The results for the individual NHMSs are summarized in the next sections.

Figure 2: The participants working on the joint assessment.

Assessment Albania

Organization

Instituti i Gjeoshkencave, Energjise, Ujit dhe Mjedisit (IGJEUM),
Institute of Geosciences, Energy, Water and Environment (IGEWE)

List of products and services

- Weather bulletin: forecast up to day 3, outlook day 4 to 7
- Warning bulletin I: contains river flooding, flash floods, landslides, thunderstorms, hail, snow, wind, wind gusts, heat and cold spells (map and text), Warning bulletin II: forest fire (map and text)
- Flood bulletin: special warning focused on floods (on request)
- Warning SMS (on request)
- Commercial and non-commercial services (data, expertise, analysis; on request)
- Training (on request)

List of stakeholders:

- Public institutions:
  Ministry of Health
  Ministry of Interior (Civil Emergency Department)
  Ministry of Agriculture
  Ministry of Transport
  Ministry of Environment
  Ministry of Energy
  Ministry of Tourism
  Public research institutions and various national agencies
  Supreme and regional districts courts
  Municipalities, communes, etc.
- Private companies:
  Building and Road Constructions companies
  Transport companies
  Hydropower companies
  Private enterprise in the field of agriculture
  Farmers
- Media (newspapers, radio and TV)
- Various NGOs
- Universities
- Individuals

Assessment

Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	1)Civil Protection and local/central authorities- warnings and special advice In the 90s the institute received an official letter with the requirements of the information that HM should provide to civil protection. MoU was signed. Probably it will be good to review the requirements to adapt to times. 2)Water sector(hydropower) KESH requested access to the automatic data of Drin river and this has been provided to them. Actually, two hydrologists are providing an average discharge inflow forecast by day to the Hydropower company and not official agreement about this have been signed. The user requirement should be defined with more detail and include in an official request of service. 3)Mass media Mass media uses the bulletins of the institute. In case of extreme situations, journalists come to the institute to have more detailed information. Sometimes they use inaccurate information available on the internet giving wrong messages to the population. The mass media should relay only in the advice of professionals of the institute. No official agreement or request with requirements is in place. 4)Ministry of Transportation (roads, marine and aviation) Roads: the institute provides the hazards bulletin by e-mail to the rad sector. We have not formal contact with the users -Aviation: apparently there is a MoU in place of data sharing for radar and satellite products with ALB control but it is not being honored right now due to technical problems. -Marine: nothing in place.	1)Level 3 2)Level 2 3)Level 2 4)Level 2	
Q1b: What processes do you have in place for engaging with your users?	-Civil Protection and local/central authorities- Email, telephone calls, SMS, Viber, Facebook -Water Sector (Hydropowers)- Email, telephone calls, SMS, Viber, Facebook -Mass media- Email, telephone calls, SMS, Viber, Facebook -Ministry of transportation: indirect contact (e-mail)	1)Level 2 2)Level 2 3)Level 2 4)Level 1	Level 2-1

Q1c: How do your users contact you?	By official letter, email, phone and personally in the office. Eventually we ask them to formalize their request and present to IGEWE contact addresses are available, bulletin and on web page -Civil Protection and local/central authorities- direct contact -Water Sector (Hydropowers)-direct contact -Mass media-direct contact -Ministry of transportation: indirect contact (e-mail)	1)Level 2 2)Level 2 3)Level 2 4)Level 1	Level 2-1
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	Direct contact with users no standardized documentation, documentations saved officially in the department and the directorate. A classification of all user requests at the end of the year or progressively will be helpful to better serve to them in the future.	Level 1	Undeveloped User requirements have not been recorded or documented. Some of users' requirements were recorded in the past, but are updated. We need to update the requirements to cover the actual needs.

Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	-Data request: In IGEWE does exist an official internal process in how to request, prepare and deliver data to clients depending on the type. Official price list is published by the Institute and approved by Ministry of Finance but has not been updated in the last 4 year. -Special studies: this is included in the approved price list (2 million to 4 million OLD Lek), sometimes this is calculated in the cost of the experts involved in the study according to time spend and their official salary. The rest of the products are given for free and no to much documentation is available. -Civil protection: In the 90s the institute received an official letter with the requirements of the information that institution should provide to civil protection. MoU was signed. Probably it will be good to review the requirements to update the MoU to nowadays needs. -Water Sector (Hydropowers, other private actors)- We deliver template with forecast rainfall and average forecast inflow discharges in a daily basis. However, in IGEWE does not exist an official document request describing users' requirements. MoU to exchange data is in place. -Mass media- there is no document defining products or services given to them -Ministry of transportation: no document, we provide to them the bulletins (meteo and natural hazards)	1)Level 2 2)Level 2 3)Level 2 4)Level 2	Level 2
Q2b: How are users kept informed when products and services are changed?	No mechanisms in case of changes are active, only small changes are applied during season. Information provided by email, phone and letters or via web site. Announcements on web site can be the future solution in that context. No big changes are made so as to avoid misunderstandings. For the moment no new services are offer so no need to communicate little changes but it will be convenient to create reliable channels to inform about big changes in the services.	Level 1	Undeveloped There is no mechanism or informing users when products and services are changed

Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	Feedback from users, civil protection morning report, media used for verification of the forecasts and warnings. Standard quality check and homogenization is conducted before providing the data to the clients. Bad quality data is not provided to the clients. Quick Meteo model performance analysis (not systematic) of the previous day in the area where civil protection reported incidences. Four models are used (COSMO LAMI, ALADIN, ECMWF, NMMB and GFS). Quick hydrological forecast performance analysis (not systematic) of the previous day looking into manual data. Special studies, sometimes we have feedback from the users, but not systematic. Internal reports at IGEWE, currently no meteorological verification Experience for verification is available, but staff is missing. Level 3 for extreme weather products, level 1 for all other products.	Level 1 Level 3	Undeveloped No measures exist to assess the accuracy, quality or effectiveness of the products and services delivered. Development in progress Some measures are used routinely to verify the accuracy and quality of service delivery. Some of these measures may be based on user requirements.
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	Internal information about quality of products, adaptation of check lists and guidelines. Some Analysis on basis of the morning report from civil protection is carried out. Use of products and experience of similar institutions. Level 3 for extreme weather products, level 1 for all other products. We use the result of the quick meteo model performance assessment to choose the meteo model that we going to use the day after to deliver the forecast	Level 1 Level 3	Undeveloped Development in progress Results are routinely recorded for some products and services and some analysis is undertaken.

Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery process?	Product check list Online archive, available for the general public Additional hard copy archive for products paid by clients cannot be on web site according IGEWE. Upgrade of web site of IGEWE will be some info about various requests by users but without the data. We have available a checklist to help to deliver the natural hazards bulletin For the data request the institute has documented the process	Level 2	Development initiated Some documentation to describe service delivery processes exists, but not in the format of a QMS.
Q4b: How do you use developments in science and technology to improve service delivery?	Observing development in science and technology, one of the IGEWE priorities plans to use them exists e.g. 24 hour precipitation forecast will be included in the daily weather bulletin in future	Level 3	Development in progress Developments in science and technology are identified with some plans in place to use them.
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	only bulletin on natural hazards: changes are communicated by email	Level 1	Undeveloped Changes are not communicated to customers or users.

Element 5 Development skills needed to sustain service delivery	Comments If we want to improve the services we need to develop new skills	Determination of current level in the SDPM		
Q5a: Who is the service delivery champion within your National Meteorological or hydro-meteorological Service (NMHS)?	Person according to WMO criteria Service Champion: Metodi Marku hazards bulletin For other services i.e.: meteo data- Prof. Zorba i.e.: special studies: different employees	Level 4	Developed A service delivery champion has been identified but does not have all the appropriate resources to make improvements.	
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery	No regular training, the experience was focused in post university level examinations for new recruitments. WMO training and other international activities related to the topics. Time by time organized activities for the education or certification of MMS and Albcontrol colleagues.	Level 2	Development initiated Informal communication of service delivery principles takes place between staff and management.	
Q5c: What mechanisms are in place for the documenting the roles of staff and their individual training requirements?	Staff does not have a job description or a training plan. Job description for each unit of the department available (not updated)	Level 1	Undeveloped Staff does not have a job description document or training plan.	
Q5d: How do you involve staff in improving service delivery?	Informal process, but not formalized Discussion on all organizational levels is possible involvement by email.	Level 2 Level 3	Development initiated An informal process for staff suggestions exists but is rarely used.	Development in progress A process for staff suggestions exists. Implementation of suggestions is ad hoc.

Assessment Bosnia and Herzegovina (Federation of Bosnia and Herzegovina)

Organization:

Federalni hidrometeorološki zavod
Federal Hydrometeorological Service (FHMS)

List of products and services:

- Warnings
- Hydrological monitoring and reports
- Standard Precipitation Index (SPI) monitoring and outlook
- Monthly, seasonal and annual bulletins
- Air quality monitoring and reporting
- Phenological observations and publications
- Climate monitoring system
- Archive

List of stakeholders

- Civil protection:
  On federal, canton and municipality level (by law)
- Public authorities on federal, canton and municipality level (by law):
  Ministry of Agriculture, Forest and Water Management
  Ministry of Spatial Planning, Civil Engineering and Ecology
  Ministry of Internal Affairs of the Federation of Bosnia and Herzegovina
- Agriculture (MoU, on request, some by law):
  Public and private customers (MoU, on request, some by law)
- Infrastructure (contract, agreement):
  Public companies roads and motorways of FBIH
  Heating companies
  Thermal power plants
  Electrical power industry
- Water sector:
  Water agencies (by law and MoU)
  Hydropower plants (contract, agreement)
- Environment agencies
- Energy sector: heating companies
- Media: TV, Radio, etc. (agreements, contract, by law of free access to information)
- General public (by law of free access to information)
- Insurance companies (on request through adopted Government Decision on the remuneration of services RHMS RS with price list)
- Health sector
- Neighboring NMHSs and other similar agencies on international level
- Research institutes and universities
- Primary and secondary schools for educational purposes

Assessment

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	1) Public authorities on Federal, canton and municipality level a) The Ministry of Internal Affairs of the Federation of Bosnia and Herzegovina (by the law) 2) Ministry of Security of Bosnia and Herzegovina/emergency centre 112 (by the law) 3) Civil protections for Federal, canton and municipalities level (by the law) 4) Agriculture, private and public (MoU, request of the user according to the law) 5) Water agencies (MoU, request of the user according to the law, agreements) 6) Neighboring NMHSs and other similar agencies on international level (MoU and agreements) 7) Infrastructure, public companies roads and motorways of FBIH (request of the user according to the law) 8) Environment agencies (request of the user according to the law) 9) Energy sector (MoU and agreement) a) Heating companies b) Hydropower companies, thermal power plants 10) Media, TV, Radio etc. (request of the user according to the law) 11) General public (request under the Law on free access to information) 12) Insurance companies (request under the Law on free access to information) 13) Health sector (request under the Law on free access to information) 14) Research, universities and education institutions (MoU, request under Law on free access to information)	1) 4 2) 4 3) 4 4) 3 5) 4 6) 4 7) 3 8) 3 9) 3 10) 4 11) 3 12) 3 13) 3 14) 3	3-4
Q1b: What processes do you have in place for engaging with your users?	Internal procedures for engaging with users Under the Law on free access to information	1) 4 2) 4 3) 4 4) 4 5) 4 6) 4 7) 3 8) 3 9) 3 10) 4 11) 3 12) 3 13) 3 14) 3	3-4
Q1c: How do your users contact you?	Web portal, mob app and thought request by Email, phone, fax, post, directly (face to face) MoU and contracts with users	1) 4 2) 4	3-4

		3) 4 4) 4 5) 4 6) 4 7) 3 8) 3 9) 3 10) 4 11) 3 12) 3 13) 3 14) 3	
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	The requests directly influence on the development of special products	1) 4 2) 4 3) 4 4) 4 5) 4 6) 4 7) 3 8) 3 9) 3 10) 4 11) 3 12) 3 13) 3 14) 3	3-4

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	Internal procedures (work instruction documents) to define the products and services for all users	4	4
Q2b: How are users kept informed when products and services are changed?	For all sectors: Changes are made at the request of a user. If there is new technology, it is presented on the web	2	2

Strategy Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	Verify the accuracy, quality and effectiveness of the products and services just in the house Effectiveness of the products and services is discussed on the joint meetings with users The requests directly influence the development of products and services	Civil protection, emergency response units 3 Public authorities (government, regional, local) 3 Other users 2	2-3
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	All products are controlled and verificated in the house Services delivery of all products improved on request of users	2	2

Strategy Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery (SD) process?	Yes, MoU or agreement Archive of all official requests and responses	4	4
Q4b: How do you use developments in science and technology to improve service delivery?	We use all technology developments (twitter, Facebook, mob app), routinely update technology in service delivery system	3	3
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	We communicate with email directly (formal communication process is followed)	2	2-3

