

RA VI (Europe) Survey (2012/2013)

NMHS: Institutional Arrangements Challenges and Priorities



RA VI Questionnaire on Institutional Arrangements for NM(H)Ss and identification of future priorities

Introduction

This Questionnaire has been prepared by the RA VI Task Team on Strategic and Operating Plan (TT/SPAP) which reports to the RA VI Management Group. The main objective of the Questionnaire is to collect basic information about the current institutional arrangements of hydrometeorological services in RA VI, as well as, the views of the RA VI Members regarding the most important challenges and priorities. The information collected will help the Management Group and Secretariat to prepare a detailed RA VI Panorama as a background material for the discussions during the XVI Session of RA VI (September 2013, Helsinki, Finland).

The Survey was conducted on-line during the period December 2012 – March 2013 (with some individual responses collected after the deadline). The total number of responses received is 47 from 46 RA VI Members (92% of the total number of Members. Two separate responses have been received and included in the survey from Bosnia and Herzegovina due to the fact that there are two separate hydrometeorological services for the two political entities that constitute Bosnia and Herzegovina, Federation of Bosnia and Herzegovina and Republika Srpska (in the survey, the acronyms BiH-FBH, and BiH-ES are used for brevity).

In the survey both acronyms NMS and NM(H)S are used as generic description of a National Meteorological Service or National Hydrometeorological Service.

The Survey has been conducted through a collaborative effort of the RA VI Network of International Advisers (INTAD-6) who contributed significantly to the high rate of response.

Some of the results of the survey should be regarded cautiously due to the fact that some terms and formulation used are not strictly standardized and may include somewhat different interpretation. Nevertheless, the Survey provided very useful information on the current institutional arrangements for the provision of meteorological, hydrological and meteorological services existing in the RA VI Member countries, as well as, on the main issues of concern for the NMSs at the present stage. This information will help the RA VI Session and the future RA VI subsidiary bodies to set up the priorities of the regional activities for the next intersession period.

The questionnaire is still available at:

<https://docs.google.com/a/wmo.int/spreadsheet/embeddedform?formkey=dHZEMVhZUGILWGR5dExER1ppWkRvaEE6MQ>

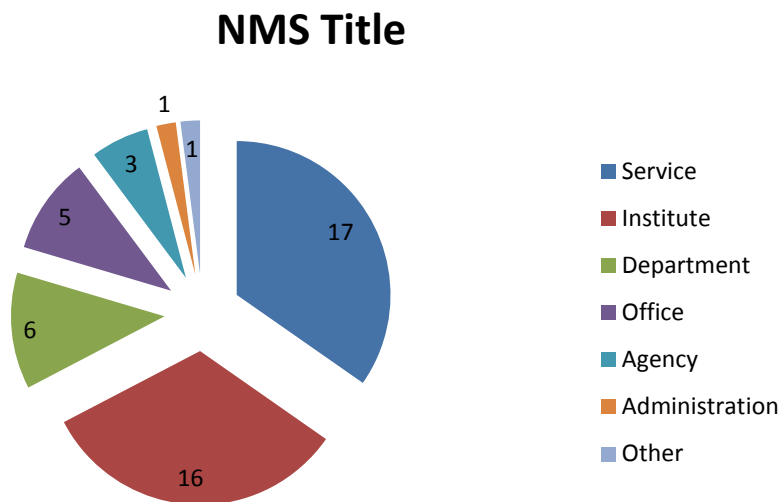
Part I – Institutional Arrangements

The purpose of this part of the survey is to collect basic information about the NMSs of the RA VI Members including the actual position of the NMS in the administration (their parent organizations: Ministry, agency, etc.), as well as, about the role of the NMS in the provision of some basic services.

Q1.1 Exact title of the National Meteorological or Hydrometeorological Service (NM(H)S)

There is a variety of names of the NMSs, the most common being “service” or “institute”.

- Service 17
- Institute 16
- Department 6
- Office 5
- Agency 3
- Administration 1
- Other 1



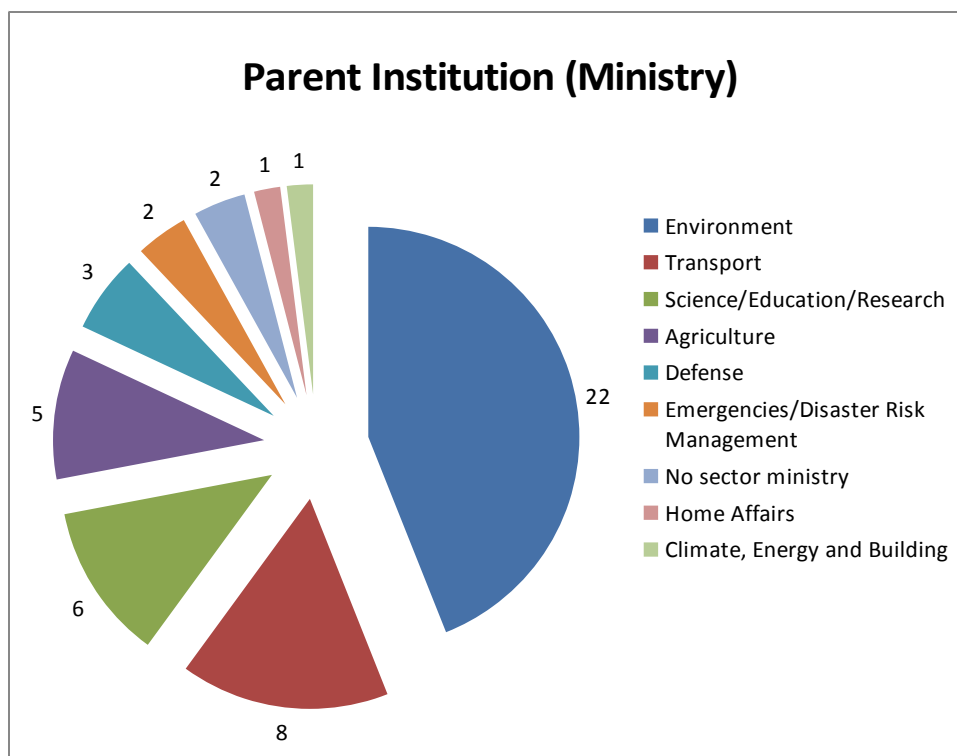
Q1.2 Parent organization

The NMSs in RA VI belong to different parent organizations, mostly sector ministries. The most common case is the Ministry of Environment followed by Ministry of Transport.

Notes: 1) The table below contains information from the 47 responses to the questionnaire complemented with information from other sources for the remaining three RA VI Member countries.

2) The exact title of the parent ministry varies from country to country; here the ministries are denoted as an economic sector.

Sector Ministries	Number of NMSs	Countries
Environment	22	Azerbaijan Belarus Croatia Cyprus Czech Republic Estonia Georgia Iceland Ireland Kazakhstan Latvia Lithuania Montenegro Poland Portugal Republic of Moldova Romania Russian Federation Slovak Republic Slovenia Spain Turkey
Transport	8	Finland France Germany Israel Jordan Lebanon Luxembourg Netherlands, the
Science/Education/Research	6	Albania Austria Belgium Bulgaria Norway United Kingdom
Agriculture	5	BiH-RS Cyprus Hungary Portugal FYR of Macedonia
Defense	3	Greece Italy Syrian Arab Republic
Emergencies/Disaster Risk Management	2	Armenia Ukraine
No sector ministry	2	BiH-FBH Serbia
Home Affairs	1	Switzerland
Climate, Energy and Building	1	Denmark



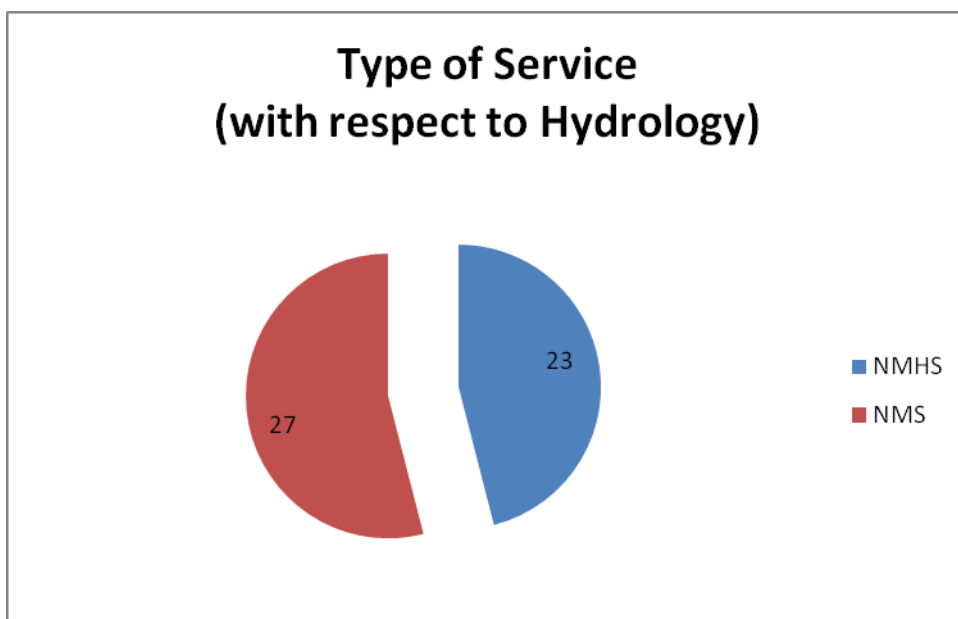
Q1.3 What is the legal status of the NMHS

The vast majority of the NMSs are state/government organizations or public administrative bodies with different degree of autonomy. Only one NMS has a status of public company limited (PLC). Several NMSs have the status of national research institutions. The question of “legal status” should be further studied in connection with the question on the “business model”.

Q1.4 Is the NM(H)S responsible for operational hydrology

Type of Service	Number of countries	Countries
NMS is responsible for operational hydrology (NMHS)	23	Albania Armenia Azerbaijan Belarus BiH-FBH BiH-RS Bulgaria Croatia Czech Republic Estonia Georgia Kazakhstan Latvia Lithuania Montenegro Poland Republic of Moldova Russian Federation Serbia

		Slovak Republic Sweden FYR of Macedonia Ukraine Slovak Republic Slovenia Spain
NMS (not responsible for hydrology)	27	Austria Belgium Cyprus Denmark Finland France Germany Greece Hungary Iceland Ireland Israel Italy Jordan Lebanon Luxembourg Malta Netherlands Norway Portugal Romania Slovenia Spain Switzerland Syrian Arab Republic Turkey United Kingdom



Q1.5 If your answer on the preceding question is "No", please provide the name of the National Hydrological Service

The responses to this question indicate a large variety of institutions responsible for hydrology. In some cases there is shared responsibility between several institutions, thus, defining a single institution as “National Hydrological Service” was not possible. The responses are in the table below:

(Note: WMO maintains a list of National Hydrological Services at:

http://www.wmo.int/pages/members/membership/nhs_en.html

Country	Institution
Austria	Hydrographischer Dienst
BiH-RS	Republic of Srpska, Ministry of agriculture, forestry and water management, Water Agency for Sava river District
Bulgaria	National Institute of Meteorology and Hydrology
Cyprus	Water Development Department, Division of Hydrology and Hydrogeology
Finland	Finnish Environment Institute, SYKE. FMI provides flashflood and sea flooding forecasts as well as providing precipitation observations
France	SCHAPI (Service Central d'Hydrométéorologie et d'Appui à la Prévision d'Inondations), the French national hydrometeorological and flood forecasting center
Germany	Federal Institute of Hydrology (BfG)
Greece	Ministry of Environment, Energy and Climate change
Ireland	The Office of Public Works (OPW) has the main responsibility for coordination of Hydrological activities in Ireland.
Israel	Israel Hydrological Service
Italy	For the State: National Department of Civil Protection (Govern Council), ISPRA (Department of Environment; For the Regions: Environment Protection Regional Agencies (ARPA)
Jordan	Ministry of Irrigation
Luxembourg	Administration de la gestion de l'eau, Service

