

Honey - we're back.....

Following our straw poll and further discussion at the AGM, it was decided that the Newsletter should be reinstated. But, there has been a change of Editor.

Richard Chapman of the BBC Weather Centre has done a brilliant job today producing our Newsletters. But he has decided to hand over to John Teather who has now retired from the BBC. John will also be taking over from Jeremy Hall who was responsible for producing our excellent web site. There is a lot of sense in one person doing both as there is an easy flow of information between both media, and thanks to Bill Gates - the easy means to do it.

John hopes that he will be able to bring a refreshing approach to the New Newsletter. At the AGM Bill Giles was given the task of publications secretary tasked with providing original and stimulating articles. This edition has a lot of 'house-keeping' articles as it contains the reports of the Annual General Meeting and committee meetings.

Our big disappointment was the postponement of the planned joint conference with the AMS. We hope that the tragedy of New York will not dampen the resolve for us all to get together. International cooperation, particularly in weather becomes even more important.

Our sympathy is with the victims and families of this outrage.

John Teather retires from the BBC

After working for the BBC for 35 years John Teather has taken early retirement. At the same time moving from London to a new house on the south coast of England.


John was involved in the production of weather on the BBC for the past 25 years. He was responsible for building up the output from 3 broadcasts a day to over 120, produced from the purpose built BBC Weather

Centre. He leaves the post of Editor of the BBC Weather Centre.

However, he is not leaving weather - just the BBC. He remains as Secretary of the association. Also he stays as fellow and council member of the Royal Met. Society. He has also been invited to become a director of the Weather Index.

View from the Chair

It is a great privilege and a great pleasure to be re-elected to the Chairmanship of this organisation, and I would like to thank all the members for bestowing on me both this honour and this responsibility. Inge Niedek has been a very active Chair during the past three years, and has set a standard for me to aspire to during my term of office. On your behalf and on my own, I would like to thank her for all her



work; I know that she will continue to be active at committee level for the foreseeable future. I hope that, with the help of all of you, we can continue to build this Association into a strong and con-

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Minutes of the Seventh Annual General Meeting of the International Association of Broadcast Meteorology

Held on Friday 29th June 2001 at 1600, in the Minneapolis Hilton, USA during the AMS 30th Conference on Broadcast Meteorology.



Inge Niedek retiring as Chairman after serving the maximum three years

In Attendance: Steve Swienkowski, Bill Giles, Claire Martin, Yoshikazu Idesako, Inge Niedek, Tomas Molina, Jim Jagers, Bob Ryan, Gerald Fleming, John Kermond, Sam Muchemi, Paul Gross, John Teather.

Apologies for absence, and notification of postal votes.

Michihiko Tonouchi (substitute Mr Idesako), Jean Francois Leroux, David Knott, Joan Blackburn, Richard Chapman, Johan Groth, Jeremy Hall, Siri Kalvig, Andrew Lane, Hema Paupiah, Maria Pirone, Nigel Reed, Andrew Riley, Hugh Sheppard, Helen Young, Monica Lopes, Jofre Janue, Michael Walsh, Evelyn Cussak, Dieter Walch

2. Minutes of the Sixth Annual General meeting, held at WMO Geneva, 22nd March 2000

The adoption of the minutes of the previous meeting were proposed by Gerald Fleming, and seconded by Bill Giles.

Any matters arising.

Membership recruitment was raised by John Kermond and the problems were generally discussed.

Report of the outgoing Chairman, Inge Niedek.

"Welcome everybody in Minneapolis St. Paul. We choose this place in coordination with the AMS conference because we know that it is getting very difficult in these days to get away from the TV for all active broadcasters, and my college Dieter Walch, who is also a vice-president has to stay home, because otherwise I would not have been here.

It makes sense, that we try to combine as many occasions as possible to give at least some members the chance to participate in professional conferences and in our AGM.

My last term as chairperson is finished now. It has been very interesting, I have learnt a lot mainly in politics. I can summarize my experience in a few words: the first year you learn, the second year to start to work and the 3rd year you learn that by far only some of your targets could be realized during this period. Therefore I am handing on a lot projects.

You can see from the records and protocols and my views of the chair what we have been doing during the past years and I don't need to repeat it all right now, I will only pick out some specific points.