Strategy Element 5 Development skills needed to sustain service delivery	Comments	Determination of current level in the SDPM	
Q5a: Who is the service delivery champion within your National Meteorological or hydro-meteorological Service (NMHS)?	Secretary of FHMI with head of divisions (Meteorology, Hydrology, Environment, Seismology, Astronomy, General Affairs)	4	4
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery	Training, workshops and meetings	3	3
Q5c: What mechanisms are in place for documenting the roles of staff and their individual training requirements?	Job description documents in place for all staff	3	3
Q5d: How do you involve staff in improving service delivery?	For the public authorities and institutions of government there is a system of evaluation of employees.	3	3

Assessment Bosnia and Herzegovina (Republika Srpska)

Organisation:

Republički Hidrometeorološki Zavod
Republic Hydro-Meteorological Service of Republika Srpska (RHMS-RS)

List of products and services:

- Sector of Meteorology
  - Department of Weather Watch and Division for Forecast:
    - Three different daily meteorological bulletins: weather condition in whole territory, measured parameters and forecast for today; forecast for tomorrow; forecast for next 3 days
    - Forecast edit for a web application and for two televisions
    - Biometeorological forecast
    - Forecast for heating and organizations for maintenance of roads and highways
    - Assistance for Ministry for Agriculture, Forestry and Water Management and Ministry Spatial Planning, Civil Engineering and Ecology
    - Assistance for electric power industry, hydroelectric power plants and heating plants
    - Regular reporting to the media: radio, television newspapers…
    - Warnings for Meteoalarm
  - Department of Climatology and Agrometeorology:
    - Monthly and annual climatological reports
    - Climatological analysis for different clients and purposes: spatial planning, construction of facilities, insurance companies, healthcare organizations, national reports on the state of climate …
    - Weekly agrometeorological bulletins and forecasts
    - Monthly and annual agrometeorological reports
    - Other information for users related to soil temperature, humidity, …
    - Phenological reports on current and medium phenological dates (appearance of the leaves, flowering, beginning of ripening, …)
    - Concentration of pollen
    - SPI index
- Sector of Hydrology and Ecology:
  - Department of Hydrology:
    - Daily hydrological bulletin for all users (including water levels, water flow and temperature; no forecast)
    - In the case the water levels exceed an alarm level, emergency bulletins are issued every hour
    - Temporary reporting to the media: radio, television, newspapers …
- Sector of Hydrology and Ecology:
  - Department of Ecology
    - Daily Report on Air Quality
    - Monthly and annual report
    - GHG Inventory (UNFCCC)
    - PRTR in process of establishing

- Air quality inventory (LRTAP) in process of establishing
- Monitoring of air and water quality of the surface, ground and offshore water
- Systematic monitoring of air and precipitation radioactivity
- Sending data to EIONET

List of stakeholders:

- Civil Protection (by law):
  On federal, canton and municipality level
- Public authorities (by law):
  Ministry of Security
  Ministry of Internal Affairs
  Government (in emergency situations)
- Agriculture:
  Public and private users (MoU, on request according to the law)
- Infrastructure:
  Public companies for roads and motorways of FBIH (request of the user according to the law)
  Energy sector: heating companies, hydropower companies, thermal power plants (MoU and agreement)
- Health and environment (on request according to the law on free access to information):
  Environment Agency
  Health sector
- Water sector:
  Water agency (MoU, on request according to the law, agreements)
- Media and general public:
  Neighboring NMHSs and other similar agencies on international level (MoU and ' agreements), TV, radio etc. (request of the user according to the law)
  General public (request under the law on free access to information)
  Research, universities and education institutions (MoU, request under the law on free access to information)
- Touristic organizations
- Other companies
- Insurance sector:
  Insurance companies (on request under the law on free access to information)

Assessment

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	1. -Republic administration for Civil Protection ,Municipal Civil Protection Headquarters (By the Law) Ministry of agriculture, forest and water management and Ministry of Spatial Planning, Civil Engineering and Ecology (By the Law) Water agencies (Low and MoU) 2. Agriculture Public and Private (MoU, under request, some by Law) 3. Energy sector: Hydropower plants, heating companies, thermal power plant, electricity power industry(contract, agreement) 4. Media: newspapers, radio, TV, General Public (agreements, contract, by law of free access to information) 5. Insurance sector (on request through adopted Government Decision on the remuneration of services RHMS RS with price list) 6. University and other research and education institution (MoU and under Law) 7. Transportation (agreement) 8. Tourism 9. Health and Environment	1.Civil protection, Ministry and Water agencies 4 2. Agriculture 4 3. Energy sector 3 4. Media 3 5. Insurance sector 3 6. University and research inst. 4 7. Transportation 2 8. Tourism 1 9. Health and Environment 2	1-4
Q1b: What processes do you have in place for engaging with your users?	Under the Law on Free Access to Information: We established standard procedures within the institution that specific sectors are assigned tasks: analysis, forecasts for special needs, specific place and time, as well as certain specific meteorological, hydrological ecological and seismological information and parameters	1.Civil protection, Ministry and Water agencies 4 2. Agriculture 3 3. Energy sector 3 4. Media 3 5. Insurance sector 3 6. University and research inst. 4 7. Transportation 2 8. Truism 1 9. Health and Environment 2	3

Q1c: How do your users contact you?	• With the governmental institutions (civil protection, ministry, agriculture, science and research, environment) is the official distribution channels • Web portal • through request: telephone, by mail • face to face, after that: MoU, agreement, contract	1.Civil protection, Ministry and Water agencies 4 2. Agriculture 3 3. Energy sector 3 4. Media 3 5. Insurance sector 3 6. University and research inst. 4 7. Transportation 2 8. Truism 1 9. Health and Environment 2	3
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	Users are able to contact NMHSs and their feedback is recorded There are some formal processes for integrating the feedback received into the development of services New contract, agreements and MoU provide new requirements of end users.	1.Civil protection, Ministry and Water agencies 3 2. Agriculture 3 3. Energy sector 3 4. Media 3 5. Insurance sector 3 6. University and research inst. 3 7. Transportation 2 8. Truism 1 9. Health and Environment 2	3

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	– To the government, ministry, civil protection, is approved scheme and channels for information distribution – Each other report, forecast, analysis has its own standard internal format established in the institution – New applications for request is on the website of the Service, – Special form for emergency bulletins	3	3
Q2b: How are users kept informed when products and services are changed?	Face to face conversation during the annual meeting. There is no systematic information to the users. The only information for users about new products is through web portal. Changes in services delivered to end users are communicated by letter.	2	2

Strategy Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	-Verification is internal by criteria. Specifically, depending on the type of forecasts, analysies, reports or bulletins. Verification can be numeric, as a percentage of feasibility or descriptive character (good, bad). -second type of verification is through response of the end users	3	3
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	We find means to improve reporting or suggest the need for new tools or human resources to improve the quality. In some situations more training and education is used.	3	3

Strategy Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery (SD) process?	The quality management system (QMS) is missing. There is a registry for the services that are delivered but there is no well-defined system	2	2
Q4b: How do you use developments in science and technology to improve service delivery?	There is no approved plan but all technical innovations have been implemented on ad hoc basis depending of possibilities.	2	2
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	On an annual or seasonal meetings organized for end-users, through the website of the institution. Ex. road services organize a meeting at the beginning of the winter season in regards to maintenance , when we as an institution exhibiting opportunities, innovation and improvement in the forecast of worst situation with snow, and also provide information of the changes in our services delivered.	4	4

Strategy Element 5 Development skills needed to sustain service delivery	Comments	Determination of current level in the SDPM	
Q5a: Who is the service delivery champion within your National Meteorological or hydro-meteorological Service (NMHS)?	board of Institution: heads of departments	4	4
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery	No official mechanism is in place. But informal communication or training are done when needed.	2	2
Q5c: What mechanisms are in place for documenting the roles of staff and their individual training requirements?	-no specific documented mechanism -communication and written requirements of the staff	2	2
Q5d: How do you involve staff in improving service delivery?	The public authorities and institutions of government there is a system of evaluation employees. The criteria are broad and comprehensive. One of the issues is the future tasks, education and improvement of employees. This includes the improvement of services and its delivery to customers	4	4

Assessment Bulgaria

Organisation:

National Institute of Meteorology and Hydrology (NIMH)

List of products and services:

- Short-range forecasts (24-48h)
- Warnings (Meteoalarm)
- Medium-range forecasts (3-7d)
- 15-day and monthly forecasts
- Marine forecasts
- Seasonal forecasts

List of stakeholders:

- Civil Protection (law obligation, MoU in place)
- Government (law obligation, on request):
    - President and Prime Minister
    - Ministry of Environment and Water
    - Ministry of Education
    - Ministry of Regional Development
    - Ministry of Agriculture
    - Ministry of Transport
    - Bulgarian Academy of Science
- Media (MoU, CSA, SLA in place and routinely assessed and updated if necessary)
    - Bulgarian national radio;
    - Bulgarian national TV;
    - Private TV and radio stations;
    - Information agencies / electronic sites;
    - Newspapers.
- General public
- Private sector:
    - Agricultural companies (MoU, CSA, SLA in place)
    - Energy companies;
    - Builders;
    - Market research companies;
    - Insurance companies;
    - Car dealers;
    - Advertising companies;
    - Movie productions.

Assessment:

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	Civil Protection Agency: MoU is in place, law obligation Agricultural companies: MoU, CSA, SLA in place Infrastructure (energy, road authorities, transport, marine): Government: law obligation and contracts Private companies: MoU, CSA, SLA and Guidelines for marine by WMO are followed; Water sector (water agencies, water administration); Media (public and private, social media, Bulgarian national radio, Bulgarian national TV, Private TV's and radio stations, Information agencies/electronic sites, newspapers, general public): MoU, CSA, SLA in place and routinely assessed and updated if it is necessary; Public authorities (President, Prime Minister, Ministry of Environment and Water, Ministry of Education, Ministry of Regional Development; Ministry of Transport, Ministry of Agriculture, Bulgarian Academy of Science, Sofia University): law obligations, under request; Insurance companies; Health and Environment (air quality, pollutants, Health sector) Tourism, outdoor activities: the forecasts are easy and free accessed on the NIMH web pages and it's enough for basic public needs Aviation: MoU, CSA, SLA in place, law obligated service	Level 4 Level 4 Level 3-4 Level 4 Level 4 Level 4 Level 2-3 Level 2-4 Level 2-3 Level 4	Level 2-4
Q1b: What processes do you have in place for engaging with your users?	Civil Protection Agency: MoU is in place, legal obligation - with annual meeting, in special situations - 1-h conference calls and meetings; Agricultural companies: MoU, CSA, SLA in place Infrastructure (energy, road authorities, transport, marine): Government: legal obligation and contracts Private companies: MoU, CSA, SLA and Guidelines for marine by WMO are followed; Water sector (water agencies, water administration); Media (public and private, social media, Bulgarian national radio, Bulgarian national TV, Private TV's and radio stations, Information agencies/electronic sites, newspapers, general public); organizing visits from schools and universities to show how we work and keep their interest in Science; we prepared a special questionnaire for students to improve education in meteorology, hydrology and climatology – to help them in professional orientation; Public authorities (President, Prime Minister, Ministry of Environment and Water, Ministry of Education, Ministry of Regional Development;	Level 4 Level 4 Level 4 Level 4 Level 4 Level 4	Level 3-4

	Ministry of Transport, Ministry of Agriculture, Bulgarian Academy of Science); Insurance companies: low interested for change; Health and Environment (air quality, pollutants, Health sector): not direct obligation for NIMH Tourism, outdoor activities: they used public information Aviation: various mechanisms are used	Level 3 Level 4 Level 3 Level 4	
Q1c: How do your users contact you?	Civil Protection Agency: e-mails, phone calls, face to face meetings; Agricultural companies: every day phone calls, e-mails Infrastructure (energy, road authorities, transport, marine): Government: legal obligation and contracts Private companies: MoU, CSA, SLA and Guidelines for marine by WMO are followed: e-mails, phone calls, meetings Water sector (water agencies, water administration): e-mails, phone calls, meetings; Media (public and private, social media, Bulgarian national radio, Bulgarian national TV, Private TV's and radio stations, Information agencies/electronic sites, newspapers, general public): e-mails, phone calls, meetings, direct line with BNR, on-line individual logins; Public authorities (President, Prime Minister, Ministry of Environment and Water, Ministry of Education, Ministry of Regional Development; Ministry of Transport, Ministry of Agriculture, Bulgarian Academy of Science): e-mails, phone calls, meetings ; Insurance companies: e-mails, phone calls; Health and Environment (air quality, pollutants, Health sector): users are able to contact NIMH on and ad hoc basic; Tourism, outdoor activities: e-mails, phone calls Aviation: e-mail, direct ftp connection Remark: In every contact, memorandum or agreement we encourage our users to contact us by using special telephone numbers or e-mails.	Level 4 Level 4 Level 4 Level 4 Level 4 Level 3 Level 4 Level 3 Level 4	3-4
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	Civil Protection Agency: by the low Agricultural companies: by the contracts Infrastructure (energy, road authorities, transport, marine): the service is going to be adapted after our users new requirements (we received a week before the WMO workshop in Tirana) Water sector (water agencies, water administration): regular exchange of CSA documents and followed adaptation of service; Media (public and private, social media, Bulgarian national radio, Bulgarian national TV, Private TV's and radio stations, Information agencies/electronic sites, newspapers, general public): every day feedback and adaptation of products depending on: seasonal conditions, general public requirements, received though public media and social media (Facebook pages of the different NIMH departments and branches;	Level 4 Level 4 Level 4 Level 4 Level 4	3-4