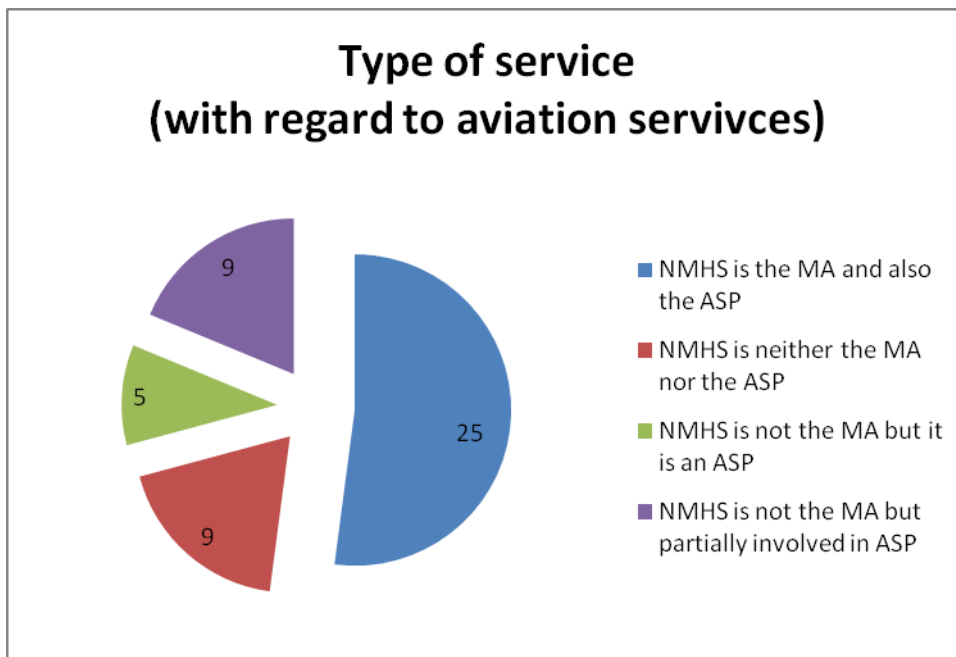
	de la navigation fluviale
Norway	Norwegian Water Resources and Energy Directorate
Portugal	Agência Portuguesa do Ambiente, I.P.
Romania	National Institute of Hydrology and Water Management
Spain	National Directorate for Water
Switzerland	Federal Office for the Environment FOEN
The Netherlands	Rijkswaterstaat
Turkey	Devlet Su İşleri-State Hydrolic Works

Q1.6 Is the NM(H)S responsible for the provision of meteorological service for aviation

This question is intended to find out the role of the NMS in the provision of aeronautical meteorological services (AMS), i.e., whether the NMS has the legal responsibility for the AMS (NMS is the designated meteorological authority as defined in the IACO Annex 3), or it has a role in the service provision under another authority. The results are in the table below:

Type of Service	Number of countries	Countries
NMHS is the Meteorological Authority (as per ICAO Annex 3) and also the service provider for aviation	25	Cyprus Czech Republic Denmark Finland France Germany Greece Iceland Ireland Israel Jordan Latvia Malta Norway Poland Portugal Republic of Belarus Russian Federation Slovak Republic Slovenia Spain Switzerland The Netherlands Turkey
NMHS is neither the Meteorological Authority (as per ICAO Annex 3) nor	9	Albania Armenia Belgium

the service provider for aviation		BiH-FBH BiH-RS Georgia Montenegro FYR of Macedonia Republic of Moldova
NMHS is not the Meteorological Authority (as per ICAO Annex 3) but it is the service provider for aviation	5	Hungary Lithuania Luxembourg Sweden United Kingdom
NMHS is not the Meteorological Authority (as per ICAO Annex 3) but partially involved in service provision for aviation	9	Austria Azerbaijan Bulgaria Croatia Estonia Italy Serbia Romania UKRAINE



Q1.7 In your country, is there a law, decree or other legislative act on meteorology (or hydrometeorology, or similar)

In most Members legislation (legal instrument) regarding the organization of the services or the statute of NMHS exists. However, seven Members report that there is no legal act related to meteorology. It varies from law to decree, statutory instrument, royal pr presidential decree, etc.

However, eight (8) Members indicate the lack of specific legislation relevant to the NMS area of activities. These cases should be studied separately in order to estimate the need for assistance in developing appropriate legal framework.

Legal instruments	Number of NMS	Countries
law	24	Armenia Austria Azerbaijan BiH-FBH BiH-RS Croatia Finland Germany Iceland Luxembourg FYR of Macedonia Montenegro Poland Republic of Belarus Republic of Moldova Serbia Romania Russian Federation Slovak Republic Slovenia Switzerland The Netherlands Turkey
Decree	9	Albania France Georgia Hungary Jordan Norway Portugal Spain Ukraine
None	8	Bulgaria (law but only hydrology) Cyprus Czech Republic Ireland Israel Latvia Malta Sweden
Legislative acts (various)	2	Greece Italy
Royal Executive Order	1	Belgium
Statutory Instrument	3	Estonia Lithuania United Kingdom
Yearly bill of Finance	1	Denmark

Q1.8 Provide the title of the primary legislative act that determines the functions of your Service

The majority of the existing legal instruments are on the meteorological and hydrological services outlining the duties and responsibilities of the NMS. In some case, the role and responsibility if the NMS is defined, fully or partially, in other legislative acts, e.g., law on water, law on emergencies, etc.

Q1.9 Please indicate any other regulatory framework applicable to the functions of your Service

The most common cases include:

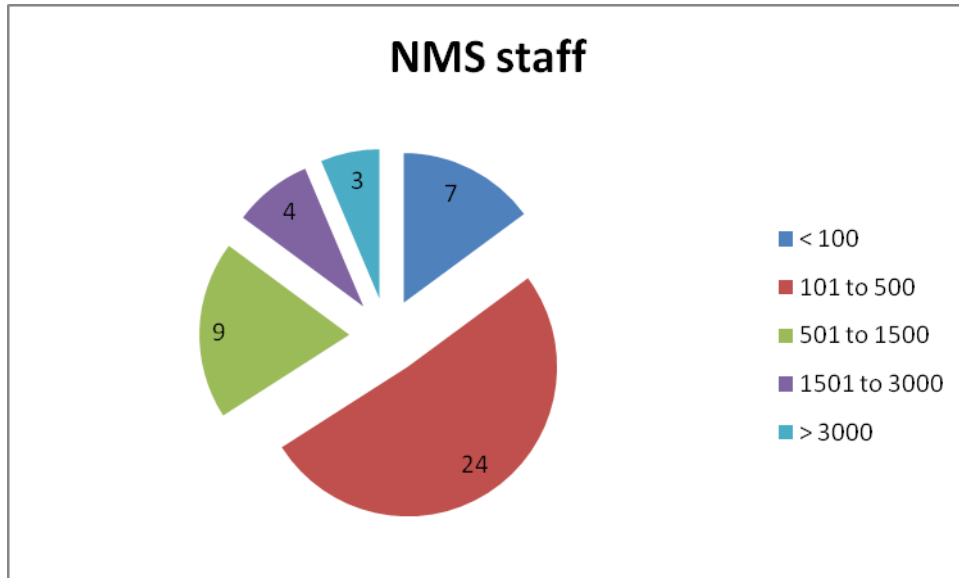
- Service level agreement with civil aviation administration (CAA)
- LoA or MOU with DRM agency concerning the provision of warning information (including information about radiological situation; information for fire rescue)
- Research agreements

One response indicates: “Since we are a governmental organization, we do not have to make any arrangement with other government institutes in the manner of service functions”.

Part II – NM(H)S management and organizational questions

Q2.1 NM(H)S Staff: what is the total staff of your organization (full time equivalent)

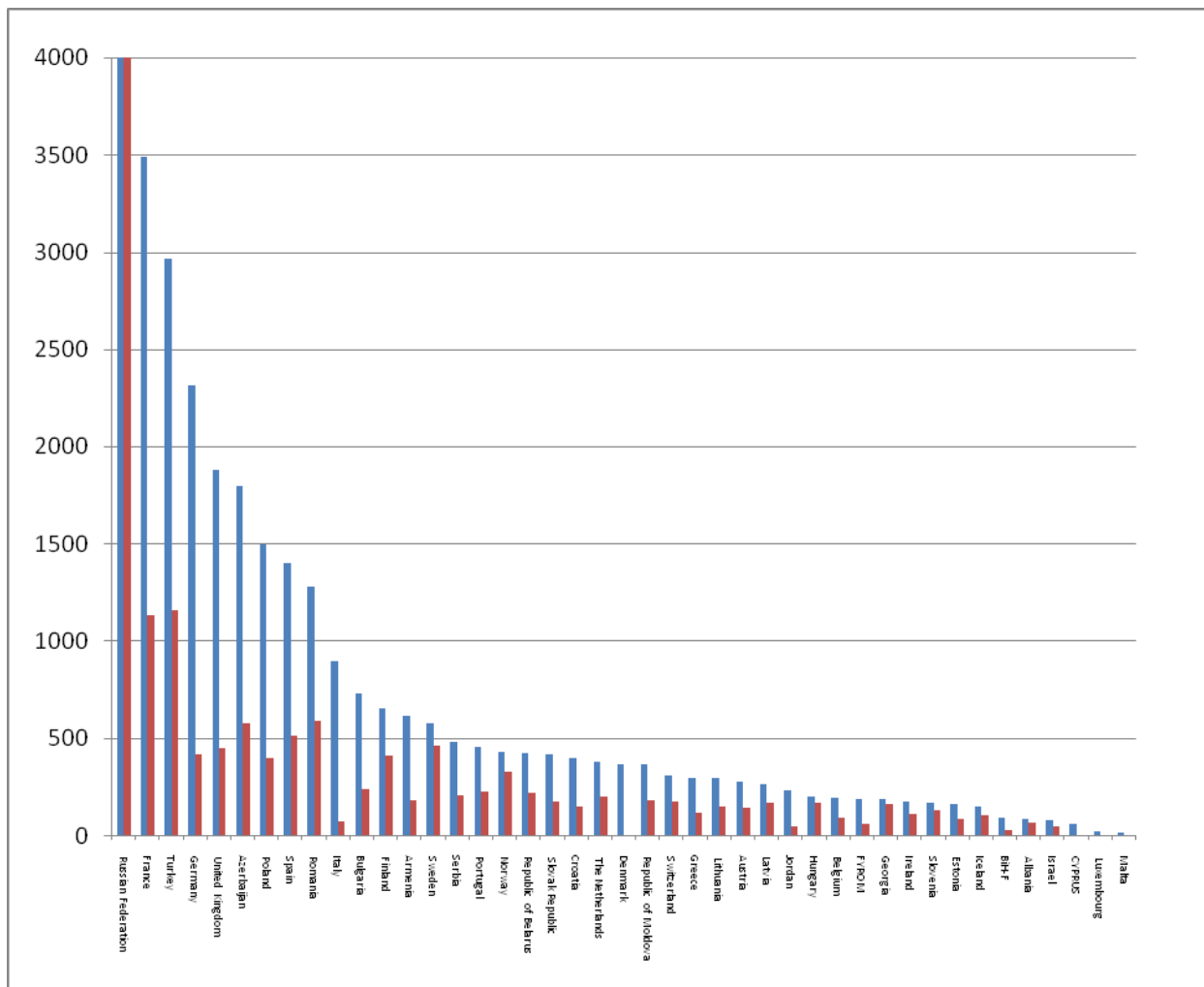
There is a vast range in the staffing level of the NMSs in the different RA VI Members - from 12 to 35000. The total number of NMS's employees in Europe is around 68,000 (more than half in Roshydromet, Russian Federation).



