

MedCOF Scoping Meeting Madrid, 12-14 June 2013

Conclusions

Following the recommendations given by RA VI Task Team on RCOF and supported by the RA VI Working Group on Climate and Hydrology targeting South Western Europe / Mediterranean basin as suitable for a RCOF implementation.

Considering the recommendation by the Scoping Workshop on Seasonal climate Prediction (Algeria, January 2012) of extending the existing RA I PRESANORD to the whole Mediterranean area involving thus RA I and RA VI.

Noting the vital importance of the collaboration and joint contribution of Regional Associations in developing capacities for the Climate Services Information System, such as the initiative of RA VI and RA I jointly launching an RCOF for the Mediterranean Region, as was pointed out during the 65th session of WMO Executive Council.

AEMET jointly with WMO -and after conversations with many parties- convened a Scoping Meeting at AEMET headquarters in Madrid from 12 to 14 June 2013 to define the features and objectives of a future Regional Climate Outlook Forum encompassing among others National and Regional Services around the whole Mediterranean region (participants and programme are attached in the annex).

The meeting started with three keynote speeches given by the Presidents of WMO Regional Associations I and VI and by the Head of the Global Framework of Climate Services (GFCS) Office. In their three speeches they underlined the need to promote collaboration among all Mediterranean member states in the first interregional RCOF (RA VI and RA I) as part of the deployment and implementation of the GFCS. The first two sessions included a series of short targeted oral presentations about the Mediterranean climate and predictability features. These presentations served as background information for discussion sessions mainly devoted to consider the characteristics and design of a RCOF for the region. Concerning the quality of seasonal forecasts, it was shown that current seasonal forecast systems still have poor skill over big areas in the Mediterranean region. The actual challenge is the coordination of efforts to improve forecast systems and to combine climate information from different sources aiming at achieving higher predictive skill for certain windows of opportunity.

There was a strong agreement in creating a single MedCOF for the whole Mediterranean region. This preference was supported by the fact that large-scale forcings (e.g., NAO) are shared by the whole basin although the effects are different across the region. It was also suggested that a joint RCOF respecting and building over the existing ones would allow the countries with less experience to take advantage of the expertise available in some other countries. The existing RCOFs –PRESANORD and SEECOF- will continue working and coordinated through the MedCOF umbrella. It

was left open the possibility of creating a South Western Europe RCOF complementary of the existing ones as a part of a network of Mediterranean RCOFs focusing in the most operational aspects of the RCOF responsibilities.

Water management was clearly identified as a critical stake for the different countries and sub-regions. Water and water-related seasonal information (precipitation, soil moisture, drought, snow-cover especially in the mountain areas, river discharge, etc...) emerged as issues of great interest especially for their cross-sectorial implications: agriculture, energy and tourism, which were also identified as probably the most relevant issues for the whole area. Energy, both production and demand, has also been indicated as a major stake for a number of Mediterranean countries. It has been suggested that relevant information can be produced at seasonal time scales for both production (water and river discharge especially) and demand (temperature either in winter and, especially, in summer). Therefore efficient interaction with stakeholders from these two sectors will be a priority for MedCOF.

Concerning timescales, it was also agreed to focus MedCOF sessions initially on seasonal timescale, but linking them at the same time with sub-seasonal and annual timescales as some centres are already delivering information for such periods. Winter and summer emerged as the seasons for which the information is crucial. Winter is the wet season for most countries of the area, and is also the season when water reservoirs are filled. Summer is important especially for energy demand and water management. However, it has been also remarked that a continuous (monthly) up-date of the forecasts would be extremely useful and advisable. Some cross-boundary issues were also highlighted, such as, for example, those related to river discharges and their impacts on water management. Cross-regional issues appeared less evident, but it was highlighted that they could emerge later in the course of the MedCOF activity process.

All participants agreed on that, due to the fact that hydrological information is strongly linked to climate information, both components should be taken together in the future RCOF for the region. Among others the following proposals were discussed and pointed out as relevant for MedCOF: i) some information on observation/climate monitoring from past season(s) -since this will be useful also for drought detection- should be incorporated to the consensus outlook statement; ii) a common climate/hydrological approach would help to forecast events and issue outlooks where both atmospheric and hydrological aspects are relevant; iii) specific hydrological information should still be handled at local (national) level.