	Public authorities (President, Prime Minister, Ministry of Environment and Water, Ministry of Education, Ministry of Regional Development; Ministry of Transport, Ministry of Agriculture, Bulgarian Academy of Science):regular exchange of CSA documents and followed adaptation of service; Insurance and car dealers companies: regular conversations before the season; Health and Environment (air quality, pollutants, Health sector): adaptation of extreme conditions for different regions Tourism, outdoor activities Aviation: phone calls, e-mails, meetings, trainings from NIMH	Level 4 Level 3 Level 3 Level 3 Level 4	

Assessment Croatia

Organisation

Državni hidrometeorološki zavod (DHMZ)
Meteorological and Hydrological Service of Croatia

List of stakeholders (in order of importance):

1. Public
2. Civil protection
   National Protection and Rescue Directorate (DUZS)
   State Office for Radiological and Nuclear Safety (DZRNS)
   National Headquarter for Search and Rescue at Sea (MRCC)
3. Public/governmental institutions:
   Ministry of Sea, Transport and Infrastructure
   Ministry of Environmental Protection and Energetics
   Ministry of Forestry and Water Management
   Ministry of Health and Social Welfare
   Ministry of Defense
   Ministry of Interior
   Ministry of Science
   Ministry of Health
   Environmental Agency
   Croatian Emergency Regulatory Agency
   State Office of Nuclear Safety
   State Institute of Radiation Protection
4. National media (HRT)
5. Energy providers:
   Croatian Electricity Company (HEP)
6. Croatian Waters (Hrvatske Vode)
7. Traffic authorities (land, sea, air)
8. Universities and other research institutes

Assessment:

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	1. Public 2. Civil protection - National Protection and Rescue Directorate (DUZS), State Office for Radiological and Nuclear Safety (DZRNS), National Headquarter for Search and Rescue at Sea (MRCC) 3. Public/governmental institutions 4. National media (HRT) 5. Energy providers: Croatian Electricity Company (HEP) 6. Croatian Waters (Hrvatske vode) 7. Traffic authorities (land, sea, air) A Memorandum of Understanding (MOU), Customer Supplier Agreement (CSA) and Service Level Agreement (SLA) are in place with some and they are routinely assessed and updated as necessary. The information contained in the documents are used to inform and/or trace the development/progress of the products and services.	1. Public …level 4 2. Civil protection … level 5 3. Public/governmental institutions ... level 4 4. National media ... level 4 5. Energy providers … level 4 6. Croatian Waters … level 5 7. Traffic authorities (land, sea, air) ... level 4 NMHS seek input on an ad-hoc basis from users to inform of services. Requirements are defined in documents agreed with the customer, but are not routinely updated	developed
Q1b: What processes do you have in place for engaging with your users?	Regular annual workshops, meetings or other similar mechanisms are used to inform and to gain the feedback information from the users on how the services is working and/or how they could be improved. A user feedback log is maintained and action to improve the service delivery is taken.	1. Public …level 4 2. Civil protection … level 5 3. Public/governmental institutions ... level 4 4. National media ... level 4 5. Energy providers … level 4 6. Croatian Waters … level 5 7. Traffic authorities (land, sea, air) ... level 4 NMHS seek input on an ad-hoc basis from users to inform development of services. Requirements are defined in documents agreed with the customer, but are not routinely updated	developed

Q1c: How do your users contact you?	Users are able to contact NMHS using a variety of means e.g ., e-mail, telephone and post.	Users are able to contact NMHS and their feedback is recorded. There are some formal processes for using the feedback received in development of services. User requirements are defined with limited documentation.	Developed work in progress
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	Users requirements gathered and documented using a variety of means : Documents, memos, minutes and records are stored both in cabinet files (papers) and in digital form (Document Management System – part of SPI software).	A consistent ongoing dialogue is maintained with users in respect of their needs and the services they receive. Requirements are defined in documents agreed with the customer and routinely updated using feedback from users	developed

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	Information has been captured for most services and products in a document such as Work Instruction or SLA and these are routinely updated.	User feedback is used to inform changes and developments to services. Products and services are consistently documented. SLAs are defined.	developed
Q2b: How are users kept informed when products and services are changed?	A formal process is followed to ensure that users are well prepared for any changes to services and products they receive.	User feedback is used to inform management of changes and developments to services. Products and services are consistently documented. SLAs are defined	developed

Strategy Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	Some measures are used for verifying accuracy and quality of service delivery routinely. Some of these measures may be based on user requirements.	Measures of verification and service delivery are in place but are not informed by user requirements.	Development in Progress
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	Outcomes are routinely recorded for some products and services and some analysis is undertaken.	Measures of verification and service delivery are in place but are not informed by user requirements.	Development in Progress

Strategy Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery (SD) process?	Some documentation to describe service delivery processes exists, but not in the format of a QMS (Quality monitoring system)	The concept of service delivery has been introduced and an assessment of current status has been undertaken.	Development Initiated
Q4b: How do you use developments in science and technology to improve service delivery?	Plans are routinely updated to benefit from developments in science and technology.	The Action Plan is being implemented to improve service delivery, the outcomes are being monitored.	Developed
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	A formal communication process is followed to ensure that customers and users are well prepared for any changes in service delivery.	The Action Plan is being implemented to improve service delivery, the outcomes are being monitored.	Developed

Strategy Element 5 Development skills needed to sustain service delivery	Comments	Determination of current level in the SDPM	
Q5a: Who is the service delivery coordinator within your National Meteorological or hydro-meteorological Service (NMHS)?	A service delivery coordinator has been identified but does not have all the appropriate resources to make improvements	All members of staff are fully aware. Formal training is provided. There is an ad-hoc process for staff to provide ideas for improvements to service delivery.	Developed
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery	Informal communication of service delivery principles takes place between staff and management.	No formal service delivery training in place, though informal communication of service delivery principles exists	Development Initiated
Q5c: What mechanisms are in place for documenting the roles of staff and their individual training requirements?	Most staff have a completed job description document, but there is no correlation between the two.	No formal training in service delivery is provided, though service delivery principles are informally communicated	Development Initiated
Q5d: How do you involve staff in improving service delivery?	Staff suggestions are encouraged and implemented as appropriate Improvements to service delivery are communicated internally.	All members of staff are fully aware. Formal training is provided. There is an ad-hoc process for staff to provide ideas for improvements to service delivery	developed

Assessment Kosovo (UNSCR 1244/99)

Organisation:

Hydrometeorological Institute of Kosovo (UNSCR 1244/99) (HMIK)

List of products and services:

Daily weather data and forecast for 3-5 days (temperature, precipitation rain/snow etc.),
Hydrological data (current water levels and river temperatures, including a tendency)
Preparation of reports for flood warnings
Hydro-climatological seasonal bulletin
Hydro-climatological yearbook

List of stakeholders (in order of importance):

- Ministry of Environment and Spatial Planning (MESP)
- Kosovo (UNSCR 1244/99) Environment Protection Agency (KEPA)
- Ministry of Internal Affairs (Emergency Management Agency – EMA)
- Ministry of Agriculture and Rural Development (MARD)
- Ministry of Infrastructure (MI)
- Water Department (WD)
- Municipalities
- Public
- Insurance Companies
- Media:
  Public TC and radio (MoU in place)
  Private TV
  Newspapers
- Water Company
- Public University (MoU in place for cooperation and data sharing)

Assessment

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	Government level: Ministry of Environment and Spatial Planning MESP: Meteo, hydro, and others environmental data from water, air and soil quality. Kosovo (UNSCR 1244/99) Environment Protection Agency – KEPA) we publish over data in the web pages, publish the three monthly bulletins, and in the disasters event warning. Water Department - WD Ministry of Agriculture and Rural Development -MARD Ministry of Infrastructure - MI Ministry of Internal Affair (Emergency Management Agency – EMA) Municipality Media/Public: MoU with public service TV and Radio) media get both data from meteo and hydro every day. Public University, MoU , for corporation, and sharing the data - PU Water Company: Standard Precipitation Index – SPI.	Government level – 5 KEPA – 5 WD – 4 MARD -3 MI – 2 EMA – 5 Municipality – 3 Media – 4 PU – 2 Water Company - 3	3-4
Q1b: What processes do you have in place for engaging with your users?	Ministry of Environment and Spatial Planning MESP: Regular weekly meetings, in director levels. Manifestations of international environmental dates, and our Institute make a presentation example for world water day, world meteorological day. Kosovo (UNSCR 1244/99) Environment Protection Agency KEPA : daily meeting Water Department WD: Meetings, working groups in the drafting of strategies in the field of water, preparing the monitoring plans etc. Ministry of Agriculture and Rural Development MARD: Ministerial: meetings, working groups in specific areas Ministry of Infrastructure, MI: during the ministerial meetings or various projects. Emergency Management Agency EMA: Frequent meetings, in the field of protection and Disaster Warning. Media/Public: weekly Remarks of TV public for weather forecast Public University: Frequent visits of students in our institute and make a practices for 2 week to 1 month, exchange of data, etc. Water Company; we put the warning information's about the drought, and make some briefing in case of that disasters.	MESP - 4 KEPA -5 WD -3 MARD 3 MI - 2 EMA - 4 Media/public - 3	3 - 4

Q1c: How do your users contact you?	Ministry of Environment and Spatial Planning MESP: by official email, phone etc. Kosovo (UNSCR 1244/99) Environment Protection Agency KEPA, face to face, telephone, email. Water Department WD: email, phone, briefing's etc. Ministry of Agriculture and Rural Development MARD: by email, phone Ministry of Infrastructure MI: email, phone Emergency Management Agency EMA, face to face, briefing's, phone, email. Media/Public: phone, email, statement.	MESP - 4 KEPA - 5 WD -3 MARD - 2 MI - 2 EMA - 5 Media/public - 4	3-4
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	Ministry of Environment and Spatial Planning MESP: All environmental projects, elaborations, etc, require meteorological information, which incorporated in them Kosovo (UNSCR 1244/99) Environment Protection Agency KEPA: Hydro and meteo data published on the Web site, and are present for the public Water Department WD: water laws, regulations, decisions, etc., harmonized in those others that are forwarded to the institution. Ministry of Infrastructure MI: In infrastructure projected, elaborations, etc., including meteo and hydro information Emergency Management Agency EMA: Prepared detailed written reports that are given during emergency situations and during the warning. Harmonization of regulations, decisions etc. Media/Public: some of televisions, especially private, require additional information during emergency situations and direct statements	MESP - 3 KEPA - 4 WD -3 MARD - 2 MI - 2 EMA - 3 Media/public - 2	2-3

Assessment The Former Yugoslav Republic of Macedonia

Organization:

Hydrometeorological Service of the Republic of The Former Yugoslav Republic of Macedonia

List of products and services:

- Day 1 forecast (daily in the morning)
- Forecast up to day 5 (daily in the morning)
- Warnings (also on Meteoalarm)
- Morning rain/snow information
- Medical meteorological forecast
- Two graphical products related to hydrology:
  Estimated rain for Vardar, Treska and Lepenec River basins till entrance point to Skopje's urban area [tons/hour] over last up to 8 days
  Daily water level of Vardar River at Skopje over last up to 15 days
- Special rain reports in three languages (The Former Yugoslav Republic of Macedonian, Albanian, English)
- Growing degree days (new since 2016)
- Rain estimation from radar images by regions (new since 2016)
- Lightnings by regions (new since 2016)

List of stakeholders:

- Governmental organizations and governmental important positions
- Media
- Energy, transport, environment, agriculture
- Directorate of fire management (during the season

Assessment:

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	Civil protection, emergency response units; Agriculture; Infrastructure (energy, road, transport); Water sector (water agencies, administration; Media; Public authorities (government, regional, local, municipalities); Insurance; Health and environment (air, pollution, health sector); Tourism, outdoor activities; Aviation.	4 Developed 3 Development in progress 3 Development in progress 4 Developed 4 Developed 3 Development in progress 2 Development initiated 2/3 Development initiated 2 Development initiated Not applicable	
Q1b: What processes do you have in place for engaging with your users?	Civil protection, emergency response units official meetings (2 or more time per year); Agriculture - seasonal everyday work; Infrastructure (energy, road, transport - everyday work; Water sector (water agencies, administration - everyday work; Media – everyday work; Public authorities (government, regional, local, municipalities) - from every day to case by case work; Insurance - case by case work; Health and environment (air, pollution, health sector) – everyday work; Tourism, outdoor activities – seasonal everyday work; Aviation – not applicable.		
Q1c: How do your users contact you?	Telephone, e-mail, fax, letter, social media, personally meetings,		
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	List of features, reports from official meetings, mainly through informatics solution.		