Average – 1451, Median - 386

Q2.2 NM(H)S Staff: Number of staff with higher education degree (ie, university or higher)

The percentage of the staff with higher education varies from about 8% to more than 80%, which represents mainly the degree of automation of networks and other technical activities. The absolute figures are represented in the graph:



Q2.3 NM(H)S Staff: if available - what is the average age of the staff

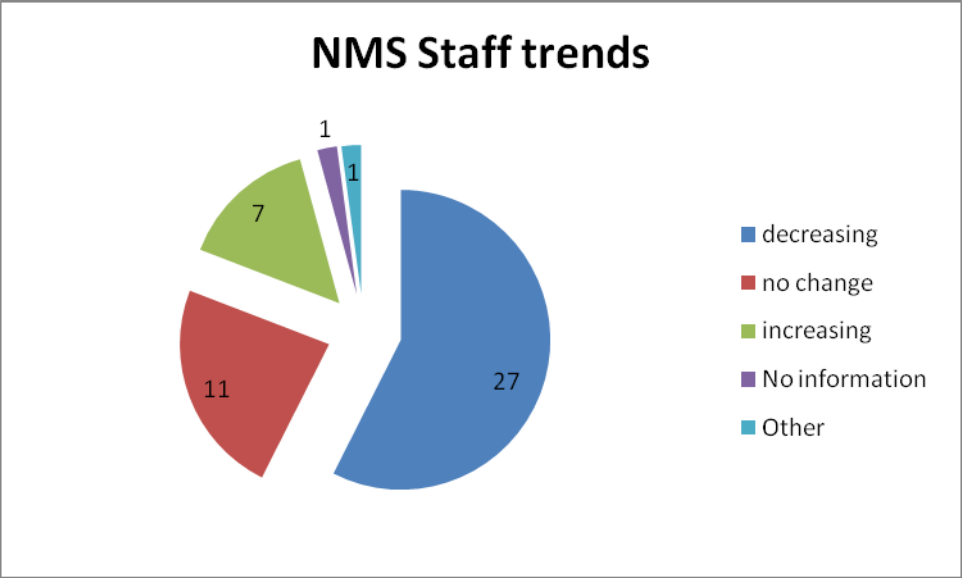
The average age of the staff of the RA VI NMSs varies between 35 and 50, with an average of 44.6. The “youngest” NMSs are Luxembourg (35) and Georgia (36), while the “oldest” are Spain (50.2) and Portugal (50)

Q2.4 NM(H)S Staff - trends: please indicate the trend of the staffing figures during the recent 3-5 years

Trend	Number	Countries
Steadily decreasing	26	Albania Armenia BiH-FBH Bulgaria Croatia Cyprus Czech Republic Denmark Estonia

		France Georgia Germany Greece Hungary Israel Italy Jordan FYR of Macedonia Malta Poland Portugal Romania Slovak Republic Slovenia Spain The Netherlands
No significant year-to-year change	11	Azerbaijan Belgium BiH-RS Latvia Lithuania Montenegro Norway Belarus Republic of Moldova Serbia Russian Federation
Steadily increasing	7	Austria Finland Sweden Switzerland United Kingdom Iceland (slightly) Ukraine
Decreased in 2012	1	Turkey
Significant year-to-year change	1	Luxembourg

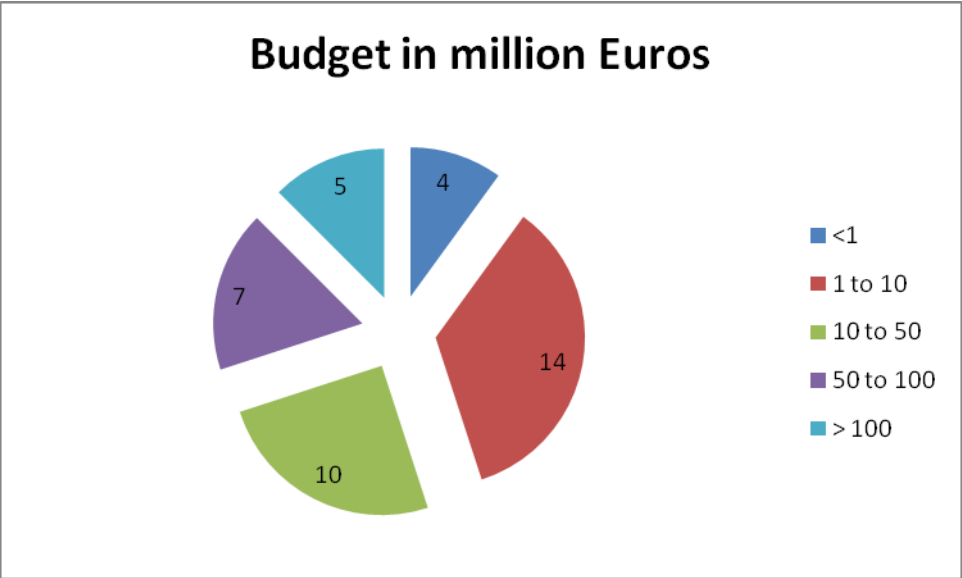
There is a well pronounced trend of decreasing NMS staff in the majority of RA VI Members.

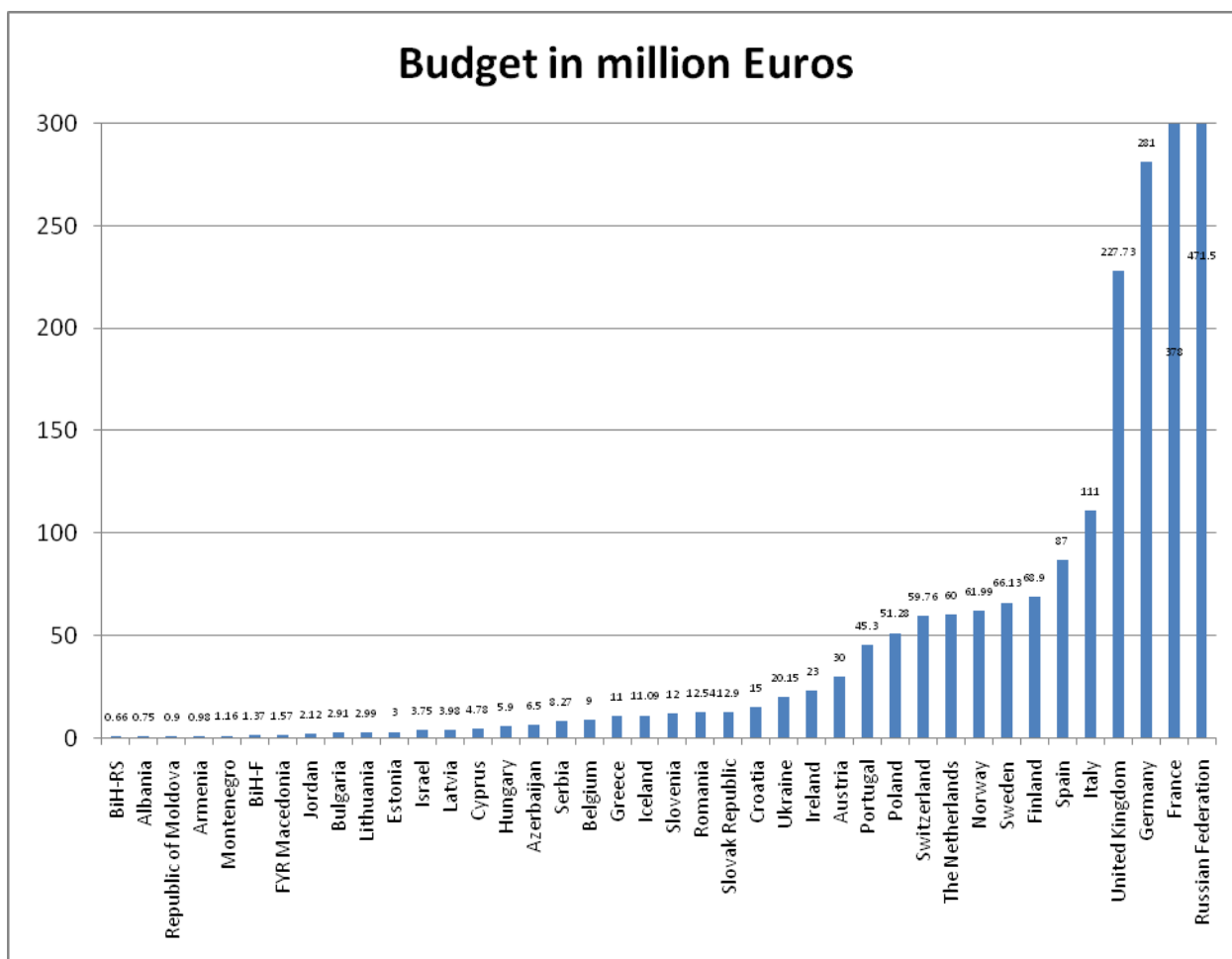


Q2.5 NM(H)S Budget: what is the total budget of your organization (e.g., year 2012)

The total budgets of NMSs are also very different depending on the size of the Service, but also to a great extent on the contributions to the international organizations (EUMETSAT, ECMWF, etc). 40 countries provided the budget figures based on their 2011 or 2012 financial year, but the data are not always comparable due to the fact that some countries included their international contributions, while others did not.

