

**On the Basis of FIRST DRAFT QUESTIONNAIRE
on CLIPS activities in RA VI NMHSs**



**On the Status of Seasonal to
Interannual Prediction (LRF)
with time scale from 1 month up to 2 years
in WMO RA VI NMHSs**

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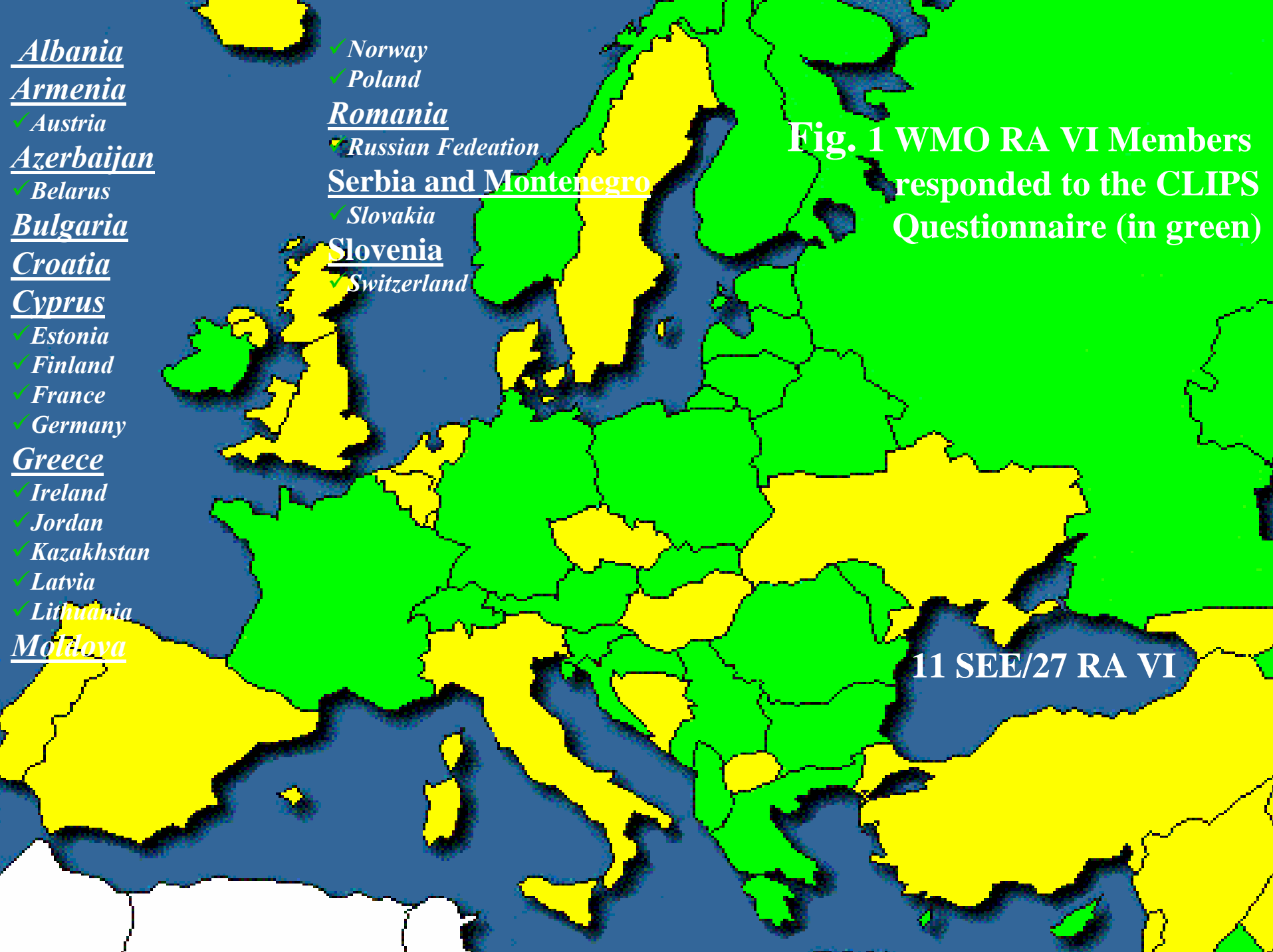


Fig. 1 WMO RA VI Members responded to the CLIPS Questionnaire (in green)

11 SEE/27 RA VI

- Albania
- Armenia
- ✓ *Austria*
- Azerbaijan
- ✓ *Belarus*
- Bulgaria
- Croatia
- Cyprus
- ✓ *Estonia*
- ✓ *Finland*
- ✓ *France*
- ✓ *Germany*
- Greece
- ✓ *Ireland*
- ✓ *Jordan*
- ✓ *Kazakhstan*
- ✓ *Latvia*
- ✓ *Lithuania*
- Moldova

- ✓ *Norway*
- ✓ *Poland*
- Romania
- ✓ *Russian Federation*
- Serbia and Montenegro
- ✓ *Slovakia*
- Slovenia
- ✓ *Switzerland*