Assessment Moldova

Organization:
Serviciul Hidrometeorologic de Stat (SHSM)
State Hydrometeorological Service

List of products and services:
Daily bulletins for temperature, precipitation & wind
Short term (5 days) forecasts temperature, precipitation & wind
Daily river debits and 2-5 days forecasts
Drought forecasts
Hail warning
Soil moisture
Late and early frosts
Harvest forecast
Provision of hydro-meteorological and environment quality data

List of stakeholders
Agricultural sector
Civil Protection
Energy
Transportation
General Public
Mass Media
Moldova Waters Agency
Science & research
Insurance

Assessment:

Strategy Element 1 Evaluate user needs and decisions Q1a: Who uses the products and services you deliver?	Comments 1. Agriculture 2. Energy (infrastructure and RE potential) 3. Water 4. Transportation 5. Civil protection (mostly during hazardous events) 6. Health and Environment 7. General public and Mass Media 8. Science and Research 9. Insurance 10. Tourism	Determination of current level in the SDPM 1. Level - 3 2. Level - 3 3. Level - 3 4. Level - 2 5. Level - 4 6. Level - 3 7. Level - 4 8. Level - 4 9. Level - 2 10. Level - 1	Level 3
Q1b: What processes do you have in place for engaging with your users?	Only with the governmental institutions (agriculture, energy, water, civil protection, science and research, environment) the distribution channels work satisfactory (Level 3), but with the private sector (agriculture (farmers and farmer associations), energy, health, insurance, tourism) the collaboration processes only start developing (low level of education of the private user). Mass media/Public collaboration is whether events dependent, but rather stable.	1. Governmental – 3 2. Private sector – 1 3. Public/Mass Media - 3	Level 2-3
Q1c: How do your users contact you?	Mostly through e-mail and phone, but not as often as they should (especially the private users). They are not aware in some cases that the essential information available at SHS would benefit them directly.	1. Governmental – 3 2. Private sector – 2 3. Public/Mass Media - 4	Level 3
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	User needs are only briefly documented and are not revised/updated for long stretches of time (only when the contracts are renewed). The delivered services haven't been developed for years.	1. Governmental – 4 2. Private sector – 1 3. Public/Mass Media - 3	Level 2-3

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	The main documentation are: 1. The government approved scheme (targeted service delivery) and channels for information distribution for governmental sector and mass media 2. Annual contracts (updated on a yearly basis) mostly for private sector.	1. Governmental – 4 2. Private sector – 3 3. Public/Mass Media - 4	Level 3-4
Q2b: How are users kept informed when products and services are changed?	All the users are notified in case there are changes in the product delivered. (the contracts and the channels of information distribution are updated accordingly)	Level 3	Level 3

Strategy Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	Overlapping of forecast data with the real one is the most efficient verification. Constant evaluation criteria are set in place, but are not always updated to the user requirements. When errors are detected, breakdown of the system is performed to identify where the fault lays.	1. Governmental – 3 2. Private sector – 2 3. Public/Mass Media - 3	Level 3
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	The feedback is lacking in most cases. Only in some isolated cases feedback is received and the product is adjusted. Therefore the development of the offered product isn't really matching the needs of the customer.	1. Governmental – 3 2. Private sector – 1 3. Public/Mass Media - 3	Level 2

Strategy Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery (SD) process?	The quality management system (QMS) is missing. There is a registry for the services that is delivered but there is no well-defined system	Level 2	Level 2
Q4b: How do you use developments in science and technology to improve service delivery?	There is no approved plan as such but some technical innovations have been implemented on ad hoc basis.	Level 2	Level 2
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	The communication channels are revised, updated and agreed upon annually. All changes are included in the service contracts, when these are updated.	Level 2-3	Level 2-3

Strategy Element 5 Development skills needed to sustain service delivery	Comments	Determination of current level in the SDPM	
Q5a: Who is the service delivery champion within your National Meteorological or hydro-meteorological Service (NMHS)?	The directors of each department are in charge with the relevant sectors.	Level 3	Level 3
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery	No official mechanism are in place. But informally communication or trainings are done when needed.	Level 1-2	Level 1-2
Q5c: What mechanisms are in place for documenting the roles of staff and their individual training requirements?	Communication or trainings are done when needed. The roles and duties of each member of the staff are well defined in the individual work contract	Level 2-3	Level 2-3
Q5d: How do you involve staff in improving service delivery?	Changes and improvements are not set in motion by a specifically designed for that plan. However, they do take place when the management requires it.	Level 2-3	Level 2-3

Assessment Montenegro

Organization

Zavod za hidrometeorologiju i seizmologiju
Institute of Hydrometeorology and Seismology of Montenegro (IHSM

Products:

- Warnings
- Bulletins
- Forecast charts, meteograms, forecast soundings from high-resolution WRF-NMM model (1 km)

Stakeholders:

- International organizations
- Neighboring NHMSs
- Ministry of Interior: Directorate for Emergency Management (OCC 112)
- Serbia and Montenegro air traffic services (SMATSA)
- Marine security administration (port of Bar, port of Kotor)
- Public TV RTCG, Private TV station Vijesti
- Biotechnical Institute

Assessment

Strategy Element 1 Evaluate user needs and Decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	1. Agriculture 2. Energy (infrastructure and RE potential) 3. Water 4. Transportation 5. Civil protection (mostly during hazardous events) 6. Health and Environment 7. General public and Mass Media 8. Science and Research 9. Insurance 10. Tourism	1. Level - 4 2. Level - 3 3. Level - 3 4. Level - 3 5. Level - 4 6. Level - 4 7. Level – 4 8. Level - 3 9. Level - 3 10. Level – 3	Level 3-4
Q1b: What processes do you have in place for engaging with your users?	With the governmental institutions (agriculture, energy, water, civil protection, science and research, environment) the distribution channels work satisfactory. With the private sector (agriculture (farmers and farmer associations), energy, health, insurance, tourism) the collaboration processes start developing (level 2). With Mass media/Public collaboration is established a good collaboration.	1. Governmental – 4 2. Private sector – 2 3. Public/Mass Media - 3	Level 3
Q1c: How do your users contact you?	Through e-mail , phone, by fax and directly and contact to PR service and relevant staff (http://www.meteo.co.me/misc.php?text=about)	1. Governmental – 3 2. Private sector – 3 3. Public/Mass Media - 3	Level 3
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	User needs are only briefly documented and are not revised/updated for long stretches of time (only when the contracts are renewed). The delivered services haven't been developed for years.	1. Governmental – 4 2. Private sector – 2 3. Public/Mass Media – 3 Guidance for access to information (only in local language http://www.meteo.co.me/misc.php?text=services	Level 2-3

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	The main documentation are: 1. The government approved scheme (targeted service delivery) and channels for information distribution for governmental sector and mass media 2. Service contracts 3. Guidance for access to information (only in local language http://www.meteo.co.me/misc.php?text=services	1. Governmental – 3 2. Private sector – 3 3. Public/Mass Media - 3	Level 3
Q2b: How are users kept informed when products and services are changed?	All the users are notified in case there are changes in the product delivered (the contracts and the channels of information distribution are updated accordingly on website http://www.meteo.co.me/index.php?kategorija=1) mostly in local language	Level 4	Level 4

Strategy Element 3 Evaluate and monitor services performance and outcomes	Comments	Determination of current level in the SDPM	
Q3a: How do you verify the accuracy, quality and effectiveness of the products and services you deliver to users?	Overlapping of forecasted data with the real one is the most efficient verification. Constant evaluation criteria are set in place, but aren't always updated to the user requirements. When errors are detected, breakdown of the system is performed to identify where the fautl lays.	1. Governmental – 3 2. Private sector – 2 3. Public/Mass Media - 3	Level 3
Q3b: How are the results of the verification of the accuracy, quality and effectiveness of service delivery used to improve the products and services you deliver to your users?	The feedback is lacking in most cases. Only in some isolated cases feedback is received and the product is adjusted. Therefore the development of the offered product isn't really matching the needs of the customer.	1. Governmental – 3 2. Private sector – 2 3. Public/Mass Media - 3	Level 3

Strategy Element 4 Sustain improved service delivery	Comments	Determination of current level in the SDPM	
Q4a: Have you documented your service delivery (SD) process?	The quality management system (QMS) is missing.	Level 2	Level 2
Q4b: How do you use developments in science and technology to improve service delivery?	There is no approved plan as such but some technical innovations have been implemented on ad hoc basis.	Level 2	Level 2
Q4c: How do you communicate the changes in your service delivery process to your customers and users?	The communication channels are revised, updated and agreed upon annually. All changes are included in the service contracts, when these are updated.	Level 3	Level 3

Strategy Element 5 Development skills needed to sustain service delivery	Comments	Determination of current level in the SDPM	
Q5a: Who is the service delivery champion within your National Meteorological or hydrometeorological Service (NMHS)?	The directors of each department are in charge with the relevant sectors (forecasting and analysis, climatology particularly)	Level 3-4	Level 3-4
Q5b: What mechanisms are in place to enable your staff to be educated in the principles of service delivery?	No official mechanism is in place but informally communication or trainings are done when needed.	Level 2-3	Level 2-3
Q5c: What mechanisms are in place for documenting the roles of staff and their individual training requirements?	Communication or trainings are done when needed to all staff.	Level 3	Level 3
Q5d: How do you involve staff in improving service delivery?	Changes and improvements are set in motion by a specifically designed plan for that, so called Human Resources plan, which is adopted annually. However, they do take place when the management requires it.	Level 4	Level 4

Assessment Romania

Organization:

Administraţia Naţională de Meteorologie
National Meteorological Administration (NMAR)

List of products and services (freely accessible on the webpage):

- Warnings at national level
- Forecasts and nowcasts at local level
- Regional forecasts (2 weeks)
- Seasonal forecasts (1-3 months)
- Agrometeorological forecasts (weekly)
- Soil moisture maps (daily)
- Notes on the drought evolution

List of stakeholders:

- Ministry of Environment, Waters and Forests
- Ministry of National Defense
- Ministry of Internal Affairs
- Ministry of Transport and Infrastructure
- Ministry of Agriculture and Rural Development
- Presidential Administration of Romania
- General secretariat of the Romanian government
- General inspectorate for emergency situations
- Ministry of Administration and Interior
- National Administration of Romanian Waters
- Romanian national company for highways and national roads
- National Society Romanian Rail Roads
- Red Cross
- Media
- National Committee for Emergency Situations (during extreme weather events)

Assessment

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	- Public Authorities: Presidency of Romania, General Secretariat of the Romanian Government, Prefectures, Mayor Houses, Universities and Research Institutions , The National Television and The National Radio Stations - Meteorological and Hydrological Data and Bulletins, Warnings and Alerts in accordance with the legal responsibilities, Customer-Supplier Agreement/ Service-level Agreement, MoU. - Emergency Response Units: General Inspectorate for Emergency Situation, Ministry for Internal Affairs, Ministry of Environment, Water and Forests, Ministry of National Defense - Meteorological and Hydrological Bulletins, Warnings and Alerts in accordance with the legal responsibilities; - Water sector: The National Administration “Apele Romane”, The Water Basins Administration , Ministry of Environment, Water and Forests, Water Companies, Hydropower and Nuclearpower Plants - Meteorological and Hydrological Bulletins, Warnings and Alerts in accordance with the legal responsibilities, Customer-Supplier Agreement/ Service-level Agreement - Agriculture: Ministry of Agriculture, private agricultural companies Individual Farmers - Meteorological and Hydrological Bulletins, Warnings and Alerts in accordance with the legal responsibilities, Customer-Supplier Agreement/ Service-level Agreement. -Health and Environment: The Red Cross Organization, Hospitals, Schools, Private Medical Institutions, Plants and Factories, etc - Infrastructure: National Company for Highways and National Roads, National Society Romanian Rail Roads; Fluvial and Maritime Transport Companies - Meteorological and Hydrological Bulletins, Warnings and Alerts in accordance with the legal responsibilities, Customer-Supplier Agreement/ Service-level Agreement. - Aviation: The National Company of Civil Aviation, Military Aviation- Customer-Supplier Agreement/ Service-level Agreement, MoU. - Media: Private Television and Radio Stations, Newspapers, General public - Meteorological and Hydrological Bulletins, Warnings and Alerts in accordance with the legal responsibilities, Customer-Supplier Agreement/ Service-level Agreement. - Insurance sector: Insurance Companies Customer-Supplier Agreement/ Service-level Agreement. Tourism: Private companies and individuals	- Public Authorities: 5 - Emergency Response Units: 5 - Water sector: 5 - Agriculture: 5 - Health and Environment: 5 - Infrastructure: 4 - Aviation: 5 - Media: 5 - Insurance sector: 3 - Tourism: 4	Level 4-5