Regarding the organization of work in MedCOF, it was agreed to emphasize the need of a strong coordination between the existing RCOFs in the region and in parallel with MedCOF. The frequency of the sessions was acknowledged to be limited by the availability of funding. However, two sessions –for winter and summer seasons- were envisaged and considered the minimum number for an operational RCOF, being at least one of them face-to-face and the other one on-line. As required to all RCOFs, they will incorporate within its core activities sessions devoted to training and interaction with users. Among the basic working material for each forum were mentioned: i) monthly bulletins generated by RCCs with responsibility on long range forecasting; ii) model outputs from global producing centres; iii) additional material such as downscaled forecasts and empirical based predictions; iv) verification. The outlook statement produced as main deliverable from each forum session will include: i) state of ocean and

other climate drivers for the region, ii) probabilistic (possibly tercile-based) forecast of temperature, precipitation and hydrological relevant variables for the MedCOF domain, iii) information on climate monitoring since the previous season, iv) verification of the last forecasted period.

In the current context of economic and financial crisis, it was considered important and strongly encouraged to design a scheme to present conveniently this initiative, highlighting the synergetic and cooperation aspects of MedCOF. In this regard, it was recommended to establish links with MEDARE and ECAD to share observational data within the RCOF frame. Both data sources can be used for estimating the Mediterranean climatology -which constitutes a first prediction- and for statistical downscaling tools and validation purposes as well. Shortage of resources reducing the observational networks has an impact on the whole chain of generating and validating seasonal products both at regional and global scales. So far there are a number of existing initiatives and networks to establish a dialogue with other stakeholders such as climate change bureaus, relevant European projects such as EUPORIAS or SPECS, etc. In addition, some other initiatives already supported by WMO, such as HyMex, should be taken into account, not to mention GFCS. Nevertheless, there is a lack of initiatives on the North African side, and in this regard, the RCOF could be a way to enhance cooperation with these countries and a way to obtain support for this sub-region from WMO, green or adaptation funds, or the EU. Some bilateral N-S trans-Mediterranean relations should be used to reinforce MedCOF.

To ensure that the implementation phase of MedCOF moves forward, a proper governance structure should be put in place and a small management team, adequately representing the Mediterranean region and the related climate organisations, was considered a valid proposal. For piloting the set up phase, it was decided to nominate an Interim Management Team (IMT), with a mandate not clearly established because of its temporary nature but expected to report to the next MedCOF session. The composition of IMT would include a representative from RA VI and RA I RCCs, from the two COFs (SEECOF and PRESANORD) currently running in the region and from a future possible South Western Europe COF. Final proposal for the IMT over this interim process was as follows:

- Ernesto Rodríguez-Camino, AEMET (interim chair)
- Jean Pierre Céron, RCCs RA VI
- Ashraf Zakey, PRESANORD
- Branko Bijelic, SEECOF
- Fatima Driouech, RCCs RA I
- Silvio Gualdi, South Western Europe representative
- WMO (to be appointed by the WMO SG)
- ACMAD (pending consultation) ¹

¹ Following the Scoping Meeting and consistently with the decided action to make ACMAD a full member of the IMT, considering their relevant role as the original coordinator of PRESANORD and its active role running the demonstration phase of African RCC, ACMAD was contacted and accepted to be included representing RA I in the IMT.

Tasks for this IMT would be to prepare the first MedCOF meeting, to prepare a proposal of Terms of Reference for IMT and to prepare any relevant document as needed according the outcomes of the Scoping Meeting.

Among others the following sources of funding were identified during the discussions: i) contribution in kind from the NMHS; ii) WMO under request and on a case by case basis; iii) COST action; iv) ClimDev funding through ACMAD. The IMT will further investigate the feasibility of the above mentioned sources and explore additional ones.