The budgets reported vary between EUR 0.66 million and EUR 470 million. The distribution of the NMS in the different budget groups is shown below:





Q2.6 NM(H)S Budget: main sources of funding

The main source of funding in all countries remains the Government budget. Other sources of funding are commercial activities, cost recovery, projects, and other paid services. The use of such funding mechanisms by RA VI Members is indicated in the table below:

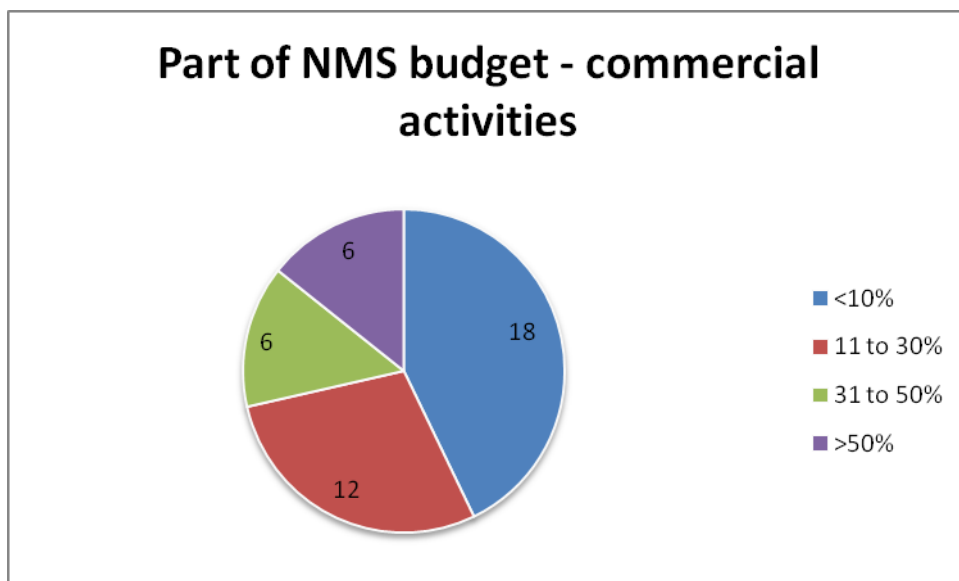
Source	Number	Countries
Government	All	
Commercial activities	14	Austria Belgium Bulgaria Czech Republic Denmark Estonia Finland France Georgia Hungary Iceland Latvia Lithuania Portugal

Cost recovery	17	Austria Azerbaijan Belgium Croatia Cyprus Denmark Finland France Hungary Iceland Lithuania Luxembourg Portugal Republic of Moldova Slovenia The Netherlands UKRAINE
Projects, research funds	7	Croatia Denmark Finland France Iceland Latvia The Netherlands
Other paid services	3	Malta Republic of Moldova UKRAINE

Q2.7 NM(H)S Budget: what percentage of the budget comes from non-government budget

Part of the budget	Number	Countries
0 – 10%	18	Albania Azerbaijan BiH-FBH BiH-RS Croatia Denmark Germany Greece Ireland Israel Italy Malta Montenegro FYR of Macedonia Republic of Moldova Serbia Slovenia Turkey
11 – 30%	12	Belgium

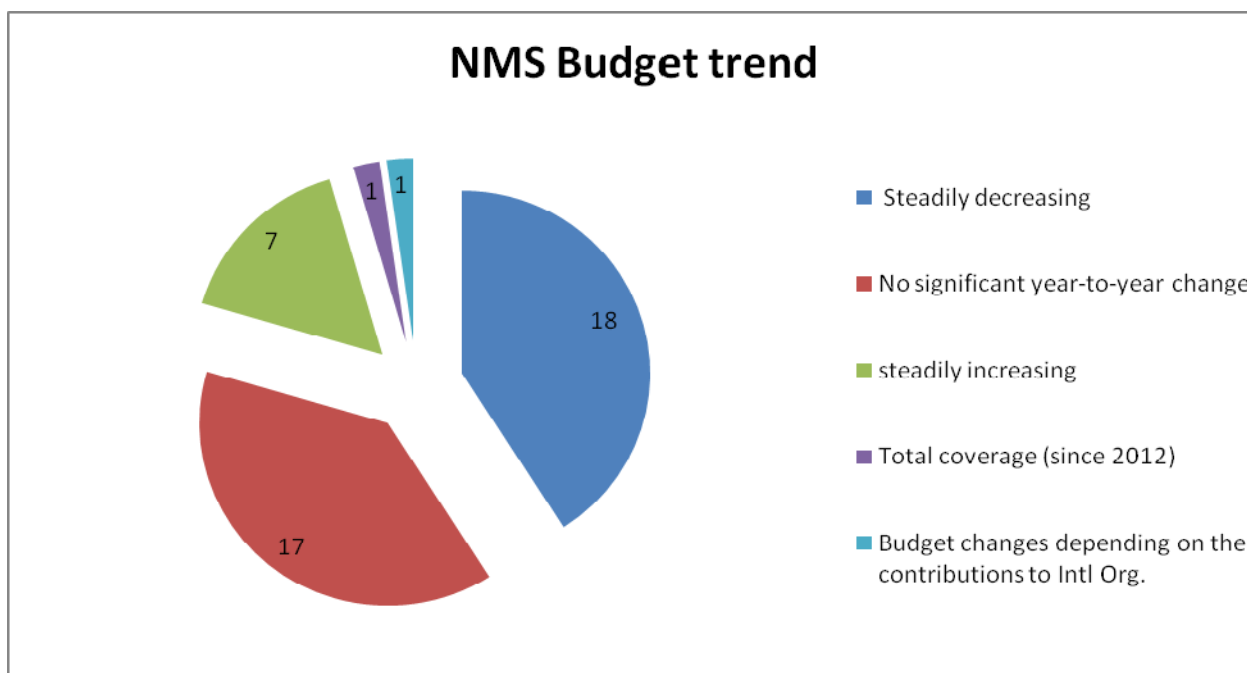
		Bulgaria Czech Republic Estonia Lithuania Poland Romania Russian Federation Spain The Netherlands Ukraine United Kingdom
31 – 50%	6	Austria Finland France Portugal Slovak Republic Switzerland
>50%	6	Cyprus Georgia Hungary Iceland Latvia Sweden



Q2.8 NM(H)S Budget: trends: please indicate the trend of the government component of the budget during the recent 3-5 years

Budget trend	Number	Countries
Steadily decreasing	18	Belgium Bulgaria Croatia Cyprus Czech Republic

		Denmark Estonia Greece Hungary Iceland Italy Montenegro Poland Portugal Romania Slovak Republic Slovenia Spain
No significant year-to-year change	17	Albania Armenia Austria BiH-FBH BiH-RS Latvia Lithuania Luxembourg FYR of Macedonia Republic of Moldova Serbia Russian Federation Sweden Switzerland The Netherlands Turkey UKRAINE
steadily increasing	7	Azerbaijan Finland France Georgia Norway Republic of Belarus United Kingdom
Total coverage (since 2012)	1	Israel
Budget changes depending on the contributions to International Organizations	1	Germany



Q2.9 NM(H)S Budget: alternative sources

35 Members pointed projects, both international and national, as an important alternative source of funds for the NMS.

Q2.10 NM(H)S –Role of NMHS – Main areas of Responsibility

Major areas include all activities, e.g. "Meteorology" includes observations, data processing, forecasting etc.

- Meteorology – 47
- Hydrology – 23
- Climate – 45 (all but Estonia and Luxembourg)
- Air/Water quality - 24
- Marine, Oceanography – 17
- Agrometeorology – 4
- Seismology, geophysics – 4
- Geomagnetic services – 1 (Ireland)
- State Volcano Observatory – 1 (Iceland)

Q2.11 NM(H)S - Business model

Various responses showing lack of a common understanding of “business model”. Members need further guidance in order to receive comparable results.

It is important to note that 18 Members indicate a business model which does not allow commercial activities (see the list below).

Government or state owned, providing Public Weather Service (PWS) or other services to the state or to the public	18	Albania Armenia Azerbaijan BiH-RS
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only (commercial activities not allowed)		Croatia Cyprus Estonia Israel Italy Jordan Montenegro FYR of Macedonia Serbia Russian Federation Slovenia The Netherlands Turkey UKRAINE
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Q2.12 NM(H)S Quality Management: is there a Quality Management (QMS) programme in place as part of your management practices

The majority of Members responded that the NMS has some kind of Quality Management programme. It is important to note that 7 Members indicated the lack of QMS as part of their management practice.

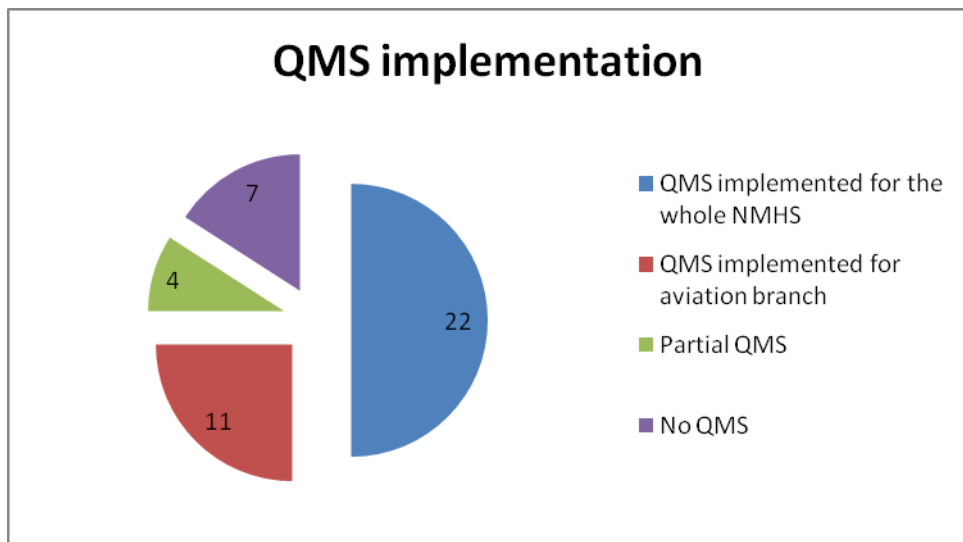
No QMS	7	Armenia Azerbaijan BiH-FBH Bulgaria Jordan Montenegro FYR of Macedonia
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Q2.13 NM(H)S Quality Management: status of QMS implementation

The question was aimed to check the number of Members implementing ISO 9001 compliant QMS for part of or for the whole NMS.

QMS implemented for the whole NMHS	22	Austria Czech Republic Estonia Finland France Germany Hungary Israel Latvia Lithuania Luxembourg Malta Poland Serbia
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		Romania Slovak Republic Slovenia Spain Sweden Switzerland Turkey United Kingdom
QMS implemented for aviation branch	11	Cyprus Denmark Greece Ireland Italy Norway Portugal Republic of Belarus Russian Federation The Netherlands UKRAINE
QMS for OBS	1	Norway
QMS for hydrometric OBS, avalanche service	1	Iceland
QMS for Environment Quality Dept	1	Rep. of Moldova
Partial QMS	1	Belgium
No QMS	7	See above



Note: The responses received from NMSs may not include information about QMS for aviation in those countries where the aeronautical meteorological services are provided outside the NMS.

Q2.14 NM(H)S development Planning: is there a development/strategic plan covering the next 3-5 years in place

The majority of Members reported the development/strategic plan is available for their NMSs; only 4 Members indicated the lack of strategic plan.

Q2.15 NM(H)S development Planning: if the answer of the question above is "yes", please indicate the main priority areas in your plan

- Enhancing the monitoring infrastructure
- Improving the management and institutional arrangements
- Improving operational forecasts including the warning products
- Enhanced climate services (implementation of the Global Framework for Climate Services (GFCS))
- Extending services to new user sectors
- Improved IT (including better use of web services and social media)
- Automation of the observing networks
- Implementation of WIS
- Implementation of WIGOS
- Development and implementation of new commercial services
- Training and education of staff
- Research & development

The responses received indicate that all the above areas are part of the existing NMS development/strategic plans.

Part III – Operations and Services

Q3.1 Types of services provided

All responses include PWS, warning services and climate services. There is some variation in the provision of other types of services like, aviation, marine, etc.

Additional services provided include: seismology, space weather, road services, education and training, SAF for EUMETSAT, geomagnetic, volcanology.