Q1b: What processes do you have in place for engaging with your users?	- Public Authorities: Regular meetings - Emergency Response Units: Regular meetings - Water sector: Regular meetings - Agriculture: Regular meetings - Health and Environment: Regular meetings - Infrastructure: Regular meetings; Videoconference - Aviation: Regular meetings, meetings to review and renew MoU with Military Aviation. Customer-Supplier Agreement/ Service-level Agreement. - Media: Regular meetings, Permanent/daily collaboration with TV and radio stations. - Insurance sector: Meetings when a new contract is initiated - Tourism: Meetings when a new contract is initiated	- Public Authorities: 5 - Emergency Response Units: 5 - Water sector: 5 - Agriculture: 4 - Health and Environment: 4 - Infrastructure: 4 - Aviation: 5 - Media: 5 - Insurance sector: 3 - Tourism: 4	Level 4-5
Q1c: How do your users contact you?	- Public Authorities: mutual meetings, email, telephone, fax, videoconference. - Emergency Response Units: mutual meetings, email, telephone, fax, videoconference. - Water sector mutual meetings, email, telephone, fax - Agriculture: email, telephone, fax. - Health and Environment: email, telephone, fax. - Infrastructure: mutual meetings, email, telephone, fax, videoconference. - Aviation: mutual meetings, email, telephone, fax. - Media: mutual meetings, email, telephone, fax. - Insurance sector: mutual meetings, email, telephone, fax. - Tourism: mutual meetings, email, telephone, fax	- Public Authorities: 5 - Emergency Response Units: 5 - Water sector: 5 - Agriculture: 5 - Health and Environment: 5 - Infrastructure: 5 - Aviation: 5 - Media: 5 - Insurance sector: 4 - Tourism: 4	Level 4-5
Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	- Public Authorities: According to the Romanian Law - Emergency Response Units: According to the Romanian Law - Water sector: According to the Romanian Law/Requirements are defined in CSA or SLA - Agriculture: According to the Romanian Law/Requirements are defined in CSA or SLA - Health and Environment: According to the Romanian Law/Requirements are defined in CSA or SLA - Infrastructure: According to the Romanian Law/ Requirements are defined in CSA or SLA - Aviation: According to the Romanian Law/ Requirements are defined in CSA or SLA - Media: Requirements are defined in CSA or SLA - Insurance sector: Requirements are defined in CSA or SLA - Tourism: Requirements are defined in CSA or SLA	- Public Authorities: 5 - Emergency Response Units: 5 - Water sector: 5 - Agriculture: 5 - Health and Environment: 4 - Infrastructure: 4 - Aviation: 5 - Media: 4 - Insurance sector: 3 - Tourism: 4	Level 4-5

Organization:

Institutul Național de Hidrologie și Gospodărire a Apelor (INHGA)
National Institute of Hydrology and Water Management (NIHWM)

List of products and services:

- Hydrological warnings in case of dangerous phenomena: floods, flash floods, drought, ice jam, accidental pollution (text and map)
- Daily bulletins:
  - The hydrological evolution regime of rivers in the last 24 hours
  - Forecast for the next 24 hours (levels and discharge) in some river cross-sections
- Hydrological forecasts for the next 6 days for the inside rivers
- hydrological evolution in the last 24 hours on the Danube river and hydrological forecasts for the next 7 days for the Bazias cross-section and for the hydrometric stations on the sector downstream Iron Gates Reservoir
- Monthly hydrological bulletin
  - the hydrological forecast for the next three months for mean monthly discharge for 32 river hydrometric stations
  - incoming mean monthly discharge for 24 reservoirs
  - the incoming mean monthly discharge for the Danube at the entrance into the country (Bazias cross-section)
  - Map with areal modul coefficients (monthly discharge divided by multiannual monthly discharge)
- Monthly and annual reports concerning the hydrological background
- Special reports in case of extreme hydrological events
- Modernization of the national network
- Technical and scientific guidance and assistance of the hydrological network
- Monitoring the performance of automatic hydrometric stations
- Monitoring the performance of automatic hydrometric stations
- Cooperation with neighboring countries (in the frame of mutual agreements) regarding real time data exchange and water management activities for the border rivers
- Development of informational technologies, hydrological data bases and GIS procedures
- Development, upgrading and implementation of hydrological models and forecasting
- Improving and increasing the operational methods for the dissemination of the hydrological diagnosis, forecasts, warnings and alerts
- Guiding and training in the field of operational data validation, data flow, and hydrological forecasting activity
- Impact of human activity and climate change on the hydrological regime
- Eco-hydrology researches
- Studies and researches regarding the protection of water resources
- Assessment of the water resources and the hydrological water balance components
- Studies for integrated and sustainable water management and water development, optimization of the water use, conservation of quantity and quality water
- Studies regarding the morphology of the Danube River, the Danube Delta and the Black Sea

List of stakeholders:

- Presidency of Romania
- Ministry of Agriculture
- Ministry of Energy
- Ministry of the Environment, Water and Forests; Central Commission for the Defense against Floods, dangerous meteorological Phenomena and Accidents at Hydraulic Structures
- Government
- Ministry of Transports
- Ministry of Internal Affairs
- Hydrological Services from Neighboring countries (bilateral agreements)
- Civil Protection
- Hydropower Company
- Mass media

Assessment Serbia

Organization:

Republički Hidrometeorološki Zavod
Republic Hydrometeorological Service of Serbia (RHMS)

List of products and services:

- Meteorological and hydrological data
- Weather warnings and forecast (bulletins, maps, pictograms, …)
- Climatological analysis and forecast (CW Bulletins, studies, climate index, …)
- Agrometeorological information (SPI, alerts, …)
- Specialized forecasts (Biometeorological forecast, Heat/Cold wave, …)
- NWP products (forecast maps, meteograms, …)
- Hydrological warnings, forecasts, analyses, …
- Calibration of meteorological instruments

List of stakeholders:

- By law:
  - Civil protection: Ministry of Interior – Sector for emergency situations
  - Government of RS and governmental institutions (MoU)
  - Local municipalities (MoU)
  - Universities
  - Non-profit organizations: Red Cross, Mountain Rescue …
  - Public
- Commercial customers:
  - Media (contracts with some but need to be reviewed): TV, radio, newspapers
  - Industry and public companies: Water management, energy, agriculture, Nis Oil Refinery, chemical industry …
  - Aviation (MoUs are in place but need to be updated): Civil Aviation Directorate (SMATSA), Belgrade Tesla Airport
  - Agriculture: companies and farmers
  - Infrastructure (CSAs in place): Energy sector, road authorities, winter road maintenance companies
  - Water Sector: Water management, Hydropower companies
  - Public institute for health “J.J. Batut”
  - Insurance companies (contracts)

Assessment:

Strategy Element 1 Evaluate user needs and decisions	Comments	Determination of current level in the SDPM	
Q1a: Who uses the products and services you deliver?	DRM (Civil protection, Ministry of interior, Republic Headquarter for emergency): User and needs are known, products defined, relation defined by Laws, procedure are in place, permanently communication Water (Water management, Hydropower,): Users and needs are known, products defined and procedure are documented Public (Government, Agencies, local municipalities): Users and needs are known, MoU Infrastructure (energy, road authorities, etc.): Products and needs are known, CSA in place Media (TV, radio, newspapers, public): Users and needs are known, There are contract with some, but has to be reviewed Aviation (CAD, SMATSA, Airport Tesla -Belgrade): Users and needs are known, MoU are in place but has to be updated Agriculture (Companies, Farmers): users and requirements known, There are contracts with companies and for farmers is public. Health (Public institute for health "J.J. Batut"): Users and products are known	DRM: 4 Water:4 Public:3 Infrastructure:3 Agriculture: 3 Aviation:3 Health:3	Level 3-4
Q1b: What processes do you have in place for engaging with your users?	General for all: User feedback maintained through implemented ISO tools, survey performed once per year DRM, (Civil protection) Public (Government, Agencies, local municipalities): Infrastructure (energy, road authorities, etc.):	DRM: 3 Water:3 Public:3 Infrastructure:3 Agriculture: 3 Aviation: Health:3	Level 3
Q1c: How do your users contact you?	Users generally able contact NHMS via e-mail, by phone, website DRM, (Civil protection): Regular contact via e-mail, SMS, user able to contact ad hocc basis by phone, Face to face on ad hoc basis, Water: Regular contact via mail and phone Public (Government, Agencies, local municipalities) and Infrastructure (energy, road authorities, etc.): via e-mail; Media: Regular contact via e-mail, by phone, FTP face to face Aviation: Regular contact; Agriculture: Regular contact; Health: e-mail, phone	DRM: 4 Water: 4 Public: 4 Infrastructure: 4 Aviation: 3 Agriculture: 4 Health: 4	Level 4

Q1d: How are user requirements gathered and documented to facilitate the developments of products and services?	User requirements are documented and analysed by ISO 9001:2008 tools. Requirements are connected with development through corrective and preventive actions.	DRM: 4 Water: 4 Public: 3 Infrastructure: 4 Aviation: Level 3 Agriculture: 3 Health: Level 4	Level 3-4

Strategy Element 2 Link service development and delivery to user needs	Comments	Determination of current level in the SDPM	
Q2a: What documentation do you maintain to define the products and services you deliver?	DRM, (Civil protection): Law, Rulebooks… Water: Law, Public (Government, Agencies, local municipalities): Law Infrastructure (energy, road authorities, etc.): Contract Media: Contract Aviation: Contract ICAO/WMO Agriculture: Contract Health: Law, Rulebook	DRM: 4 Water: 4 Public: 3 Infrastructure: 4 Media: 3 Aviation: 4 Agriculture: 4 Health: 4	Level 3-4
Q2b: How are users kept informed when products and services are changed?	DRM, (Civil protection): All users are informed Water: All users are informed Public (Government, Agencies, local municipalities): Some users are informed Infrastructure (energy, road authorities, etc.): All users are informed Media: Some users are informed, all with contract but other ad hoc basis Aviation: All users are informed Agriculture: All users are informed	DRM: 3 Water: 3 Public: 2 Infrastructure: 3 Media: 2-3 Aviation: 3 Health: 3	Level 2-3

Action Plans

Based on the assessment of the capacities regarding service delivery, feedback from stakeholders (collected by the participants in advance or during the workshop), and the user needs and requirements, the participants carried out a gap analysis and worked on the development of the Action Plan jointly with the WMO experts.

In general the Action Plans were developed for training purposes. The plans do not have the status of official documents of the participating NHMS. Nevertheless the design of the plans was as realistic as possible in order to make them serve as a guideline for the implementation of the Strategy in the individual NHMSs.

The objective of the action plan is to ensure that the NHMS is able to gain a higher level within the SDPM. Key actions for each element in order to implement the Strategy and areas of focus are defined for the short and medium-term. Some of the actions can be implemented on ad hoc basis, other changes may require a series of actions over medium or long timescales, so it is important that they are documented and tracked through to completion.

Over the medium term, the Implementation Plan aims to help the NHMSs to gain at least one level in their service delivery development and to document the process and share lessons learned with other Members.

Over the long term, the aim of the Strategy is to develop or strengthen a culture of service and facilitate the mainstreaming of service delivery in the programmes and activities of the participating NHMSs, resulting in a tangible improvement in the user's perception of its products and services.

The participants decided on the next higher level of service delivery they would like to achieve in future and identified the resources required to get there. The result of the workshop were Action Plans for the different NHMSs. The plans contain actions and activities required to progress to higher levels of service delivery over the short, medium and long term tailored to the specific NHMSs. Those plans are presented on the following pages.

Figure 3: Workshop participants working on the development of the Action Plans.

Action Plan Albania

Gaps and Action Plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	2-3	1.MoU not in place or not updated with all users 2.Incomplete feedback 3.Regular communication Mechanism 4.Lack of training of some end users 5Absence of communication focal point/	1.1.1	Identify existing and potential users and think/suggest about their needs to be included in the new MoU.	Administrative			Internal
			1.1.2	Reach out, meet with potential and existing users to check on their expectations and needs. Get feedback from the proposed user needs predefined in the previous section. Sign/update contract/MoU with all users.	Administrative			Internal
			1.1.3	Update the user database gathering all the information of previous steps.	Administrative			Internal
			1.2.1	Organize stakeholders workshops on a regular basis (yearly, or more often if required) to discuss specific needs and feedback of service requirements.	Administrative			Internal
			1.2.2.	Dedicated workshops covering the social-economic-institutional benefits of available services.	Administrative			Internal
			1.3.1	Planning and organizing an open house day of the institution every year. Participation in public exhibitions/Marketing activities/users survey. Stablishing a strong customer service relationship	Administrative			Internal
			1.3.2	Organize user trainings to explain the different services available.	Administrative			Internal
			1.3.3	Focal point nomination for service delivery. The liaison person should deliver customer services.	Administrative			Internal
			1.3.4	Feedback/documentation log of users' follow up by liaison.	Administrative			Internal
			1.3.5	The focal point proactively engages users by providing a good customer services.	Administrative			Internal

Gaps and Action Plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	2	1.No detail list describing services and products is available jointly with an updated price list 2.No well-defined and updated mechanism of service delivery/quality assurance 3.No customer service satisfaction is in place	2.1.1	Elaborate a detailed list of services and products that can be delivered, including price list.	Administrative			Internal
			2.1.2	Elaborating detail description of each of the services and products that can be offered to be included in a brochure or leaflet.	Administrative			Internal
			2.2.1	Implementation of a short and simple manual on service delivery stating the main principles of good praxis.	Administrative			Internal
			2.2.2	Implementation of a quality assurance guideline for service delivery.	Administrative			Internal
			2.3.1	Stablishing a customer service satisfaction survey and control and feedback	Administrative			Internal