Communication among partners, with users and eventually to media will be based on a web page which AEMET has offered to host. The structure and initial contents of this site will be discussed within the IMT. It was considered very important to learn from the experience of the already existing sub-regional COFs, especially from SEECOF. The MedCOF web page will have links to SEECOF and PRESANORD sites and other tools such as wikis from relevant RCCs. Interactions with end-users should not be directly addressed by MedCOF but better through the existing COFs, NMHSs (and partners). It was also emphasized that NMHSs should play a key role in bringing the benefits of climate outlooks to the different categories of end-users. In this sense, it was considered essential a close coordination with GFCS. To develop a general communication strategy was also seen as a priority task aiming not only at publicizing MedCOF activities and products but also for attracting experts and linking with stakeholders.

There also was an agreement on issuing outlook statements with simple and clear forecast messages in one language (English) to be later translated literally by countries to their own languages. Forecast messages from MedCOF have to be agreed, though sub-regional COFs can further adapt and refine them, avoiding any kind of contradiction. It was deemed important to maximize the spread of the outlook statements as a way to enhance the MedCOF visibility. The creation of a leaflet advertising the objectives and outputs of MedCOF was also discussed and accepted.

It was agreed to have the first MedCOF meeting in November and the option of holding it together the SEECOF meeting in Belgrad will be examined by the IMT. As second option AEMET will consider the feasibility of hosting it.

Finally, it was decided to send this document of conclusions to the Presidents of WMO RA I and RA VI, the RA I and RA VI WG on Climate matters and the corresponding RCCs. Further steps to formalize the designation of MedCOF will be on hands of both Presidents of WMO RA I and RA VI.

Annex

Programme

Wednesday, 12 June

09:00 – 09:15	Registration
09:15 – 09:30	Opening
09:30 – 10:30	Key note speeches <ul style="list-style-type: none">• Mamadou L. Bah, President of WMO RA I• Ivan Čačić, President of WMO RAVI• Filipe Lucio, Head GFCS Office, WMO
10:30 – 10:45	Overview and objectives
10:45 – 11:15	Coffee break
11:15 – 13:00	Session 1 Features of the Mediterranean climate relevant for a RCOF (Short presentations) Chair/Rapporteur: E. Rodríguez/ M ^a A. Pastor <ul style="list-style-type: none">• R. Bojariu, “Sources of climate variability and predictability in Mediterranean regions”.• A. Zakey, “Climate change outlook over the Mediterranean from the science respective”• S. Gualdi, “Experimental seasonal predictions at CMCC”• A. Kamga, “Variability en the Mediterranean climate”• B. Bijelic, "Climatology of cyclones in Mediterranean Basin"• O. Demir, “Expected climate change for Eastern Mediterranean. Climate assessment for Turkey”• F. Driouech, “Climate and seasonal forecast in Morocco”
13:00 – 14:00	Lunch
14:00 – 16:00	Session 2 Predictability at seasonal timescale over the Mediterranean basin (Short presentations) Chair/Rapporteur: A. Pastor <ul style="list-style-type: none">• E. Rodriguez, “Operational seasonal forecast constrained by low predictability”• Y. Levi, "ECMWF system 4 seasonal forecast predictability over the Mediterranean basin".• J.-P. Ceron, “Predictability of the Meteo France seasonal forecast model over the Mediterranean basin”.• F. Doblas-Reyes, “Mediterranean-basin seasonal prediction forecast quality from a multi-model perspective”.• A. Kamga, “Predictability in the Mediterranean climate”
16:00 – 16:30	Coffee break

16:30 – 18:00 Session 3 (discussion)
Which sub-regional approach would be more adequate considering climate variability and predictability over the region?
Chair/Rapporteur: F. Doblas-Reyes/ O. Demir

Thursday, 13 June

09:00 – 10:30 Session 4 (discussion)
Which are the major stakes and critical periods around the region from a seasonal timescale point of view?
Chair/Rapporteur: J.-P. Céron/ S. Gualdi

10:30 – 11:00 Coffee break

11:00 – 12:00 Session 5 (discussion)
Should the RCOF(s) include a hydrological component? If yes, how?
Chair/Rapporteur: D. Berod/ D. Mazzocco

12:00 - 13:00 Session 6 (discussion)
Which objectives and benefits may come out from a coordinated approach for RCOF(s) between two RAs
Chair/Rapporteur: Y. Levi/ Y. Luna