Country	PWS	Warning Services	Climate Services	Aviation Services	Marine Services	Hydro services	Agromet services	Tailored services	Air/Water quality	Climate research	Other
Albania	x	x	x			x	x		x	x	
Armenia	x	x	x			x	x	x		x	
Austria	x	x	x	x	x	x	x	x	x	x	
Azerbaijan	x	x	x		x	x	x	x	x	x	
Belarus	x	x	x	x		x	x	x	x	x	
Belgium	x	x	x		x	x	x	x	x	x	
BiH-FBH	x	x	x		x	x	x	x	x	x	Seismol.
BiH-RS	x	x	x			x	x		x	x	
Bulgaria	x	x	x		x	x	x	x	x	x	
Croatia	x	x	x	x	x	x	x	x	x*	x	*no water q.
Cyprus	x	x	x	x	x	x	x	x		x	
Czech Republic	x	x	x	x	x	x	x	x	x	x	
Denmark	x	x	x	x	x	x	x	x	x	x	
Estonia	x	x	x	x	x	x					
Finland	x	x	x	x	x	x	x	x	x	x	Space weather
France	x	x	x	x	x	x	x	x	x	x	Road weather services (including Road Surface temperature forecast)
Georgia	x	x	x			x	x			x	
Germany	x	x	x	x	x		x	x	x	x	
Greece	x	x	x	x	x		x	x	x	x	ETR, Hydromet
Hungary	x	x		x					x	x	
Iceland	x	x	x	x	x	x	x	x	x	x	Volc.
Ireland	x	x	x	x	x	x	x	x	x	x	Geomagn.
Israel	x	x	x	x	x		x		x	x	
Italy	x	x	x	x	x			x			
Jordan	x	x	x	x	x	x	x			x	
Latvia	x	x	x	x	x	x	x	x	x	x	
Lithuania	x	x	x	x	x	x	x	x	x		
Luxembourg	x	x	x				x	x			
Malta	x	x	x	x	x	x				x	
Montenegro	x	x	x		x	x	x	x	x	x	Seismol.
Netherlands, The	x	x	x	x						x	SAF EUMETSAT
Norway	x	x	x	x	x					x	
Poland	x	x	x	x	x	x	x	x	x	x	
Portugal	x	x	x	x	x		x	x		x	
Republic of Moldova	x	x	x		x	x	x	x	x	x	Soil q., r/activity
Romania	x	x	x				x	x	x	x	
Russian Federation	x	x	x	x	x	x	x	x	x	x	

Serbia	x	x	x	x		x	x	x		x	
Slovak Republic	x	x	x	x		x	x	x	x	x	
Slovenia	x	x	x	x		x	x		x		
Spain	x	x	x	x	x	x	x	x		x	
Sweden	x	x	x	x	x	x	x	x	x	x	
Switzerland	x	x	x	x			x	x		x	
The FYR Macedonia	x	x	x			x	x	x	x	x	
Turkey	x	x	x	x	x	x	x	x	x	x	
Ukraine	x	x	x	x	x	x	x	x	x	x	
United Kingdom	x	x	x	x	x	x	x	x	x	x	Consultancy

Q3.2 NM(H)S - Current level of service provision for different type of services

This is a self-assessment question; please express your assessment in the specified grades to the best of your knowledge

Country	PWS	Warning Services	Climate Services	Aviation Services	Marine Services	Air/Water quality	Climate research
Albania	s	ps	ps	ps	p	ps	s
Armenia	s	s	s	N/A	N/A	N/A	s
Austria	a	a	a	N/A	N/A	a	a
Azerbaijan	s	s	ps	ps	a	ps	ps
Belarus	s	s	s	s	N/A	N/A	s
Belgium	s	s	ps	N/A	s	s	ps
BiH	a	s	ps	N/A	N/A	ps	p
BiH-2	s	s	s	N/A	N/A	ps	s
Bulgaria	s	s	s	N/A	a	N/A	s
Croatia	a	a	a	N/A	a	s	s
Cyprus	s	s	ps	s	s	N/A	ps
Czech Republic	s	a	a	a	N/A	a	s
Denmark	s	s	s	s	s	s	s
Estonia	s	s	ps	s	ps	N/A	N/A
Finland	a	a	s	a	a	a	a
France	s	a	a	s	s	N/A	a
Georgia	s	s	s	N/A	ps	N/A	s
Germany	s	a	a	a	a	N/A	ps
Greece	s	s	ps	s	s	N/A	N/A
Hungary	a	s	s	s	N/A	s	a
Iceland	a	a	s	a	ps	ps	a
Ireland	s	s	s	s	s	N/A	s
Israel	a	a	ps	s	ps	ps	p
Italy	s	s	ps	s	s	N/A	N/A
Jordan	s	s	ps	a	ps	p	p
Latvia	s	s	ps	a	ps	s	p
Lithuania	s	s	ps	s	ps	N/A	N/A
Luxembourg	s	s	ps	s	N/A	N/A	N/A
Malta	a	s	s	a	ps	N/A	ps
Montenegro	s	s	s	N/A	s	s	ps
Netherlands, The	a	a	a	a	N/A	N/A	a
Norway	a	a	s	a	s	N/A	s
Poland	a	a	ps	a	s	ps	s
Portugal	s	s	ps	s	ps	N/A	ps
Republic of Moldova	s	s	ps	N/A	N/A	ps	ps
Romania	s	s	N/A	N/A	N/A	ps	s
Russian Federation	s	s	s	s	s	s	s
Serbia	s	s	s	s	N/A	N/A	a
Slovak Republic	s	s	ps	s	N/A	s	ps
Slovenia	s	a	s	a	ps	s	ps
Spain	a	a	s	a	s	s	s
Sweden	a	a	a	a	a	a	a
Switzerland	a	a	a	a	N/A	N/A	a
The FYR Macedonia	s	s	ps	N/A	N/A	s	ps
Turkey	a	s	s	a	s	s	ps
Ukraine	s	s	ps	s	s	p	ps
United Kingdom	a	s	ps	a	s	s	a
Average score	3.45	3.30	2.68	3.40	2.84	2.68	2.74
Number of NMS	47	47	46	35	32	28	

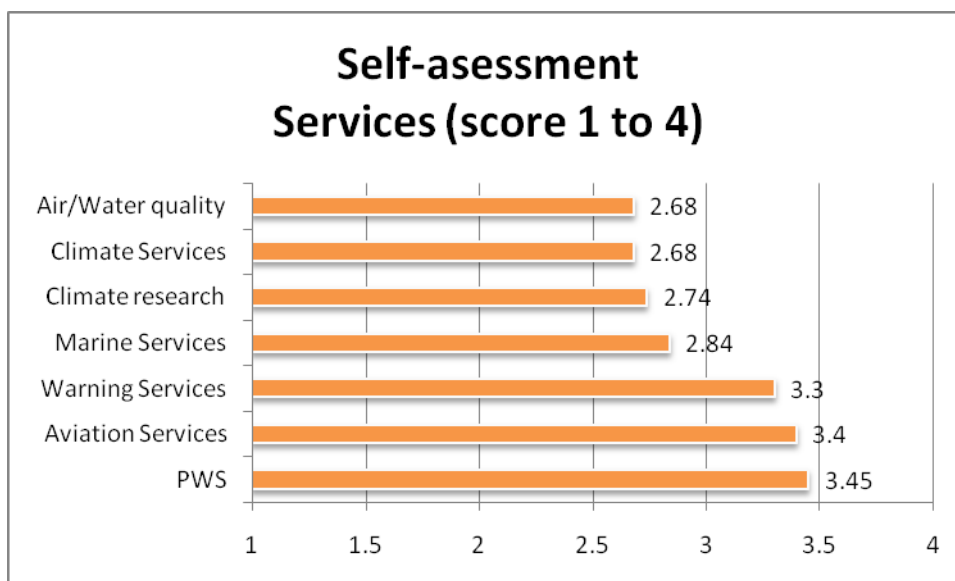
a (score 4) – advanced (exceeding the requirements and utilizing innovative services)

s (score 3) – satisfactory (meeting most of the requirements)

ps (score 2) – partly satisfactory (meeting some of the requirements)

p (score 1) – poor (not meeting stated requirements by the government or other users)

N/A – not applicable



Q3.3 Monitoring and infrastructure - Indicate areas where you consider your NM(H)S lacking adequate equipment and infrastructure or there has been deterioration during the recent years

13 Members did not report any problems.

Country	Surface OBS	Upper-air OBS	WXR OBS	Hydro OBS	AGM OBS	Autom.	Telecom National	Telecom Internat.	Data Mgmt	IT	Other
Albania	x	x	x	x	x	x	x	x	x	x	
Armenia	x	x	x	x	x	x	x	x			
Austria									x		
Azerbaijan	x	x	x	x	x	x	x	x	x	x	
Belgium		x			x						
BiH-FBH	x			x	x	x	x		x	x	
BiH-RS		x				x			x		
Bulgaria		x	x			x					
Croatia			x			x					
Cyprus			x		x	x	x		x	x	
Czech Republic			x		x					x	
Denmark											
Estonia		x			x	x			x	x	
Finland											
France											
Georgia	x	x	x	x	x	x	x				
Germany											
Greece	x	x			x	x				x	
Hungary	x	x	x								
Iceland					x						
Ireland											
Israel		x		x	x						
Italy	x					x	x		x	x	
Jordan	x	x	x			x					
Latvia		x			x		x	x	x	x	
Lithuania		x							x		
Luxembourg		x									
Macedonia	x	x	x	x	x	x			x	x	
Malta			x		x						
Montenegro			x	x		x		x			
Norway											
Poland					x						
Portugal	x	x									
Belarus											
Republic of Moldova	x	x	x	x	x	x	x	x	x	x	
Serbia				x	x	x			x	x	

Romania	x	x			x	x	x	x	x	x	
Russian Federation											
Slovak Republic			x			x					
Slovenia					x						
Spain											
Sweden											
Switzerland											
Netherlands		x									x
Turkey											
UKRAINE		x	x		x	x					
United Kingdom											
Total	13	21	16	10	21	20	10	7	14	13	1

Q3.4 Is your forecasting branch sufficiently staffed to operate on 24/7/365 basis *

6 Members (both parts of BiH) report insufficient staffing for 24 hr operations: Albania, Bosnia and Herzegovina (both NMS), Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Slovenia.

Q3.5 Has your NM(H)S implemented an Early Warning System (EWS)

It is expected that all NM(H)Ss provide some type of warning services. This question refers to the implementation of a EWS that is recognized part of the national regulatory framework on disaster risk management

8 Members report lack of appropriate EWS: Belgium, BiH-RS, Cyprus, Italy, Jordan, Latvia, Montenegro, Republic of Moldova

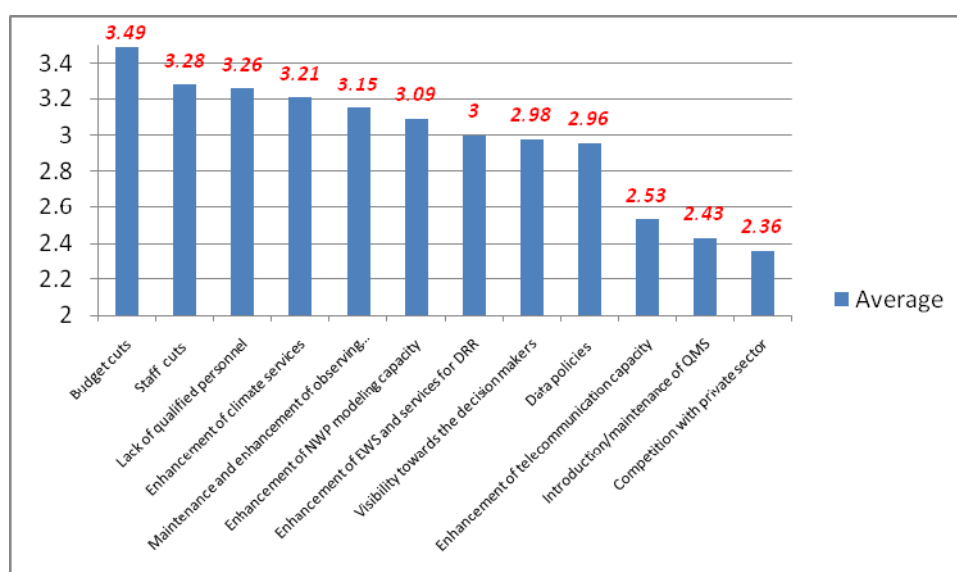
Note: This result should be regarded very carefully. Lack of strict definition of EWS may affect the responses.