Gaps and Action Plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	**1**-3	Delivered products are not properly verified/evaluated. Feedback from users is not always incorporated into the delivered services User requested verifications Lack of mechanism for outputs verification	3.1.1	Development a manual and automatic verification mechanism incorporating user feedback and tailored needs.	Administrative			Internal
			3.1.2	Include verification conclusions and findings into SLAs	Administrative			Internal
			3.1.3	Annual (or as often as requested by users) evaluation/ verification reports of the delivered products. Including performance analysis with various indicators such as (Nash-Sutcliffe, benchmarks, MAE, RMSE, etc).	Technical			Internal
			3.1.4	Based on the findings of the evaluation/verification, improve/update the products and include the improvements in the SLAs and mentioning persisting limitations of the services and products.	Technical			Internal
			3.1.5	Training of evaluation/verification processes and performance analysis.	Technical			Internal
			3.1.6	Communicating the improvements of the products to the end users. Including full explanation and agreement on existing limitation of the products with the end users. Finding future solutions to overcome these limitations with future actions.	Administrative/ Technical			Internal

Gaps and Action Plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	2	Missing QMS No existing plan on implementing the new technologies Users are not informed of changes in delivery process on ad hoc basis Only informal communication of service delivery process updates		Implement and document a standardized QMS for all delivered services and products considering the quality of the service and products. Including manuals in how to deliver the services and products according to requested quality.	Administrative			Internal
				Discuss with customers a required quality level to each service delivered and product and include the assigned quality in the updated SLAs.	Administrative			Internal
				Develop an implementation plan to introduce/include new technologies or science development in service delivery processes and products.	Technical			Internal
				Setting up specific formal communication channels to inform stakeholders about new developments or changes in the service delivery and products.	Administrative			Internal
				Design and implement a long-term stakeholder's engagement strategy to strengthen the relationship including from the first contact (early stage) to the future. Including actions such as bilateral meetings, workshops, and surveys.	Administrative			Internal

Gaps and Action Plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	2-3	Lack of a focal point in charge of service delivery Lack of skills and customer oriented mindset	5.1.1	Appoint a focal point with clear responsibilities and sufficient empowerment to fulfill them.				

Assessment Bosnia and Herzegovina (Republika Srpska)

Gaps and Action Plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	**3-4**	Q1a: MoU not in place with all users Q1b: Incomplete feedback Q1c: Lack of training of end users Q1d: Absence of communication focal point Q1e: Lack of a communication registry Q1f: Human resources; insufficient tools; equipment for some request	Q1a:	Identify existing and potential users and their updated needs	Administrative			internal
			Q1b:	Reach out, meet with the potential users. Sign/update contract/MoU	Administrative			internal
			Q1b:	Update the user database	Administrative			internal
			Q1c:	Organize stakeholder workshops on a regular basis (yearly or more often if required) to discuss specific needs	Administrative			Internal and external
			Q1c:	Dedicated workshops covering the social-economic benefits of available SHS services	Administrative			Internal and external
			Q1c:	Participation in public exhibitions/Marketing activities/ User survey/	Administrative			Internal and external
			Q1c:	Organize training with users that need it	Administrative			Internal and external
			Q1d:	Focal point nomination for communication	Administrative			Internal
			Q1e:	Form communication registry and procedure	Administrative			internal
			Q1f:	a project to strengthen the capacity of institutions for better quality and distribution services to the relevant Ministry	Administrative and technical			Internal and external

Gaps and Action Plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	2-3	Q2a: All users are informed when the products and services they receive are changed Q2b: Some users are informed ahead of time on an ad hoc basis when products and services are changed	Q2a:	Implement the specific mechanism for efficient communication, especially feedback on delivered products	administrative			internal
			Q2a:	Improve all mechanism, is on time and proper quality by some kind of evolutions	administrative			internal
			Q2b:	Organizing annual meeting with stakeholders	administrative			internal
			Q2b:	Communication channel for all users about new services and tools	administrative			internal
			Q2b:	improve mechanism of service deliverance/quality assurance	administrative			internal

Gaps and Action Plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	3	Delivered products are not properly verified/evaluated Feedback is not always incorporated into the delivered products and services User requested verifications Lack of mechanism for output verification	Q3a:	Develop/implement a verification mechanism incorporating user feedback and tailored needs	administrative			internal
			Q3a:	Include verification measures into SLAs	administrative			internal
			Q3a:	Annual (or as often as requested) evaluation/verification reports of the delivered products	administrative			internal
			Q3b:	Based on the reports, improve/update the SLA and acknowledge persisting limitations	administrative			internal
			Q3b:	Training on evaluation/verification processes	administrative and technical			Internal and external
			Q3b:	Defining, explaining and agreeing on existing limitation with the end user	administrative			internal

Gaps and Action Plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	2	Missing QMS No existing plan on implementing the new technologies Users are informed of changes in delivery process on ad hoc basis Only informal communication of service delivery process updates	Q4a:	Implement a standardized QMS	administrative			internal
			Q4b:	Development of a plan aimed at new technology implementation in service delivery processes	administrative			internal
			Q4c:	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)	administrative			Internal and external

Gaps and Action Plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	2-3	Lack of a focal point in charge of service delivery Only informal, ad hoc trainings Absence of a customer oriented work mindset Staff involved only on ad hoc basis		Appoint a focal point with clear responsibilities and sufficient empowerment to fulfill them	administrative			internal
				Training workshop for the staff focusing on service delivery performance	administrative and technical			internal
				Integrate formal process for staff inputs into service/product delivery process	administrative			internal
				Accordingly revised job descriptions in the work contracts	administrative			internal
				Incentivize staff contributions for establishment of new SLAs or improvement of existing SLAs	administrative			internal
				Maintain an open dialog for staff suggestions (meetings on a monthly basis)	administrative			internal

Action Plan Croatia

Gaps and Action Plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	**4**	Room for improvement of communication to the stakeholders	1.1.	Annual formal meeting or workshop for present and potential stakeholders	administrative	Director general (DG)	Summer 2017	External: conference room Refreshment Internal resources
			1.2.	Update user data base	tehnical	Client service department	April 2017	internal
			1.3.	Additional marketing activities - exhibitions, showing examples of new products on web	administrative	Client service department	2017	internal

Gaps and Action Plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	4	Users are consulted to facilitate development of products and services	2.1.	Identify priority stakeholders and document their special needs to improve user designed products	technical	heads	April 2017	internal
			2.2.	Annual formal meeting or workshop for present and potential stakeholders to show possibilities for user designed products	administrative	DG & heads	Summer 2017	External: conference room Refreshment Internal resources

Gaps and Action Plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	3	Measures are used to assess the accuracy quality and effectiveness of service delivery based on user requirements The measures are defined in the SLA	3.1.	Identify special indicators – verification scores for priority stakeholders	**Technical**	Head of department	March 2017	internal
			3.2.	Introduce scientifically based methodology for introducing the appropriate verification process on daily bases	Technical	Head of department	December 2017	internal
			3.3.	Start verification process on daily bases to produce user defined indicators	technical	Head of department	December 2017	internal

Gaps and Action Plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	3 to 4	A QMS exists to cover all service delivery processes and compliance is monitored. Some action are taken to improve processes.	4.1.	Incorporate processes into QMS system, write or update user internal work instruction documents	administrative	Heads of departments	October 2017	Internal External for auditing

Gaps and Action Plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	3	Regular communication and training, which is based on available materials, takes place for all staff and management.	5.1.	Organize staff training in regards to service delivery and communication skills	administrative	Head of department	Summer 2017	internal

Action Plan Kosovo (UNSCR 1244/99)

Gaps and Action Plan regarding Element 1: Evaluating user needs and decisions - KOSOVA

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	2-3	MoU not in place with all users Incomplete feedback Regular communication mechanism Lack of information and training for most users. Absence of Defining and communication with the focal point Lack of a comprehensive register of communication	1.1	Identify existing and potential users and their updated needs	Administrative	director		Internal
			1.2	Reach out, meet with the potential users. Sign/update contract and new /MoU	Administrative		Before 01.11.2016	Internal
			1.3	Update the user database	Administrative			Internal
			1.2.1	Organize stakeholder workshops on a regular basis (yearly or more often if required) to discuss specific needs	Administrative		06.02.2017 – first workshop	Internal &External
			1.2.2	Dedicated workshops covering the social-economic benefits of available SHS services	Administrative		06.02.2017 – first workshop	Internal &External
			1.3.1	Participation in public exhibitions/Marketing activities/ User survey/	Administrative		23.03.2017	Internal &External
			3.2	Organize trainings with users that need it	Administrative		The second part of 2017	Internal &External
			3.3	Focal point nomination for communication and regular meetings with them.	Administrative		the first part of 2017	Internal
			3.4	Feedback/documentation log	Administrative			Internal
			3.5	Proactively engage users and facilitate communication	Administrative			Internal/External

Gaps and action plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	3-4	Services and products are not recorded for all users No well-defined mechanism of service deliverance / quality assurance	2.1.1	Individual approach to each user to the services provided				
			2.1.2	Define the proper mechanisms to realize it				
			2.1.3	Implement the specific mechanism for efficient communication, especially feedback on delivered products	Combined			

Gaps and Action Plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	2-3	Delivered products are not properly verified/evaluated Feedback is not always incorporated into the delivered products and services User requested verifications Lack of mechanism for output verification	3.1.1	Develop/implement a verification mechanism incorporating user feedback and tailored needs				Internal
			3.1.2	Include verification measures				Internal
			3.1.3	Annual (or as often as requested)evaluation/verification reports of the delivered products				Internal
			3.1.4	Based on the reports, improve/update the SLA and acknowledge persisting limitations				Internal
			3.1.5	Training on evaluation/verification processes				External
			3.1.6	Defining, explaining and agreeing on existing limitation with the end user				

Gaps and Action Plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	2	Missing QMS No existing plan on implementing the new technologies Users are informed of changes in delivery process on ad hoc basis	4.1.1	Implement a standardized QMS for most of delivered services				
			4.1.2	QMS inclusion in the updated SLAs				
			4.1.3	Development of a plan aimed at new technology implementation in service delivery processes			During 2017/2018	
			4.1.4	Setting up a formal communication process with well-defined timelines for informing stakeholders				
			4.1.5	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)			Every 6 months or more often as needed (2017)	

Gaps and Action Plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	2-3	Lack of a focal point in charge of service delivery Only informal, ad hoc trainings Absence of a customer oriented work mindset Staff involved only on ad hoc basis	5.1.1	Appoint a focal point with clear responsibilities and sufficient empowerment to fulfill them				
			5.1.2	Training workshop for the staff focusing on service delivery performance			as necessary during the whole year 2017	Internal
			5.1.3	Revised job descriptions in the work contracts with detail				
			5.1.4	Incentivize staff contributions for establishment of new SLAs or improvement of existing SLAs				
			5.1.5	Maintain an open dialog for staff suggestions (meetings on a monthly basis)				

Action Plan Moldova

Gaps and Action Plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	2-3	MoU not in place with all users Incomplete feedback Regular communication mechanism Lack of training of some end users Absence of communication focal point Lack of a communication registry	1.1	Identify existing and potential users and their updated needs	**Administrative**			Internal
			1.2	Reach out, meet with the potential users. Sign/update contract/MoU	**Administrative**		Before 01.03.2016	Internal
			1.3	Update the user database	**Administrative**			Internal
			1.2.1	Organize stakeholder workshops on a regular basis (yearly or more often if required) to discuss specific needs	**Administrative**		01.02.2017 – first workshop	Internal&External
			1.2.2	Dedicated workshops covering the social-economic benefits of available SHS services	**Administrative**		01.02.2017 – first workshop	Internal&External
			1.3.1	Participation in public exhibitions/Marketing activities/ User survey/	**Administrative**			Internal&External
			3.2	Organize trainings with users that need it	**Administrative**			Internal&External
			3.3	Focal point nomination for communication	**Administrative**			Internal
			3.4	Feedback/documentation log	**Administrative**			Internal
			3.5	Proactively engage users and facilitate communication	**Administrative**			Internal/External

Gaps and Action Plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	3-4	Services and products are not recorded for all users No well-defined mechanism of service deliverance / quality assurance	2.1.1	Individual approach to each user to tailor the services provided	Administrative/ Technical			Internal
			2.1.2	Define the proper mechanisms	Administrative			Internal
			2.1.3	Implement the specific mechanism for efficient communication, especially feedback on delivered products	Administrative/Technical			Internal/External

Gaps and action plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	2-3	Delivered products are not properly verified/evaluated Feedback is not always incorporated into the delivered products and services User requested verifications Lack of mechanism for output verification	3.1.1	Develop/implement a verification mechanism incorporating user feedback and tailored needs	Administrative			Internal
			3.1.2	Include verification measures into SLAs	Administrative			Internal
			3.1.3	Annual (or as often as requested) evaluation/verification reports of the delivered products	Administrative			Internal
			3.1.4	Based on the reports, improve/update the SLA and acknowledge persisting limitations	Administrative			Internal
			3.1.5	Training on evaluation/verification processes	Administrative/ Technical			Internal/External
			3.1.6	Defining, explaining and agreeing on existing limitation with the end user	Administrative			Internal/External