13:00 – 14:00 Lunch

14:00 – 16:00 Session 7 (discussion)
Which synergies (e.g., partners, projects and initiatives) and concerns (e.g., cross-regional, regional or sub-regional approaches: pros and cons) should be considered prior to the establishment of RCOF(s) for the region?
Chair/Rapporteur: R. Bojariu/ F. Espejo

16:00 – 16:30 Coffee break

16:30 – 18:00 Session 8 (discussion)
Which time scale (seasonal or/and beyond) should the RCOF focus on?
Chair/Rapporteur: M. Pasqui/ E. Rodríguez

Friday, 14 June

09:00 – 10:30 Session 9 (discussion)
Which organization of work (frequency, deliverables, basic material, products, type of meetings, training, etc) would be the basis of the resulting RCOF(s)?
Chair/Rapporteur: A Zakey/ B. Bijelic

10:30 – 11:00 Coffee break

11:00 – 12:00 Session 10 (discussion)
How can the sustainability of the RCOF(s) be guaranteed?

12:30 – 13:00	Chair/Rapporteur: G. Maresca/ J. Camacho Session 11 (discussion) Communication and user targeting, including participation of users and media in the RCOF(s)
13:00 – 14:00	Chair/Rapporteur: D. Gutierrez/ F. Espejo Lunch
14:00 – 15:30	Main conclusions
15:30	Closure

List of participants

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Predicción Estacional

Eroteida Sánchez García

Curso "Introducción a la Meteorología"
Santander, 21-29 de octubre de 2013



¡ Muchas gracias!

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PREZI

Predicción estacional:
Modelización e incertidumbres

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Agencia Estatal de Meteorología

Fuentes de predictibilidad

¿Se puede hacer?

La atmósfera, ¿no es de naturaleza caótica?

¿Qué es una predicción estacional?

Escala temporal

Escala espacial

¿A quién le interesa?

- AGRICULTURA
- SALUD
- AGUA
- TURISMO
- ENERGÍA

¿Qué modelos se utilizan?

¿Es igual predecir en unos lugares que en otros?

¿Y la época del año?

¿Tiene la misma fiabilidad la predicción de unas variables que otras?

Predicción estacional:
Procedimiento Operativo

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Agencia Estatal de Meteorología

Se elabora un boletín climatológico global una vez al mes.

Se publica en la web y en los medios de comunicación las tendencias de la temperatura y precipitación para el siguiente trimestre.

PREZI

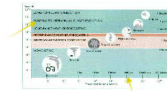
Predicción estacional: Modelización e incertidumbres



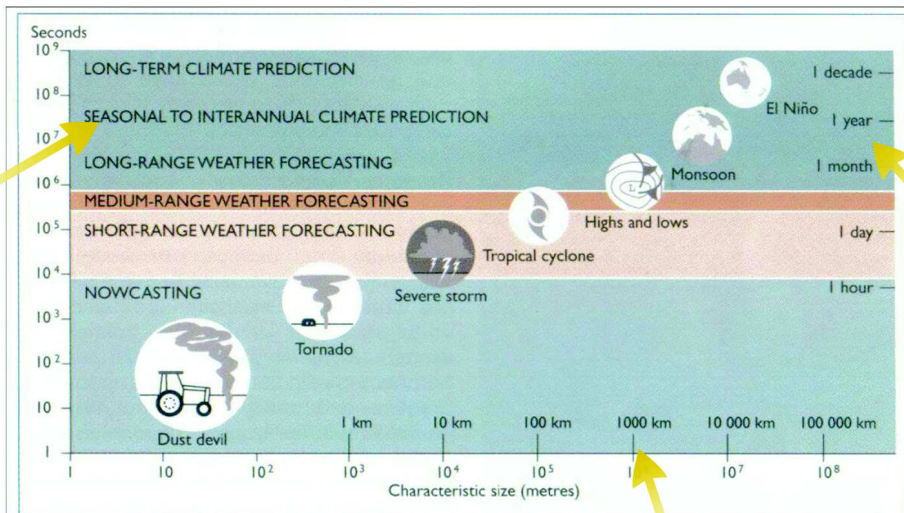
¿Qué es una predicción estacional?