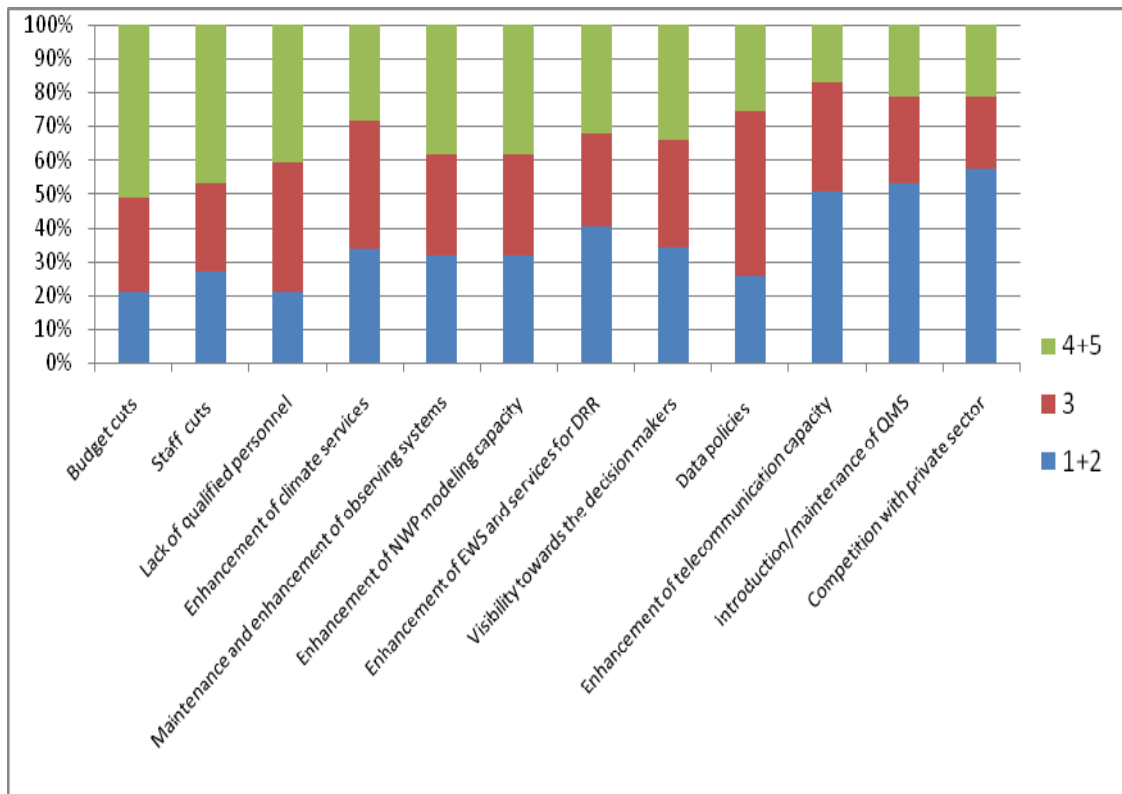
Part IV – Your inputs to identify the main Priorities for RA VI for the period (2013-2016)

Q4.1 Major Challenges foreseen by the NMHS in 2013 – 2016, please indicate the level of importance for your Service:

(Levels of importance: 1 – low; 2 - low to medium; 3 – medium; 4 - medium to serious; 5 – serious)

	1	2	3	4	5	4+5	Average	Median	Rank (based on AVE)
Budget anticipated cuts	5	5	13	10	14	24	3.49	4	1
Staff anticipated cuts	10	3	12	8	14	22	3.28	3	2
Lack of qualified personnel in some areas	3	7	18	13	6	19	3.26	3	3
Enhancement of climate services	1	9	21	11	5	16	3.21	3	4
Maintenance and enhancement of the existing observing systems	4	11	14	10	8	18	3.15	3	5
Enhancement of NWP modeling capacity	4	11	14	13	5	18	3.09	3	6
Enhancement of EWS and services for DRR	4	15	13	7	8	15	3	3	7
Visibility towards the decision makers needs to be improved	6	10	15	11	5	16	2.98	3	8
Data policies	5	7	23	9	3	12	2.96	3	9
Enhancement of telecommunication facilities and capacity	9	15	15	5	3	8	2.53	2	10
Introduction/maintenance of QMS	13	12	12	9	1	10	2.43	2	11
Negative impact to services due to competition with private sector	16	11	10	7	3	10	2.36	2	12





The table and the two graphs above show how the Members assess the challenges based on the 12 predefined categories. The most clear result is the related to the three items given lower priority – Enhancement of telecommunication capacity, Introduction and maintenance of QMS, Competition with private sector. While the former two reflect the fact that RA VI has well developed telecommunications (e.g., the RMDCN), and the QMS has already been implemented by a number of Members, the low ranking of the competition with private sector may mean that the majority of Members have not yet experienced problems of this kind; however, there is indication in individual responses that this is a significant issue that need to be taken seriously.

The top three challenges are related to: Budget cuts, Staff cuts (combined with the worries for the lack of qualified staff in some areas), and the Improvement of Climate Services (related to the implementation of GFCS).

Q4.3 In meeting the challenges specified above, please list up to five priority areas to be addressed in the RA VI work programme for the next period

This question provided opportunity for formulating up to five priority areas in a free text. Thus, the concrete formulation responses vary significantly, however, they can be combined in well defined groups, which correspond well to the graded challenges in Q4.1. The following are the grouped priority areas as indicated in the responses (the actual responses are included in the table in Annex I):

Priority 1: Coping with national institutional/management, capacity development issues: includes budget and staffing issues, education and training, efficiency, local infrastructure (e.g., the need for new premises for NMSs), etc.

Priority 2: Enhancement of Climate Services - implementation of GFCS.

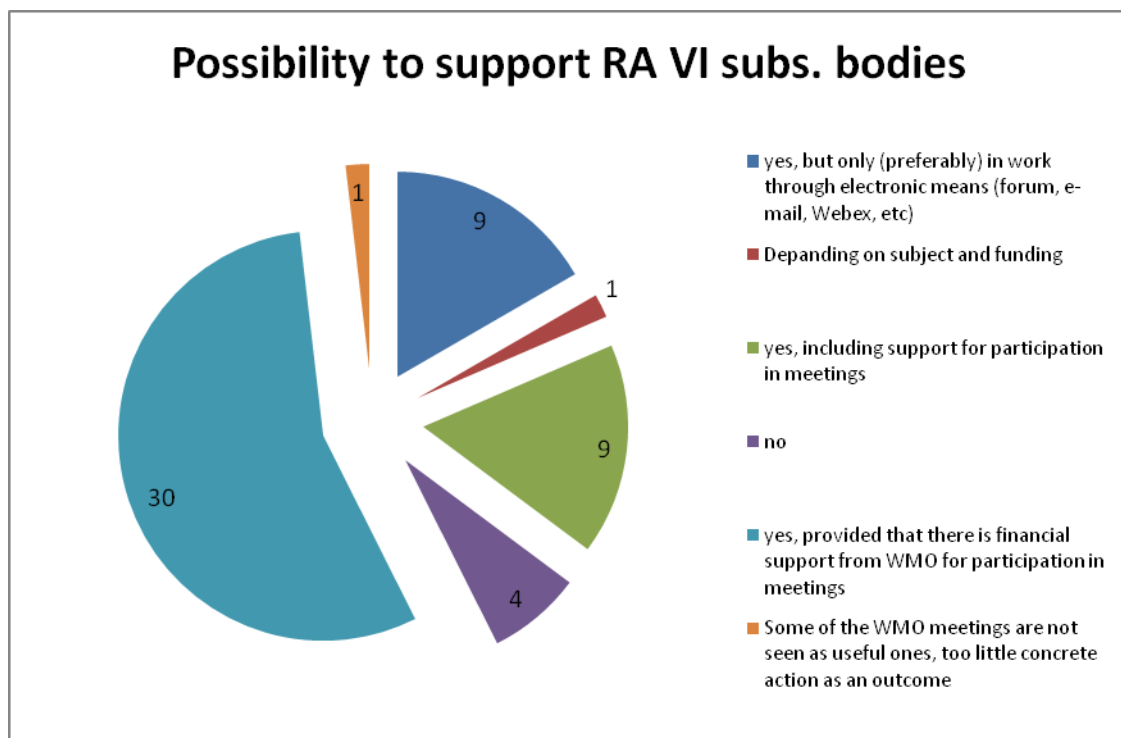
Priority 3: Implementation of WIGOS (and in a lesser extent – WIS): this is expressed in different concrete needs mostly related to the need to maintain and improve the observing systems and the quality of observations.

Priority 4: Enhancement of Services – PWS, DRR/EWS, Aviation: mostly expressed in terms of developing the capacity for warning services, aviation, socio-economic benefit (SEB) studies, etc;

Priority 5: Enhanced international cooperation and partnership: expressed in terms of raising the effectiveness and efficiency of the regional activities, building common position on issues like data policy, commercialization and public/private sector relationships.

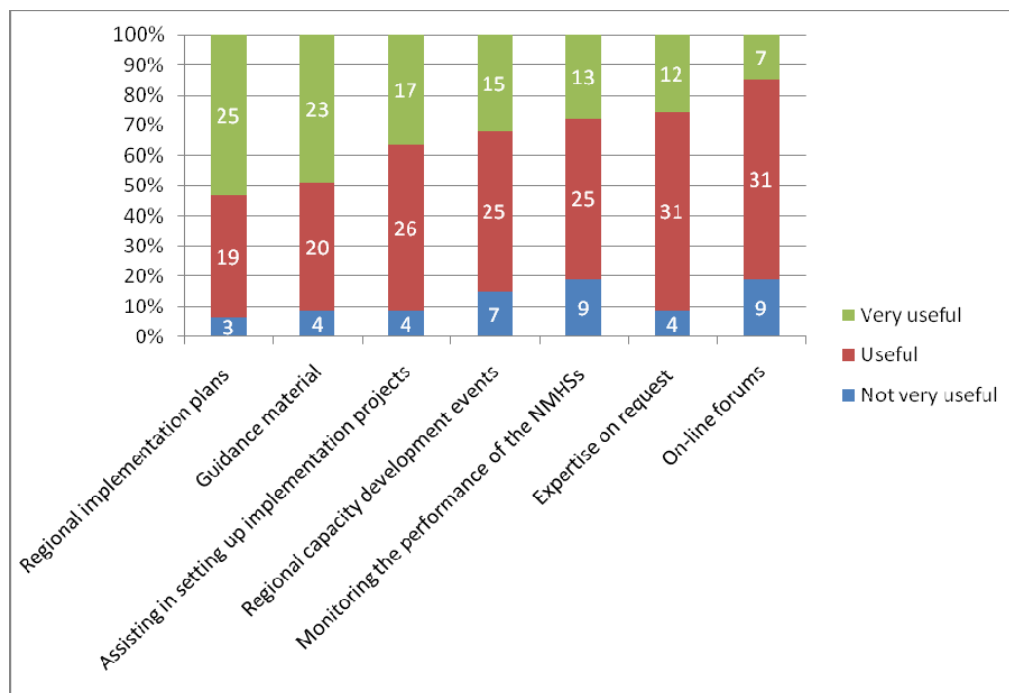
Q4.4 Is your NM(H)S in the position to provide experts to support the work of RA VI subsidiary bodies (working groups and task teams) during the period 2014 – 2017

The majority of responses indicate that participation in the regional work could be possible only with financial support from WMO. Four (4) NMSs replied that they cannot allocate such resources (even with WMO financial support) due to very limited staff. Nine (9) NMSs are ready to support their experts participating in the different subsidiary bodies.