Do you think that *SIP is currently successful* only
1 *in specified geographical regions and specific sectors*
and *what about SIP in Europe/your region/country?*

- ✦ 'We do not use SIP' (Albania, Serbia & Montenegro, Cyprus)
- ✦ although 'SIP is successful in wide geographical regions' (Armenia, Moldova) because
- ✦ it 'seems currently successful for some regions and sectors' (Bulgaria, Slovenia, Cyprus)
- ✦ namely in the 'ENSO-related regions with week predictability in mid-latitudes – NAO' (Croatia);
- ✦ 'SIP is too complicated due to various factors – geographical, human and financial resources' in addition (Moldova);
- ✦ 'it becomes more complicated for the smaller spatial scale' (Greece);
- ✦ 'especially for local territories, with complex mountainous relief' (Armenia, Bulgaria);
- ✦ and due to complicated topography SIP seems more difficult concerning the precipitation than the air temperature field (Romania)
- ✦ ! so that 'about successfulness of SIP it is difficult to say something' in set terms !
(Azerbaijan)

Do you *connect SIP with ENSO events only* or not?

The *responses vary*:

- ✦ *from 'we have not carried investigations on this topic' (Armenia)*
- ✦ *to 'SIP in Europe is closely related to ENSO events' (plan Moldova)*
- ✦ *or at least 'SIP should be more successful during ENSO events' (Croatia);*
- ✦ *across 'No evident signal about ENSO impact over the region' (Bulgaria)*
- ✦ *and 'from our investigations the ENSO events have a weak signal' except some periods after the maximum phase 'when significant signal in the climatic anomalies was found in the Romanian area' (Romania)*
- ✦ *as well as 'In Europe SIP is not reliable enough yet to be issued' (Slovenia)*
- ✦ *but 'the ENSO impact however is not unique one from SIP point of view' (Azerbaijan, Bulgaria, Cyprus);*
- ✦ *'SIP in our region is mainly related to the position of Polar and Subtropical Jet Streams' (Greece)*
- ✦ *so that 'SIP is not necessary related to the ENSO events except for the regions in which they have a strong signal but it seems that it is not the case of whole Europe' (Romania)*
- ✦ *and 'the help of GPCs providing SIP and WMO is of a great importance' (Bulgaria)*

3 Does *your NMHS provide or plan to provide official SIP* in near future?

Yes : No → 50% : 50%

Amongst the responding Yes:

- ✚ *Bulgaria, Serbia & Montenegro* - often practice - **Monthly Prediction**
- ✚ *Armenia, Azerbaijan* - **Monthly & Seasonal**
- ✚ *Moldova* - **SIP** elaborated for agricultural purposes
 - it is planned to elaborate in the future – 'SIP for diverse sectors of economy'
- ✚ *Romania* - NMHS provides to the concerned authorities:
 - one-month forecast
 - prognostic estimation for the next 2 months
 - meteorological outlook for the next season
 - annual forecasting estimates bulletin containing estimates of air temperature and precipitation anomalies for the next for seasons

! On the basis of GPCs SI products and own investigations, taking into account the regional and local conditions it is expected to get a substantial SIP improvement !
(Romania)

4 Does *your NMHS use SI products from GP Centers* and have you *special requirements on products & services* from these centers?

- ✦ 20 % - do not use SI Products from GPCs
- ✦ *Armenia, Azerbaijan* - 'use monthly forecast by ROSHYDROMET'
(Synoptic – statistic analogue forecast)
- ✦ *Albania* - 'use products from Reading but it is not common practice...by request'
- ✦ *Greece* – 'don't provide official SI forecast' but use ECMWF products in some particular cases'
- ✦ *Bulgaria* - 'from the web sites of ECMWF, IRI, UK Met Office, Meteo-France as a common information for the monthly weather forecast'
- use IRI and UK Met Office Products downscaling on the basis of NIMH archive for hydrological monthly and seasonal prediction
- ✦ *Romania* – 'takes into account SI Products from ECMWF, Met Office, IRI, Japan meteorological Agency, Hydrometecentre, Free University of Berlin
- ✦ *Moldova* - 'some SI Products from Meteo-France, Roshydromet, NIMH - Romania'

!All use SI products in a different manner!

!_special requirement – higher resolution !

5

Do you apply *SIP* in the management of different sectors of the economy and which ones in particular?

- ✦ 36 % - No (at the moment)
but this information could be useful (*Cyprus*)
- ✦ 27% - Monthly predictions
- ✦ *Bulgaria*—except Monthly Weather, Hydrological, Agrometeorological Forecasts
'Seasonal Hydrological Prediction for water management, irrigation, energy supply'
- ✦ *Moldova* - 'partially applies SIP in management of the agriculture, water resources, energy generation & consumption'
- ✦ *Romania* – 'warns the decision-making factors, including mass media in case the forecasts are worth to be taken into consideration'
- ✦ *Azerbaijan* – 'We apply SIP in the management of: water resources, energy generation & consumption, agriculture, disaster management
- ✦ *Armenia* - 'We apply SIP in the management of: agriculture, water resources, energy generation & consumption, public health, tourism.