Escala temporal

Escala espacial

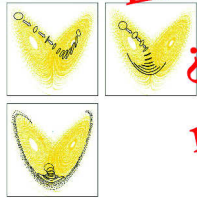


Predicción estacional: Modelización e incertidumbres



¿ Se puede hacer ?

La atmósfera,
¿ no es de
naturaleza
caótica ?



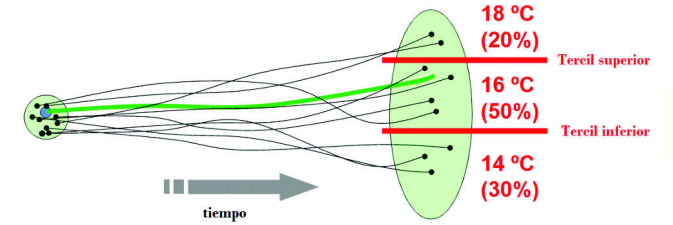
Incertidumbre

Modelos
probabilísticos

Se usan
varios modelos

Se modifica
ligeramente el modelo

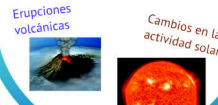
Se cambian las
condiciones
iniciales



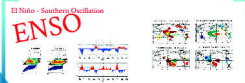
Fuentes de predictibilidad

contenido
de calor en
los océanos
contenido
de agua en
el suelo
cobertura
nivosa

Forzamientos
externos



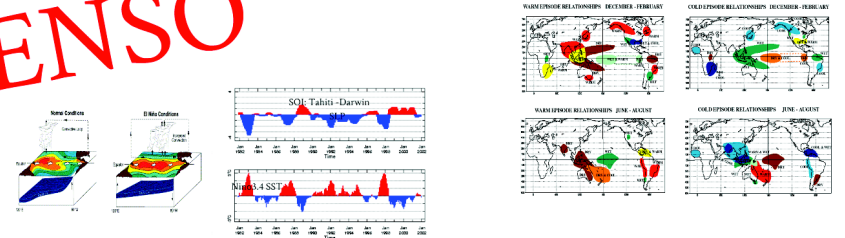
Teleconexiones



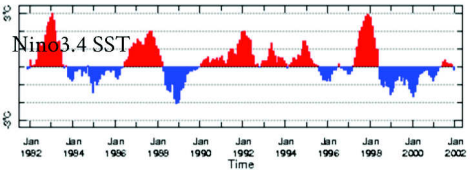
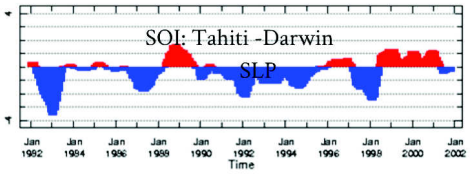
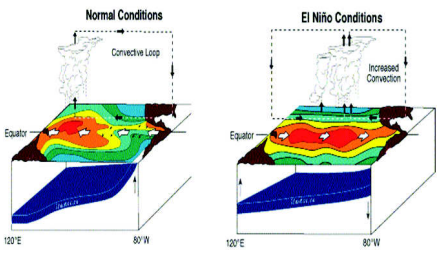
Teleconexiones

El Niño - Southern Oscillation

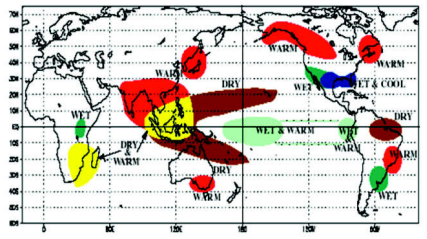
ENSO



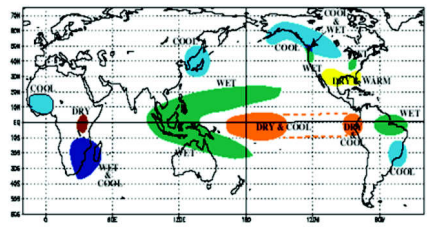
ENSO



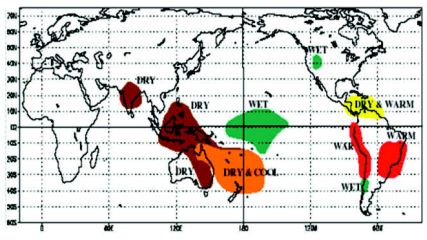
WARM EPISODE RELATIONSHIPS DECEMBER - FEBRUARY