Q4.6 What type of outcomes of the work of the RA VI subsidiary bodies would be most useful to you

There is a clear preference for two types of activities: regional implementation plans and development of guidance materials on implementation subjects. There is very little demand for the development of on-line forums as part of the tasks of the regional bodies.



Q4.7 What kind of support would your NMHS wish to see from the other Members in RA VI?

E.g., twinning projects (in which areas?), training possibilities, exchange of experts, assistance in developing and/or enhancing regulation and procedures, technical support

Large variety of answers to this question but obvious emphasis on joint/twinning projects, exchange of expertise, training. The table below provides all responses:

Albania	Technical support Calibration of equipments exchange of expert
Armenia	Armstatehydromet would benefit from bilateral cooperation with the advanced NMHSs in RAVI, conducting twinning projects in the area of long-range forecasting, provision of tailored products to specific users, climate variability and climate change research, vulnerability assessment etc. An important activity would be exchange of expertise through visiting scientist programmes providing new methodologies, guidance.
Austria	mostly done through EUMETNET
Azerbaijan	Everything which is indicated: twinning projects in data base management, communication, NWP ans etc. training possibilities, exchange of experts, assistance in developing and/or enhancing regulation and procedures, technical support
Belgium	- Training possibilities - Technical support
BiH-RS	1. technical support 2. training possibilities 3. twinning projects (in all areas of activity: meteorology, hydrology, ecology- air and water quality) 4. assistance in developing...

BiH-FBH	<ul style="list-style-type: none"> - Training possibilities - Technical support - Exchange of Experts - Twinning projects
Bulgaria	All listed above.
Croatia	Data, experience, experts and knowledge exchange including twinning projects when appropriate.
Cyprus	<ul style="list-style-type: none"> Training Exchange of experts Technical support
Czech Republic	e.g. twinning projects on integrated observing systems Modelling - NWP (exchange of experts)
Denmark	
Estonia	Projects; Courses; Assistance
Finland	Partnership between the developed and less developed NMHSs as externally funded projects. Support to know-how sharing between the NMHSs.
France	
Georgia	It would be noted that all the issues listed above more effectively works in cooperation with country development agency that would support in frames twinning programmes and other neighboring initiatives mainly of EC/EU. It would be mentioned that by support of WMO Georgia not being the member of some EU organizations had been supported greatly e.g. The satellites receiving systems, the various technologies for example the QA/QC methodologies etc.
Germany	
Greece	<ul style="list-style-type: none"> -TRAINING POSSIBILITIES IN VERIFICATION METHODS -MODERNIZATION OF ACTIVITIES (MULTIMEDIA/MOBILITY TECHNOLOGY) -GUIDANCE REGARDING COMMERCIAL ACTIVITIES
Hungary	Main need is for projects. We are able to offer expertise (long-term, well-qualified), but no money for travel only if income is provided.
Iceland	Twinning projects, training possibilities, exchange of experts
Ireland	Support through the exchange of knowledge and expertise perhaps through workshops or training events.
Israel	Exchange of products (NWP products) consultation in various issues: homogenization, mesoscale modelling, TAF verification, etc.
Italy	Exchange of expertise, best practices, common/agreed guidelines on public services and data policy
Jordan	<ul style="list-style-type: none"> 1- Financially Supporting some project 2- Training
Latvia	
Lithuania	<ul style="list-style-type: none"> Training possibilities Exchange of experts Assistance in developing/enhancing regulation and procedures
Luxembourg	
Macedonia	Exchange of experts, assistance in developing and enhancing regulation and procedures, technical support,...
Malta	<ul style="list-style-type: none"> twinning projects training possibilities
Montenegro	Main support that can come from the other NHMS is related to the exchange of experience and procedures, training possibilities, exchange of data (data from radars which are covering Montenegro area) and exchange of expert.
Norway	We wish to see the increase in collaboration amongst NMSs.
Poland	Training possibilities (e.g. on SEB issues).
Portugal	<ul style="list-style-type: none"> - Exchange of experts - Assistance in developing and/or enhancing regulation and procedures
Republic of Belarus	Training opportunities
FYR of Macedonia	<ol style="list-style-type: none"> 1. Twinning projects (hydrological monitoring, environmental monitoring, applied meteorology and hydrology, transboundary effects of weather and climate) 2. Training (LINOX operational system, numerical weather prediction, nowcasting, early warning tools, flash flooding, climate forecasts, hydrological modeling, calibration, advanced tools for visualisation of hydrometeorological products) 3. Exchange of experts (organizing trainings through the WMO system for other meteorological services in the country, like the aeronautical meteorological service. Opportunities of international exchange of professors through EU programmes should be explored). 4. Assistance in developing and /or enhancing regulation and procedures (implementation on ISO 9001 Quality Management Systems (QMS) to improve its overall visibility and performance, 5. Technical support (equipment, visualisation tools, software, radar and satellite equipment, instruments, and other advanced technique.
Republic of Moldova	<ul style="list-style-type: none"> - harmonization of the national legislation to EU legislation - technology transfer - topic oriented training courses - expert support in the establishment of EWS
Serbia	It would be of great benefit for NMHS of Serbia to establish close cooperation with RAVI members through: twinning projects/relevant technical support (e.g. road meteorology); exchange of experts within the context of the newly-established NWP/SEEVCCC Consortium, as well as in other research areas; training support from RAVI experts (aviation, meteorology, etc.)
Romania	<ul style="list-style-type: none"> - bilateral projects on data assimilation for limited area numerical models - training on meteorology (marine/mountain meteorology and extreme weather events)

	We would like to find out the position of other National Meteorological Services, WMO Members, regarding the activity of private meteorological companies issuing weather warnings (legislation, regulations, etc.)
Russian Federation	Twinning project, training possibilities, exchange of experts, technical support.
Slovak Republic	Regional cooperation in applying the methodologies for climate monitoring, e.g. drought monitoring and data policy. Exchange of experts, methodologies, know-how, twinning projects.
Slovenia	/
Spain	Search of synergies in common interest matters (through exchange of data, experts, experiences...)
Sweden	Most important would be to try to coordinate RA VI activities further with activities within EUMETNET, EUMETSAT, ECMWF, as far as possible; also bilateral arrangements in relevant sectors are useful.
Switzerland	
The Netherlands	Technical support: eg joint tender procedures for large infrastructures, exchange of technical knowledge Training for forecasters Exchange and coordination of cross-border weather alerts
Turkey	Twinning projects, training, exchange of experts in the fields of climate, agrometeorology, early warning, numerical weather predictions.
UKRAINE	Participation in the works of the European Consortiums - COSMO, ALADIN and others
United Kingdom	

Q4.8 What kind of support would your NMHS wish to see from the Secretariat?

The responses provided a number of extremely useful proposals and suggestion for improved support from the Secretariat, varying from financial support for participation in regional events to promotion and advocacy for raising the visibility of NMHS. Most of the responses indicate that the Secretariat should review its methods and working mechanisms at regional level in order to increase its efficiency and effectiveness in coordinating the activities and assisting Members.

Country	4.8 What kind of support would your NMHS wish to see from the Secretariat?
Albania	Some full training for hydro and meteorology staff.
Armenia	WMO Secretariat could assist in developing human and technical capacities of our NMHS, through its training programmes, e-learning, providing various guidance material. WMO could coordinate and promote regional collaboration and partnership, regional exchange of data/information, etc.
Austria	WIS and WIGOS guidance
Azerbaijan	Recommendations how to improve institutional capacity of the Service
Belgium	/
BiH-RS	As you know the specific situation in Bosnia and Herzegovina, there are two entity institutes. The efforts of our two institutions are to contribute as much as possible in the development of hydro-meteorological services, of course, within their jurisdiction. Therefore, it is present cooperation and joint participation in the international meteorological community. We wish from Secretariat to recognize the situation, and have a balanced attitude to the hydro meteorological services in Bosnia and Herzegovina, in terms of equitable presentation, participation in projects and support.
BiH-FBH	Technical support, training, Seconded expert trainings
Bulgaria	* Expert assistance in preparing materials for elaborating national legislative act for meteorology * Continuing financial support for participation of our experts in WMO meetings and other activities * Continuing financial support for participation of young specialists in different training courses
Croatia	To continue successful support as it has been for years with high professional approach as possible. Not only administrative but also scientific and consensual approach has been shown as successful on long-range time scale and should be continued.
Cyprus	Support to be a member of ECMWF and EUMETSAT
Czech Republic	Cost-benefit studies, as basis for dealing with our own ministry, government (budget negotiations) How to improve a visibility towards decision makers
Denmark	
Estonia	Financial support

Finland	- Concrete action proposals for the WMO Secretariat, TCs and EC - Concrete actions at country level - revisit the TC requirements and structure. The cost/benefit of the TCs is low and the WMO resources allocated for the TCs could be used to serve the needs of the Members in a more efficient way.
France	Implementation for data policy standards
Georgia	It could be mentioned that we are getting excellent support from secretariat and we will be only happy if it would be further enlarged.
Germany	Technical and administrative support for the working bodies (of the Region).
Greece	FINANCIAL SUPPORT FOR ATTENDING WMO RELATED EVENTS
Hungary	- to spur cooperation between members on European level
Iceland	
Ireland	-
Israel	More friendly and useful website Education and training material Yearly Meeting schedule (published on November or sooner)
Italy	To provide full information about activities, to adjourn the national distribution list as informed, to provide advice about national silent addresses
Jordan	we look to improve the Numerical weather prediction unit, also we try try to find some fund to purchase weather radar but we fail, we look to install early warning system , but no support from any body
Latvia	
Lithuania	Improvement of visibility towards decision-makers
Luxembourg	
Malta	Small states like Malta should be given the opportunities for exchange visits, technical support on new projects, & sponsors.
Montenegro	To continue to support our Service and include our staff in all programs and projects from which we can benefit.
Norway	
Poland	Training possibilities, providing guidance material on the implementation of selected programmes
Portugal	Outreaching meteorological services to governments and economic sectors
Republic of Belarus	
FYR of Macedonia	Continuation of the support from the WMO Secretariat, to achieve its core mission, service delivery, successful operation of HMS services, its development and regional cooperation. Express the importance of Hydrometeorological works on higher level (among decision makers).
Republic of Moldova	- information on the current activities of RA-VI - establishment of the communication between the existing WGs and TTs
SERBIA	We wish to see our extremely successful cooperation with the Secretariat continue in the future. At the same time, we expect the Secretariat to consider the possibility of enhancing the human capacities at the Regional Office for Europe, which would lead to further improvement of resources mobilization and project implementation activities that have already provided outstanding results, despite the current limited human resources.
Romania	
Russian Federation	WMO sponsored/co-sponsored training events, expert secondment
Slovak Republic	Methodological assistance and some financial support in running RIC when organizing the meetings and expert assistance in the respective region.
Slovenia	Support in sub regional activities (DMCSEE, WMORIC)
Spain	Guidance
Sweden	Generally (not for the NMHS) we appreciate support to working groups from the Secretariat
Switzerland	
The Netherlands	Clear, open and timely communication of matters that are relevant for the European NMS's. An intense communication/coordination of the RAVI Secretariat with the European Meteorological Infrastructure (the ECMWF, EUMETSAT and EUMETNET secretariats).
Turkey	More fellowship options for our staff in other countries.
UKRAINE	There are no proposals
United Kingdom	Effective coordination

Q4.9 As RA VI Member, what do you expect as outcomes from the XVI Session of RA VI (September 2013)?