6

Has your NMHS *contracts for regular SIP provision* with a *specific sector(s)/user(s)* ?

No : *Yes (Monthly!)* : *Yes (SIP)* → 55% : 27% : 18%

Azerbaijan - 'We have *contracts for regular SIP provision* with:

Water Management Committee,

Water Management Company

Electric Power Company

Agriculture

Centralized Heating System'

Romania - NIMH **regularly provides SIP**, on the basis of **contracts**, to different state and private sectors of activity such as:

Agriculture

Transport

Tourism

Electric Power Companies

private sector, etc.'

Has your NMHS (although) occasional requests for SIP from specific sector(s)/user(s) ?

Yes – 82%, but:

- ✚ not so frequently (*Albania*)
- ✚ occasional requests (*Armenia*)
- ✚ in case of extremes (*Bulgaria*)

The need to sensitize the user community will be one of the main objectives in the near future (Albania)

Users revealing greatest interest:

Agriculture –	20%
Electric Power Companies –	14%
Private Sector –	15%
Disaster Management –	9%
Central heating System –	6%
Transport –	6%
Public media –	6%
Tourism –	6%
Maritime business –	6%
Fisheries –	3%
Forestry –	3%
Building industry –	3%
Oil-fuel providers –	3%

8

Is your SIP officially issued by some media?

'No' or 'Without answer' – 45%

Monthly Freecast issued – 36%

Armenia - 'The monthly and seasonal prediction officially issued by Radio and TV'

Romania - 'SIP is officially distributed to the radio, TV, press, etc.'

9 *How many specialists are engaged in your operational SIP activities*

'No' or 'Without answer' – 45%

Bulgaria - MWP and SHP - 2 physicists-meteorologists, 2 engineers hydrologists

Azerbaijan - MWP and SHP - 2 divisions: 7 forecasters, 5 hydrologists

Croatia - Only partially, some climatologists and some forecasters.

Armenia - in our SIP activity are engaged individuals –
a climatologist and two forecasters

Romania - Within the **SIP operational activity**, there work a **team of 5 specialists** having a basic preparation in Physics, Mathematics and Geography. They were trained in long-range forecasting

...individuals – rarely small group...

10

Do you develop the theoretical basis of your SIP activities by own research efforts?

If 'yes', what are your related resource requirements (human, financial, infrastructure etc.)?

'No' or 'Without answer' – 80%

Bulgaria - ...at the beginning - interest to the experience of ECMWF, Meteo-France, IRI, etc)

Croatia - ECMWF forecasts are used for seasonal periods.

Slovenia - We monitor development of ECMWF SIP products.

Armenia: *A group of scientists* of Scientific Applied Center of Hydrometeorology and Ecology *are trying to elaborate a model of SIP for our region.*

Romania: *We develop the theoretical bases of SIP activity* and within the operational practice, *we combined our methods* with those ones coming from international sources (ECMWF, IRI, JMA, etc.)

...human, financial, infrastructural resources...always scarce...

11 How do you maintain the theoretical basis of your SIP activities?

'No' or 'Without answer' – 80%

Bulgaria - 'participating in conferences/workshops and keeping an eye on the references'

Slovenia – 'conferences, papers, ECMWF workshops'

Romania – references, own investigations using new methods

! Trough References, Workshops, Conferences, Investigations !

12

Do you apply downscaling methods for specific sectors/applications/locations?

Bulgaria - ...'*classical downscaling method through multiple regressions using precipitation and temperature data to predict monthly and seasonal river discharges*'

Romania - ...'*classical downscaling method through multiple regressions, ... conditioned analogy method is used on nested sectors*

'No' or 'Without answer' – 82%

13

Could you please give a **general assessment** of the
'**pro's&'con's** of your **SIP activity?**

'Without answer' – 73%

Romania - 'the precipitation forecast especially still has a low skill for some regions'

Azerbaijan – 'SIP gives appreciable benefit for the economical sectors,
but if the forecast is not justified the prestige of the service falls'

Slovenia - 'If SIP products are reliable we'll have feedback from the users. '
We ought to have a strong interest in the SIP subject
and on up-to-date information on the SIP products

SIP – related requirements?

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'No need' – 36%

Albania – We need software and training

Armenia - ...short and long-term training on SIP

Serbia & Montenegro – to train the personnel in application of SI products

Bulgaria – training on the modern SIP principles;

space and time resolution;

SIP downscaling;

etc.

! Training !

SIP – related needs and suggestions?

- *hardware and software (Albania)*
- *personnel training (Albania, Bulgaria, Cyprus, Greece)*
- *use of existing experience in the field (Cyprus)*
- *co-operation,*
- *SIP European network,*
- *access to super- computers,*
- *regional models (Romania)*
- *etc.*