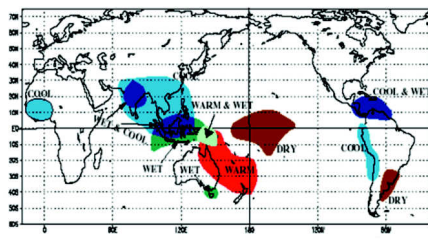
COLD EPISODE RELATIONSHIPS DECEMBER - FEBRUARY



WARM EPISODE RELATIONSHIPS JUNE - AUGUST

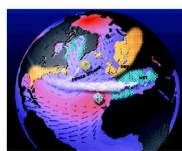
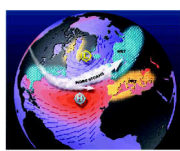


COLD EPISODE RELATIONSHIPS JUNE - AUGUST



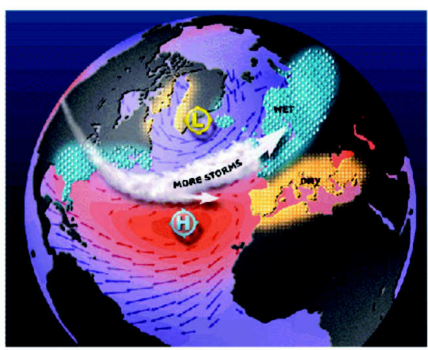
The North Atlantic Oscillation

NAO

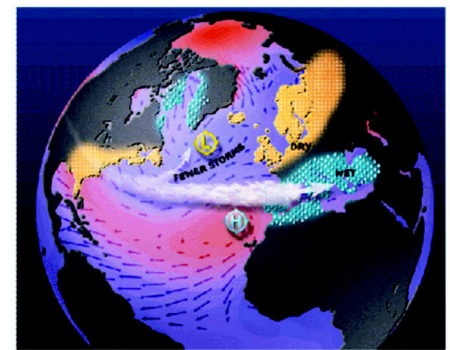


NAO fase positiva

NAO fase negativa



NAO fase positiva



NAO fase negativa

Fuentes de predictibilidad

contenido de calor en los océanos
contenido de agua en el suelo
cobertura nival

Teleconexiones

The North Atlantic Oscillation (NAO) and El Niño - Southern Oscillation (ENSO) are shown as key teleconnections.

Forzamientos externos

Erupciones volcánicas
Cambios en la actividad solar

Predicción estacional: Modelización e incertidumbres



¿Qué modelos se utilizan?

¿Es igual predecir en unos lugares que en otros?

¿Y la época del año?

¿Tiene la misma fiabilidad la predicción de unas variables que otras?

WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble

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Introduction | Deterministic MME | Probabilistic MME | References

Latest Forecast data

Map showing forecast data for various locations: Moscow, Exeter, Toulouse, Beijing, Seoul, Tokyo, Pretoria, Melbourne, Montreal, Washington, and CPTC.

Notice / News

- Check! System Requirements
- All GPCs(12) for MAM 2013 are uploaded 2013.03.19
- All GPCs(12) for FMA 2013 are uploaded 2013.01.23
- Forecasts for FMA 2013 are uploaded 2013.01.17
- All GPCs(12) for JFM 2013 are uploaded 2012.12.17
- Forecasts for JFM 2013 are uploaded 2012.12.14

WMO Global Producing Centres

Canada	Montreal	ECMWF	Moscow
Seoul	Toulouse	Washington	
Exeter	PCWMA	Melbourne	Pretoria
			CPTC

¿Qué modelos se utilizan?

¿Es igual predecir en unos lugares que en otros?

¿Y la época del año?

¿Tiene la misma fiabilidad la predicción de unas variables que otras?