A number of responses indicate expectations in advancing the implementation of WIS, WIGOS and GFCS. There are also strong expectations for discussing openly the existing economic constraints, data policy issues, private/public sector relationship. Members expect from the 16th Session to determine clear priorities for the next intersession period and agree on concrete actions for their realization. Further enhancement of the regional cooperation is also among the most frequent response. Some individual items also deserve attention, e.g., more focus on the Arctic area.

Country	4.9 As RA VI Member, what do you expect as outcomes from the XVI Session of RA VI (September 2013)?
Albania	More concrete help in the right diplomatic way to the right level of the government.
Armenia	
Austria	WIS and WIGOS implementation exchange of experiences on climate services
Azerbaijan	WIS, TDC, WICOS, GFCS etc.
Belgium	/
BiH-RS	After a real examine the current situation of hydro meteorological services in the region, make some kind of Plan and program for developing services in order to reduce the technology gap, and reached the WMO standards. Already in the past proved to be a very important cooperation between institutions in the region. Continue with this practice and to encourage projects of regional significance. For our country to be of importance, the projects which will strengthening technical capacities of our two institutions (equipment and software).
BiH-FBH	- More focus on sub-regional co-operation
Bulgaria	
Croatia	To define priorities for the period 2013-2016, identifies members' capacity gaps in the Region and proposes relevant measures, to plan implementation WIS/WIGOS/GFCS/QMS in the Region.
Cyprus	
Czech Republic	Risk of budget and staff cuts... Risk of reduction of observing systems...
Denmark	
Estonia	
Finland	- priority settings for the region - discussions on real needs and suggestions for how WMO best could act to serve the NMHSs
France	WIS-WIGOS progress GFCS progress
Georgia	We are looking for feather strengthening ofn cooperation in frames of RA VI. The previous collaboration activities allowed us to strenghten Georgian NMHS activities and to recover and increase necessary services.
Germany	Enhance the dialogue between all RA VI members with a view to increase active participation of countries in economic transition and motivate them to express their needs. In view of the above a set of realistic goals and deliverables for the working bodies and the RA VI Operating Plan.
Greece	-GUIDANCE REGARDING THE RELATION BETWEEN PUBLIC/PRIVATE SECTOR -CAPACITY BUILDING (IN CLIMATE PREDICTION/PROJECTION DOMAIN FOR CLIMATE CHANGE IMPACT STUDIES) -SUPPORT FOR RE-ORGANIZATION/MODERNIZATION OF OBSERVATIONAL METEOROLOGICAL NETWORK (ENSURING SUSTAINABILITY) -ENHANCEMENT OF EWS/DRR SERVICES
Hungary	- discussion on financing solutions - discussion on cooperation between members, mainly in projects - identification of different expertise/outstanding areas of different RA VI members
Iceland	Issues concerning the Arctic, e.g. EC-PORS,
Ireland	-

Israel	
Italy	
Jordan	we look to deepen the relation in different aspect within RA VI, we look to increase the cooperation between member of the region
Latvia	
Lithuania	To address the issue of RA VI (ROE) cooperation with EU (EC)
Luxembourg	
Malta	studies on the current mediterranean weather changes such as floods and flash rain. Opportunities for training / refresher courses for Forecasters & Observers.
Montenegro	Outcome which will foster and strengthen cooperation and exchange of information and data between RA VI members.
Norway	Issues concerning data policy and commercial meteorology should be addressed more in depth by the WMO and in particular by the RA VI.
Poland	- more detailed identification of regional priorities for the next financial period, - review of actual roles of NMHSs in RA VI taking into consideration recent development of financial situation in Europe and technological progress
Portugal	
Republic of Belarus	
FYR of Macedonia	<ol style="list-style-type: none"> 1. Capacity building for delivering and access to a high quality information data, forecasts, products and warnings to the end users and all relevant societal sectors; 2. Capacity building in the Early Warning Management System, Flood and Drought Management system involvement and Improvement; 3. Capacity building for producing better weather, water, climate and environment information through improvement of long-range forecasts, climate predictions, hydrological information, water assesment and environment information; 4. Enhanced capability to access, develop, implement and use integrated and interoperable surface-based and space-based systems for weather, climate and hydrological observations, as well as related environmental observations, based on world standards set by WMO (WIGOS, WIS, access to global climate observations and climate data archives); 5. Enhanced capability to contribute the global research capacity for weather, climate, water and environmental science and technology development (climate predictions, research in the prediction et.c.); 6. Enhanced capacity building of HMS to fulfill its main mission (institutional position, infrastructure and operational facilities, education and training, institutional framework, cooperation and partnership); 7. Strengthening partnerships and cooperation activities to improve NMHS performance in delivering services and to increase the value of the contributions of WMO within the United Nations system, relevant international conventions and national strategies (increase cooperation at national and international level partnership, policy dialogue improvement, improvement of awarness of public, decision-makers and stake holders of key WMO and HMS issues). 8. Increase the role and recognition as ab effective member of RA VI Association. <ul style="list-style-type: none"> - O&M of the Hydrometeorological Networks - Quality insurance of the Hydrometeorological data - Modernization of Hydrometeorological Networks - Safety at work
Republic of Moldova	<ul style="list-style-type: none"> - development activities and possible funding for the NHMSs - regional programmes and networks - VCP activities
SERBIA	We expect from the XVI Session of RA VI to pay special attention to the development of regional/sub-regional project proposals as envisaged in the GFCS Implementation Plan.
Romania	
Russian Federation	<ol style="list-style-type: none"> 1. Enhanced aeronautical meteorological information exchange in line with the SESAR initiatives. 2. Training workshops in line with the RA-VI priority areas. 3. Establishment of Implementation Coordination Teams (ICTs) to promote the implementation of RA-VI priorities, e.g. WIS, WIGOS, etc.

Slovak Republic	GFCS programme for RA VI and probably also for different regions of RA VI. Deeper cooperation at the regional level regarding the access to the data.
Slovenia	Direction for increased efficiency of RA VI NMHS
Spain	Clear, concrete guidelines for the implementation of the main WMO programmes
Sweden	Concrete plans for the implementation of GFCS in RA VI
Switzerland	- Common position on important issues (GFCS implementation, data liberalization) - Assessment of progress in the last 4 years and clear, measurable targets for the coming intersessional period
The Netherlands	To discuss the major challenges for the public NMS's in the coming years and how to tackle these in the European context: budget cuts (especially, in relation to the observations network), private/public sector competition, open data policy.
Turkey	We are expecting to see the recent developments in the Region's NMHS in the frame of WMO 1083, Organizational structures and Quality Managements Systems.
UKRAINE	There are no proposals
United Kingdom	Implementation of WIS in RAVI

Annex I

	Priority 1	Priority 2	Priority 3
Capacity development, management, legal	Capacity - staff	Build of new headquarter building	Stable budget and staff
	Institutional	Lack of qualified personnel in some areas	Negative impact to services due to competition with private sector
	New main building of the Republic Hydro Meteorological Service	staff - anticipated cuts	Relations with private sector
	Membership in International organisations such as ECMWF, EUMETSAT and EUMETNET	legal basis	education and training
	Attract young specialists and ensure their training	poor salary	specialized people
	Training	Financial constraints - support from Central Governments	ETR (Aviation meteorology competence)
	Budget - anticipated cuts	Lack of trained personal	Budget
	Visibility at the Ministerial level	staff training	Support to small states
	Training	reception staff, particularly experts from all fields of activity	Lack of modern technology
	Education and training in relation with the competence assessment scheme		to enhance the education and training opportunities for its staff
	Lack of qualified personnel in some areas		Improved efficiency
	capacity building		Capacity Building
	Lack of financial means		Improve visibility towards decision makers
	Budget/staff cuts		The impact of economic crises on countries being able to support ECMWF and EUMETSAT
			capacity issues
		Introduction/maintenance of QMS	
Climate Services (GFCS)	Strengthening climate services through	GFCS	GFCS

	implementation of GFCS		
	GFCS	Seasonal Decadal weather/climate service capacity as a scientific and operational challenge	enhancement of research on improving climate prediction skill for decadal and longer timescales.
	Climate change (analysis and Prediction)	GFCS	
	Implementation of GFCS - national level approach	Regional implementation of GFCS	
	GFCS	CLIMATE PREDICTION/PROJECTION (IMPACTS/ADAPTATION STRATEGIES)	
	GFCS	Strengthen the recognition as climate data provider	
	GFCS	проект ГОКО	
	GFCS	GFCS	
	Implementation of GFCS at the European and national level	Enhancement of climate services	
		GFCS	
		Seasonal Forecasting	
WIS, WIGOS Enhancement of Services	Modernization of observation networks	data transmission and digital archive	data elaboration and calibration
	Maintenance and enhancement of the existing observing systems	Implementation of WIS/WIGOS	improving network
	WIS	WIS, WIGOS	Observing system
	It is necessary to strengthen the observational network i.e. increase its space resolution	Automatization of network system	WIS and WIGOS
	Regional implementation of WIS	Implementation of WIS an WIGOS	Restoration of classical meteorological equipment on the main meteorological stations
	WWW (Global Data-Processing and Forecasting System)	Full sharing of RADAR network at the European level	To rehabilitate the necessary observations interrupted from 90-ies (Upper air observations, ozonometric, radiation, radar)

	Adequate maintenance of the observing systems, modernization of the observation technology, regular calibration, and implementation on QMS as well as participation in SEERAD and EUMETNET-OPERA projects.	NWP modeling	Regional implementation of WIGOS
	Enhancement of the observing network	To strengthen telecommunication needs inside the country and neighbors	OPERATIONS
	Observing system		Capacity building in NWP
	Implementation of WIS		Degree of redundancy of meteorological infrastructure with respect to NWP
			Near real time availability of high density precipitation data
			WIS/WIGOS
	Warning Services	Hydro-Meteorological Early Warning System	Strengthening capacities of NMHSs for reducing risks and impacts from weather, climate and hydrological hazards
	Service provision	DRR Programme	Socio-Economic Benefits
	Enhancing the role of aviation and warnings	Guidance on WMO endorsed methodologies for the demonstration of socio-economic benefits of services provided by NM(H)Ss	Aviation services
	Detecting Storms for pre-warnings advice	Information and Public Affairs Programme	Enhancement of research on the prediction of high-impact weather on time scales of hours to seasons.
	Enhancement of EWS and services for DRR	Aeronautical meteorological program	Improvements of DRR systems - MHEWS approach
		DRR/CWS	Forecast and products delivery, the Public Weather Services (PWS)
		Early warning system	Establishment of EWS

		DRR	Provision of aeronautical services
		Socio-economic benefits of met. services	
International cooperation and partnership	An Effective and efficient Regional Association	Commercial meteorology	Homogenization of data policy
	Data policy issues	Sharing services & Cooperation on RA VI level	Open data policy
	Data policy	Public/private sector discussion	
	Increased efficiency of NMHS		