Gaps and action plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	2	Missing QMS No existing plan on implementing the new technologies Users are informed of changes in delivery process on ad hoc basis Only informal communication of service delivery process updates	4.1.1	Implement a standardized QMS for most of delivered services	**Administrative**			Internal/External
			4.1.2	QMS inclusion in the updated SLAs	**Administrative**			Intern
			4.2.1	Development of a plan aimed at new technology implementation in service delivery processes	**Administrative**			Internal/External
			4.3.1	Setting up a formal communication process with well-defined timelines for informing stakeholders	**Administrative**			Internal
			4.3.2	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)	**Administrative**			Internal

Gaps and action plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	2-3	Lack of a focal point in charge of service delivery Only informal, ad hoc trainings Absence of a customer oriented work mindset Staff involved only on ad hoc basis	5.1.1	Appoint a focal point with clear responsibilities and sufficient empowerment to fulfill them	Administrative			Internal
			5.1.2	Training workshop for the staff focusing on service delivery performance	Technical			Internal/External
			5.1.3	Integrate formal process for staff inputs into service/product delivery process	Administrative			Internal
			5.1.4	Accordingly revised job descriptions in the work contracts	Administrative			Internal
			5.1.5	Incentivize staff contributions for establishment of new SLAs or improvement of existing SLAs	Administrative			Internal
			5.1.6	Maintain an open dialog for staff suggestions (meetings on a monthly basis)	Administrative			Internal

Action Plan Montenegro

Gaps and action plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	3-4	Relations with users Relations with media Not all users perform survey Better connection between user feedback and taken action	1.1	Establish MoU, CSA, SLA with all users	Administrative	Director/ Deputy	End of 2020	Internal+external
			1.2	Reviwed relations with media. Reviewed contracts and establish new.	Administrative	Director/ Deputy	End of 2018	Internal+external
			1.3	Establish round table and workshop	Administrative	Head of DIIC	During 2017,2018	Internal+external
			1.4	Motivate all users to perform survey with face to face contact	Administrative	Head of DIIC	June 2017 June 2018	Internal
			1.5	Update procedure for action after received feedback	Administrative	Head of DIIC	End of 2017,2018	Internal

Gaps and Action Plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	2-4	Not all users and services documented Not all users proper informed	2.1	Update QMS documentation	Administrative	Head of DIIC	End 2018	Internal
			2.2	Define proper mechanism for informing all stakeholders	Administrative	Director/ Deputy	End 2018	Internal
			2.3	Implement the specific mechanism for efficient communication, especially feedback on delivered products	Administrative	Director/ Deputy	End 2018	Internal

Gaps and action plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	3-4	Delivered products are not properly verified/evaluated Feedback is not always User requested verification	3.1	Develop/Implement a verification mechanism incorporating feedback and tailored needs	Administrative	Head of Forecast	End of 2019	Internal
			3.2	Include verification measurements into SLA	Administrative	Director/ Deputy	During 2018	Internal
			3.3	Publishing of annual verification reports of the delivered products	Technical	Head of DIIC	June 2018	Internal
			3.4	Based on the reports improve/update in the SLA	Administrative	Director/ Deputy	End of 2018	Internal
			3.5	Training on evaluation/verification processes	Administrative	Head of DIIC	During 2017 and 2018	Internal/External

Gaps and action plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	3-4	Need better apply QMS tools Need to improve communication with stakeholders	4.1	Use QMS tools	Administrative	Director and deputy	During 2017	Internal
			4.2	Action plan for implementing science and technology developments	Administrative	Director/ deputy Head of NWP	End of 2017	Internal
			4.3	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)	Administrative	Director, Deputy Director,	During 2017	Internal

Gaps and action plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery		No regular training, only informal Absence of a customer oriented work mindset Staff involved only ad hoc basis	5.1	Appoint a focal point with clear responsibilities and sufficient empowerment	Administrative	Director, Deputy Director	March2018	Internal
			5.2	Training workshop for the staff focusing on service delivery performance	Administrative	Head of DIIC	End of 2018	Internal
			5.3	According revised job description in the work contracts	Administrative	Director, Deputy Director	End of 2018	Internal
			5.4	Maintain and open dialog for staff suggestions (meetings on a quarterly basis)	Administrative	Head of DIIC	End of 2018	Internal

* Head of DIIC , Head of Department for Information and International cooperation

Action Plan Romania

Gaps and action plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	**3-5**	MoU/CSA/SLA not in place with all users Some users' needs are not totally understood and recorded	1.1	Identify new potential users and their needs	Administrative	-Head of the Department of Service Delivery -Head of the National Meteorological Forecasting Center -Head of the National Hydrological Forecasting Center	2017	Internal
			1.2	Reach out, meet with he potential users. Sign/update contract/MoU	Administrative	-"-	2017	Internal
			1.3	Update the user database	Administrative	-"-	2017	Internal
			1.4	Organize stakeholder workshops on a regular basis (yearly or more often if required) to discuss specific needs	Administrative	-"- -NMA and NIHWM directors	01.06.2017 – first workshop	Internal/External
			1.5	Participation in public exhibitions/Marketing activities/ User survey/	Administrative	-"- -NMA and NIHWM directors		Internal/External

Gaps and action plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	3-5	All services and products are not totally documented. Not all the beneficiaries can access the best way of communication for the changes in service delivery.	2.1	Documentation of all potential services and products	Technical	-Head of the Department of Service Delivery	2017	Internal
			2.2	Looking for new tools in order to facilitate access to new products and services	Technical	IT Department	2017	Internal/External

Gaps and action plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	4	Feedback is not always incorporated into the delivered products and services	3.1	Include verification measures into SLAs	Administrative/ Technical	-Head of the Department of Service Delivery	2017	Internal
			3.2	Defining, explaining and agreeing on existing limitation with the end user	Administrative/ Technical	-Head of the Department of Service Delivery -Head of the National Meteorological Forecasting Center -Head of the National Hydrological Forecasting Center - Head of the Modeling Department - Head of the IT Department	2017	Internal

Gaps and action plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	3-4	The modernization of service delivery is in progress	4.1	Future planning for new technologies implementation in accordance with financial possibilities	Administrative	- Head of the Modeling Department - Head of the IT Department	2017	Internal/External
			4.2	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)	Administrative	-NMA and NIHWM directors	2017	Internal/External

Gaps and action plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery	3-4	Not all the members of staff are fully aware of the importance of service delivery Formal training is provided in accordance with the financial available sources	5.1	Training the staff about focusing on service delivery performance	Administrative/ Technical	-NMA and NIHWM directors	2017	Internal
			5.2	Looking for new financial internal/external sources for organizing formal training	Administrative/ Technical	-NMA and NIHWM directors	2017	Internal/External

Action Plan Serbia

Gaps and action plan regarding Element 1: Evaluating user needs and decisions

Strategy element	Current level	Gaps	Act-ID	Action	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 1: Evaluating user needs and decisions	3-4	Relations with users Relations with media Not all users perform survey Better connection between user feedback and taken action	1.1	Establish MoU, CSA, SLA with all users	Administrative	Ass. Director	End of 2018	Internal
			1.2	Reviwed relations with media. Reviewed contracts and establish new.	Administrative	Ass. Director	End of 2017	Internal
			1.3	Establish round table and workshop	Administrative	HoF	During 2017	Internal/external
			1.4	Motivate all users to perform survey with face to face contact	Administrative		July 2017	Internal
			1.5	Update procedure for action after received feedback	Administrative		End of 2017	Internal

Gaps and action plan regarding Element 2: Linking service development and delivery to user needs

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 2: Linking service development and delivery to user needs	2-4	Not all users and services documented Not all users proper informed	2.1	Update QMS documentation	Administrative	HoF,	End 2017	Internal
			2.2.	Define proper mechanism for informing all stakeholders	Administrative	Ass. Director	End 2017	Internal
			3.3.	Implement the specific mechanism for efficient communication, especially feedback on delivered products	Administrative	Ass. Director	End 2018	Internal

Gaps and action plan regarding Element 3: Evaluating and monitoring service performance and outcomes

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 3: Evaluating and monitoring service performance and outcomes	3-4	Delivered products are not properly verified/evaluated Feedback is not always User requested verification	3.1	Develop/Implement a verification mechanism incorporating feedback and tailored needs	Administrative	Head of Forecast	End of 2017	Internal
			3.2	Include verification measurements into SLA	Administrative	Ass.Director	During 2017	Internal
			3.3	Publishing of annual verification reports of the delivered products	Technical	HoF	June 2017	Internal
			3.4	Based on the reports improve/update in the SLA	Administrative	Ass. Director	End of 2017	Internal
			3.5	Training on evaluation/verification processes	Administrative	HoF	During 2017 and 2018	Internal/External

Gaps and action plan regarding Element 4: Sustaining Improved service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 4: Sustaining Improved service delivery Strategy element	3-4	Need better apply QMS tools Need to improve communication with stakeholders	4.1	Use QMS tools	Administrative	Ass. Director and Hof,	During 2017	Internal
			4.2	Action plan for implementing science and technology developments	Administrative	Ass. Director, Head of NWP	End of 2017	Internal
			4.3	Intensification of stakeholder relationship (bilateral meetings, workshops, surveys)	Administrative	Ass. Director, HoF	During 2017	Internal

Gaps and action plan regarding Element 5: Developing skills needed to sustain service delivery

Strategy element	Current level	Gaps	Act-ID	Actions	Administrative or Technical	Lead manager	Timetable for actions to be complete	Resources
Element 5: Developing skills needed to sustain service delivery		No regular training, only informal Absence of a customer oriented work mindset Staff involved only ad hoc basis	5.1	Appoint a focal point with clear responsibilities and sufficient empowerment	Administrative	Ass.Director	March2017	Internal
			5.2	Training workshop for the staff focusing on service delivery performance	Administrative	HoF	End of 2017	Internal
			5.3	According revised job description in the work contracts	Administrative	Ass. Director	End of 2017	Internal
			5.4	Maintain and open dialog for staff suggestions (meetings on a quarterly basis)	Administrative	HoF	End of 2017	Internal

Concluding Remarks

Briefly summarized, the following recommendations are given to the participating NHMSs in order to enable them to improve their service delivery processes.

- Increase the interaction with the stakeholders, users and customers;
- Revise, establish or update MoU, CSA, SLA or contracts at least with key users;
- Provide more accurate weather forecasts and warnings at higher spatial and temporal resolution according to the needs and requirements of the major stakeholders;
- Collect and encourage user feedback in a more formal way;
- Tailor products and services to requirements of users;
- Formalize internal processes and responsibilities regarding service delivery;
- Improve dissemination of products;
- Start verification processes or refine them if already in place; and
- Establish a service-oriented culture, i.e*. act more proactively than reactively.*

The assessment and the formulation of the action plans were carried out as an exercise during the workshop. Even though those documents do not have an official status, they shall serve as a baseline for the implementation of the WMO Strategy in the individual NHMSs.

Acknowledgement

The authors of the workshop report thank all contributors for their close cooperation and support.

Annex 1: Workshop Programme

WORLD METEOROLOGICAL ORGANIZATION WDS/SDD/SHW-SD-SEE/Doc.1

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REGIONAL STAKEHOLDERS WORKSHOP TO IMPLEMENT THE WMO STRATEGY FOR SERVICE DELIVERY FOR NMHSs IN SOUTH-EAST EUROPE

TIRANA, ALBANIA, 17-21 OCTOBER 2016 ORIGINAL: ENGLISH

PROGRAMME

	DAY 1 (WORKING HOURS: 0900-1700)		
TIME(S):	**TITLE(S) / SUBJECT(S):**	**PRESENTER(S):**	**TIME(S):**
08:00-0900	REGISTRATION OF PARTICIPANTS		
WELCOME AND INTRODUCTION			
0900-1200	1. Welcome address and introduction to mission 2. Recall of the 2015 Service Delivery Workshop in Albania (in collaboration with the World Bank) 3. Review of outcomes and activities of the 2015 Workshop	Mr Fatos HOXAJ, Director, Institute of Geosciences, Energy, Water and Environment and PR of Albania with WMO/ Ms Haleh Kootval, WMO/ Ms. Tahseen Sayed, Country Manager, World Bank Group	0900-1200
Lunch			
1300-1700	4. Stakeholders presentations of the activities resulting from the 2015 Workshop 5. Conclusions of the review		1300-1700