- Es más difícil predecir en nuestra zona que en latitudes tropicales.
- Existe más predecibilidad en temperatura que en precipitación.
- Más predecibilidad en los meses estivales que en los invernales.
- Hay bastante consistencia entre modelos

¿Qué modelos se utilizan?

¿Es igual predecir en unos lugares que en otros?

¿Y la época del año?

¿Tiene la misma fiabilidad la predicción de unas variables que otras?

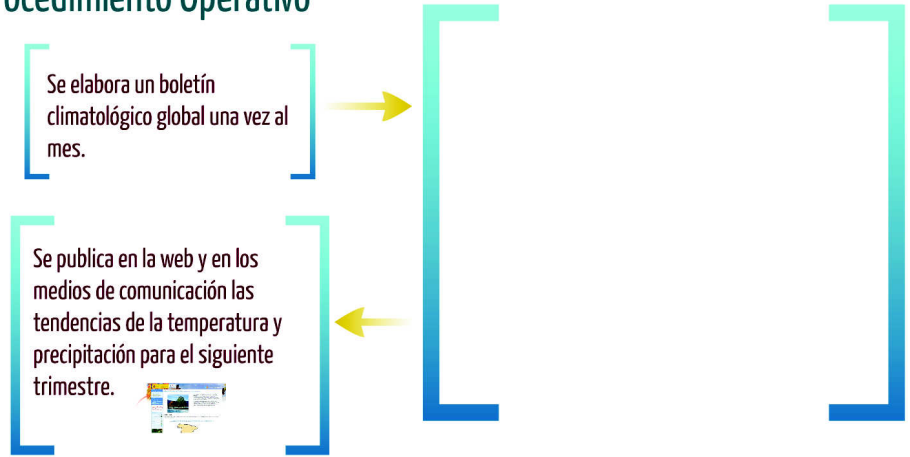
¿A quién le interesa?

- AGRICULTURA
- SALUD
- AGUA
- TURISMO
- ENERGÍA

Predicción estacional: Modelización e incertidumbres



Predicción estacional: Procedimiento Operativo









**Predicción estacional:
Procedimiento Operativo**

Se elabora un boletín climatológico global una vez al mes.

Se publica en la web y en los medios de comunicación las tendencias de la temperatura y precipitación para el siguiente trimestre.

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The diagram illustrates the operational procedure for seasonal forecasting. It features a central vertical bar with a blue-to-teal gradient. Two yellow arrows point towards this bar from the left. The top arrow points to a blue bracket containing the text 'Se elabora un boletín climatológico global una vez al mes.' The bottom arrow points to another blue bracket containing the text 'Se publica en la web y en los medios de comunicación las tendencias de la temperatura y precipitación para el siguiente trimestre.' Below the second bracket is a small image of a weather bulletin. The entire content is set against a background of a blue sky with white clouds and a grid of small white plus signs. Logos for the Spanish Government, the Ministry of Agriculture, Food and Environment, and Aemet are located in the top right corner.

Bienvenido Beningata Benvidos Benvingata Ongi etorri Welcome Bienvenos

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Inicio Servicios climáticos Predicción estacional

Predicción estacional para el periodo octubre 2013 - diciembre 2013



Predicción estacional

La predicción estacional se basa en el modelo de predicción estacional del Centro Europeo de Predicción a Medio Plazo (ECMWF) y otros modelos procedentes de otros centros. Esta predicción se renueva con periodicidad mensual. Los pronósticos proporcionan, para amplias zonas, una valoración de las anomalías de temperatura y precipitación respecto de un valor climatológico de referencia.

La fiabilidad de estas predicciones, que actualmente son experimentales en AEMET, resulta mayor en latitudes tropicales que en nuestras latitudes, ya que en estas últimas las fluctuaciones aleatorias del tiempo son normalmente mayores que las componentes predecibles a escala estacional.

TEMPERATURAS

No se aprecian tendencias significativas con respecto a los valores normales en ninguna zona de España con respecto al periodo de referencia 1971-2000.

ANOMALÍA DE TEMPERATURA (OCTUBRE 2013 - DICIEMBRE 2013)



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¡ Muchas gracias!

PREZI