	DAY 2 (WORKING HOURS: 0900-1700)		
0900-1200	1. Discussion and agreement on: • Mission objectives • Mission scope • Sectors to be studied • Responsibilities of each party • Anticipated outcome 2. Introduction by the participating NMHSs, short presentations	Ms Haleh Kootval (WMO) Mr Andreas Schaffhauser (ZAMG)/ Mr Georg Pistotnik (ZAMG) / All participants	0900-1200
	3. Joint assessment with NMHSs, WMO and ZAMG of each NMHS's current service delivery level in the Service Delivery Progress Model (Annex 1 of the WMO Strategy for Service Delivery). The assessment will include: • Joint assessment with NMHSs of their current user engagement processes • Joint assessment with NMHSs of their current service design and development processes • Joint assessment with NMHSs of their current production and delivery processes • Joint assessment with NMHSs of their current evaluation and Monitoring processes		
Lunch			
1300-1700	This activity will continue from the morning session. Joint assessment with NMHSs, WMO and ZAMG of each NMHS's current service delivery level in the Service Delivery Progress Model (Annex 1 of the WMO Strategy for Service Delivery). The assessment will include: • Joint assessment with NMHSs of their current user engagement processes • Joint assessment with NMHSs of their current service design and development processes • Joint assessment with NMHSs of their current production and delivery processes • Joint assessment with NMHSs of their current evaluation and Monitoring processes	Ms Haleh Kootval (WMO)/ Mr Andreas Schaffhauser (ZAMG)/ Mr Georg Pistotnik (ZAMG)/ All participants	1300-1700

DAY 3 (WORKING HOURS: 0900-1700)			
0900-1200	This activity will continue from Day 2: Joint assessment with NMHSs, WMO and ZAMG of each NMHS's current service delivery level in the Service Delivery Progress Model (Annex 1 of the WMO Strategy for Service Delivery). The assessment will include: ● Joint assessment with NMHSs of their current user engagement processes ● Joint assessment with NMHSs of their current service design and development processes ● Joint assessment with NMHSs of their current production and delivery processes ● Joint assessment with NMHSs of their current evaluation and Monitoring processes	Ms Haleh Kootval (WMO)/ Mr Andreas Schaffhauser (ZAMG)/ Mr Georg Pistotnik (ZAMG)/ All participants	0900-1200
Lunch			
1300-1700	Provide guidance to NMHSs on how to organize and run stakeholder workshops	● WMO ● ZAMG	1300-1700
	NMHss **not accompanied by stakeholders** to prepare a list of the most important stakeholders in their respective countries and list the requirements from each stakeholder (to be prepared in advance in consultation with their national stakeholders) Presentations by NMHSs on their respective important stakeholders and their activities; ● how the sector is impacted by weather; ● how they get information and services from NMHSs; and what improvements in NMHSs services they require.	● WMO ● ZAMG ● NMHSs	

DAY 4 (WORKING HOURS: 0900-1700)			
0900-1200	This activity will continue from Day 3: Presentations by stakeholders **(in the case of those NMHSs that are accompanied by their stakeholders)** on their activities; ● how the sector is impacted by weather; ● how they get information and services from NMHSs; and ● what improvements in NMHSs services they require.	● NMHSs ● WMO ● ZAMG	0900-1200
Lunch			
1300-1700	Development of an Action Plan including level of resources, milestones, and types of actions for short, medium and long term, to start improving the Service Delivery level	● NMHSs ● WMO ● ZAMG	1300-1700
DAY 5 (WORKING HOURS: 0900-1700)			
0900-1200	Development of an Action Plan including level of resources, milestones, and types of actions for short, medium and long term, to start improving the Service Delivery level	● NMHSs ● WMO ● ZAMG	0900-1200
Lunch			
1300-1700	Development of an Action Plan including level of resources, milestones, and types of actions for short, medium and long term, to start improving the Service Delivery level	● NMHSs ● WMO ● ZAMG	1300-1700
	Closure of the workshop		

ZAMG: The Central Institute for Meteorology and Geodynamics, Austria

WMO: World Meteorological Organization

Annex 2: Participants List

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
	ALBANIA	Assoc. Prof. Fatos Hoxhaj Director Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana E-mail: Hoxhajf@gmail.com
		Professor Petrit ZORBA Institute of GeoSciences, Energy, Water and Environment Head of the Department of Climate and Environment Rr. Don Bosko Nr.60 Tirana Albania Email: petrit.zorba@gmail.com
		Mr Stavri LAMI Institute of GeoSciences, Energy, Water and Environment Head of the Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirane Albania

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Mr Klodian Zaimi Polytechnic University Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Email: klodianzaimi@yahoo.com
		Ms Amparo Samper Hiraldo CIM International Hydrologist Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: amparosamper@hotmail.com
		Ms Liljana LATA Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: lataliljana@gmail.com

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Mr Metodi Marku Supervisor National Centre for Forecastand Monitoring of Natural Risks Institute of Geosciences, Energy, Water & Environnement Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: metodi.marku@gmail.com
		Ms Elona ABAZI Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: elonaabazi@yahoo.com
		Ms Entela VAKO Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: entelavako@gmail.com

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Ms Orjeta Jaupaj Institute of GeoSciences, Energy, Water and Environment Department of Water Economy and Renewable Energy Rr. Don Bosko Nr.60 Tirana Albania Email: orijaupaj@gmail.com
		Ms Albana Hasimi Institute of GeoSciences, Energy, Water and Environment Department of Climate and Environment Rr. Don Bosko Nr.60 Tirana Albania Email: albahasimi@gmail.com
		Ms Elvin Como Institute of GeoSciences, Energy, Water and Environment Department of Climate and Environment Rr. Don Bosko Nr.60 Tirana Albania Email: elvincomo@gmail.com

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Mr Jakup Hoxhaj Institute of GeoSciences, Energy, Water and Environment Department of Climate and Environment Rr. Don Bosko Nr.60 Tirana Albania Email: jakupjh2001@yahoo.com
		Ms Anira Gjoni Institute of GeoSciences, Energy, Water and Environment Department of Climate and Environment Rr. Don Bosko Nr.60 Tirana Albania Email: gjoni.anira@yahoo.com
	ALBCONTROL	Arben Sancolli Training Expert Technical Division Aeroport “Nene Tereza” PO Box 8172 Rinas, Tirana Tel: +355692088891 Email: asancolli@albcontrol.al

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
	BOSNIA & HERZEGOVINA	Mr Almir Bejedic Director Federal Hydrometeorological Institute Bardakcise 12 7100 Sarajevo Tel: +387 332 76716 Fax: +387 332 76701 Email: almir.bijedic@fmhzbih.gov.ga; almir.bijedic@yahoo.com
		Mr Bakir Krajinovic Expert associate Federal Hydrometeorological Institute Bardakcise 12 7100 Sarajevo Tel: +387 332 76716 Fax: +387 332 76701 Email: bakir.krajinovic@fhmzbih.gov.ba

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
	BOSNIA & HERZEGOVINA (Republic of Srpska)	Mr Igor Kovacic Assistant Director for Meteorology Republic Hydrometeorological Service Put Banjalukog Odreba BB 78000 Banja Luka Tel: +387 514 33523 Email: i.kovacic@rhmzrs.com
		Mrs Branka Klaric Spasovdanska 3 71123 Istocno Sarajevo Tel: +387 57 344258 Fax: +387 57 344 259 Email: branka.klaric@rucz.mup.vladars.net
	BULGARIA	Dr Anastasiya Stoycheva (Ms) Chief of the Meteorological Forecasting Office National Institute of Meteorology an Hydrology 66, Tarigradsko chausse 1784, Sofia Tel : +359 887 942 024 Email: Anastassia.Stoycheva@meteo.bg

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Ms Maria Milcheva Yanakieva National Radio 16, Krum Popov str 1784, Sofia Tel: +359 884 362 891 Email: mari30@abv.bg
	CROATIA	Dr Natasa Strelec Mahovic (Ms) Director Meteorological and Hydrological Service Gric 3 HR – 10000 Zagreb Tel: +385 91 4564 772 Fax: +385 1 4851 901 Email: strelec@cirus.dhz.hr
		Mr Borivoj Terek Meteorological and Hydrological Service Gric 3 HR – 10000 Zagreb Tel: +385 91 4564 225 Fax: +385 1 4851 901 Email: terek@cirus.dhz.hr

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Dr Vlasta Tutis (Ms) Assistant Director Weather Analysis and Forecasting Division Meteorological and Hydrological Service Gric 3 HR – 10000 Zagreb Tel: +385 91 4565 768 Fax: +385 1 4851 901 Email: tutis@cirus.dhz.hr
	KOSOVO (UNSCR 1244/99) (as per UNSCR 1244/99)	Mr Hasan Hasani Hydrometeorological Institute of Kosovo (UNSCR 1244/99) Insitituti Hidro-Meteorologjik I Kosovës (IHMK) Bill Clinton Street nr 86 10.000 Pristina Kosovo (UNSCR 1244/99) Tel: +377444477726 Email: hasan.hasani@rks-gov.net

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Bashkim Kastrai Expert Hydrologist Ministry of Environment and Spatial Planning Instituti Hidrometeorologjik I Kosovës (IHMK) Bill Clinton Street nr 86 10.000 Pristina Kosovo (UNSCR 1244/99) Tel: +37744256552 Email: bashkin.kastrati@rks-gov.net; bashkimkastrati@gmail.com
	MOLDOVA	Mr Victor Negru Specialist coordinator in Marketing State Hydrometeorological Service 134 Grenoble Str 2072 Chisinau Tel: +373 227 73622 Fax: +373 227 73622 Email: vic.negru@gmail.com

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Mr Cazac Valeriu Chief of Hydrology Department State Hydrometeorological Service 134 Grenoble Str 2072 Chisinau Tel: +373 227 73622 Fax: +373 227 73622 Email: valeriu.cazac@meteo.gov.md
	MONTENEGRO	Mr Angel Marcev Chief Group for Numerical Modeling IV Proleterske 19 81000 Podgorica Tel: +382 206 5518 Fax: +382 206 55 197 Email: angel.marcev@meteo.co.me

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Ms Zorica Markovic Senior Adviser Directorate for Emergency Situations Ministry of Internal Affairs Str. Jovana Tomasevica NN 81000 Podgorica Tel: +382 204 81815 Fax: +382 024 81833 Email: zorica.markovic@mup.gov.me
	ROMANIA	Dr Florinela Georgescu (Ms) Executive Director National Meteorological Administration Sos Bucuresti- Ploiesti, No 97, 013686, Bucharest Tel: +40 21 316 37 32 Fax: +40 21 316 31 43 Email: florinela.georgescu@meteoromania.ro

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Ms Elena Anghel Hydrologist Forecaster National Institute of Hydrology and Water Management Sos Bucuresti- Ploiesti, No 97, 013686, Bucharest Tel: +40 21 317 99 94 Fax: +40 21 317 99 95 Email: elena.anghel@hidro.ro
	SERBIA	Mr Goran Mihajlovic Meteorologist Head National Center for Hydrometeorological system for early warnings and alerts Republic Hydrometeorological Service Kneza Viseslava 66 11000 Belgrade Tel: +381 6483 85274 Fax: +381 1130 50847 Email: goran.mihajlovic@hidmet.gov.rs

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
	The Former Yugoslav Republic of THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	Mr Dusko Petrovski Head Department for Operations and Coordination Crisis Management Center Dimce Mipcev No. 9 P. Fax 372 1000 Skopje Tel: +389 232 49101 Fax: +389 231 36226 Email: dusko.petrovski@cuk.gov.mk
		Mr Boris Sekirarski Weather Forecast Department Hydrometeorological Service Skupi 28 1000 Skopje Tel: +389 230 97105 Fax: +389 230 97118 Email: bsekirarski@yahoo.com
	GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit	Mr Gerrit Bodenbender Project Manager Flood Risk Management Western Balkans Tirana, Albania Tel: +355697033521 Email: gerrit.bodenbender@giz.de

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Ms Merita Mansaku-Meksi Deputy Project Manager Regional Coordinator, Albania and Kosovo (UNSCR 1244/99) Climate Change Adaptation in Flood Risk Management Western Balkans Ruga “Skënderbej”, P.6, Sh.2, Ap. 20 P.O. Box 2391 Tirana, Albania Tel: +35542273639 Mob: +355694030510 Email: merita.meksi@giz.de
	Zentralanstalt für Meteorologie und Geodynamik (ZAMG)	Mr Andreas Schaffhauser Head Customer Service Division Hohe Warte 38 Vienna, Austria Tel: +43 1 36026 2301 Fax: +43 1 369 1233 Email: andreas.schaffhauser@zamg.ac.at

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
		Mr Georg Pistotnik Customer Service Hohe Warte 38 Vienna, Austria Tel: +43 1 36026 2238 Fax: +43 1 36026 72 Email: georg.pistotnik@zamg.ac.at
	World Meteorological Organization (WMO)	Ms Haleh Kootval Chief Service Delivery Division Weather and Disaster Risk Reduction Services Department 7bis avenue de la Paix CH 1211 Geneva 2 Tel: +41-22-730 8333 Email: hkootval@wmo.int
		Ms Catherine Bezzola Service Delivery Division Weather and Disaster Risk Reduction Services Department 7bis avenue de la Paix CH 1211 Geneva 2 Tel: +41-22-730 8587 Email: cbezzola@wmo.int

	COUNTRY/ ORGANIZATION	NAME / position/ contact details
	World Bank Group	Mr Daniel Kull Humanitarian-Development Attaché Senior Disaster Risk Management Specialist Geneva T +41 (0)22 748 1015 M +1 202 677 8892 F +41 (0)22 748 1030 Email : dkull@worldbankgroup.org
		Ms. Tahseen Sayed Country Manager Albania