Regarding our political involvement in the WMO one of our major targets we have been working on since the beginning almost 7 years ago, was a mechanism, which would give us a more "official" relation to WMO. Normally WMO is an almost exclusive circle of Met Services. But as broadcasting of weather has evolved enormously over the past years we thought a dialogue between the original collector and producers of weather data and those who hand it on to the public should be one of our utmost priorities. Our efforts resulted in the status of an "observing party" at WMO, which allows us to participate in all official WMO assemblies, to get more involved in WMO matters, and to get a deeper understanding of the important World Organization.

Very soon we learned about our limitations which are simply determined by manpower, time and money. We realized that it is impossible to fully take this chance, because somebody would have to spend weeks in Geneva. But I think we have reached a good solution in trying to find out about the agenda and participate when broadcast relevant issues are on the agenda.

The second point we learned is that it is very difficult to start a real dialogue with WMO concerning relevant issues as referring to the broadcasters and the media. There is basically no discussion forum to really discuss these issues, but we can place statements in the official assemblies and hope that they find their counterpart for attention. Also we have to consider that the democratic nature of WMO causes long decision-finding processes. But despite all limitations we have appreciated the current solution and any dialogue very much.



Delivering Weather to the public is our business



We managed together with WMO to organize a scientific Media Conference last year in Geneva, which had been quite successful and made us think of an "International" Broadcast Conference together with AMS and WMO in Geneva, because weather is a worldwide process and not a national one.

It took us about half a year to a Letter of Intend processed through WMO and finally it was too late to organize an international conference for 2002. But we are quite confident that it will take place within the next years.

Yesterday we had a meeting with AMS (Board of the Broadcast Conference in under the current Board Chair Mike McLelan, in attendance of the president of AMS, Bob Serafin, the meetings director, Yale Schiffman, other AMS-staff, Haleh Kootval, Chief, Public Weather and Operational Information from WMO, IABM current chair Inge Niedek, designated new chair Gerald Fleming IABM and other IABM members.

The participants of the meeting mutually agreed to hold an International Broadcast in 2004 in Geneva, considering besides others the two major arguments – namely:

to find profound reasons in order to gain acceptance for such an event from the TV-management of weather broadcasters

no higher expenses compared to those in the US for such an event.

This decision was of course a preliminary meeting decision and will have to be communicated and examined by the Board of Directors of AMS, and then presented and examined by WMO. After that we will have a joint meeting of all participating parties in Geneva.

Now I switch over to another theme which kept us occupied during all years of IABM existence – "data-policy" of the Met Services in Europe.

There has been formed an interest group of European Met Services "ECOMET" who worked out a concept on data-policy which we think is not suitable for weather-broadcasters. Over the years we tried to get a chance to discuss this issue with a group representing ECOMET, but there has not been any relevant body to speak to. The UK Met Office is the first institution (also a corporate member of IABM) which promised to help and organize a meeting with relevant people.

Before I finish my speech just a few comments on some future or ongoing projects.

One issue or outcome from the committee meeting was passing on our knowledge and experience in weather broadcasting through training (concept will be worked out).

Work out a certification concept which could go along with the efforts of the National Met Services in this respect and should be accepted by WMO

Return to the newspaper "on paper"

Summing up I can say – most of the work has been done in close cooperation with the committee, it always was a joint effort and I want to express my warmest thanks to all committee members for their cooperation."

Bill Giles proposed a vote of thanks to Inge for all her hard work and members warmly applauded her.

Following on from the report on the meeting to discuss the AMS/IABM meeting, Bob Ryan proposed sending an open letter by email to USA News Directors explaining the purpose and costs of the 2004 Conference in Geneva. Radio & Television News Directors Association (RTNDA) would be a suitable organisation at which to promote the idea of the Conference. Attendance at the annual meeting of the RTNDA would be a suitable venue at which to propose the 2004 Conference and convince stations of the value of sending their broadcast meteorologists..

Report of the outgoing Honorary Secretary, John Teather.

John Teather reported that the IABM Committee were only able to meet three times in the year on 20/6/00, 4/12/00 and 26/6/01. It is a reflection of the problems of running an international association. He reiterated the progress that the IABM had been able to make as observers at WMO. In particular attendance at two meeting of the Executive Council had produced results as the members of WMO are slowly recognising the importance of the broadcast profession and the need for NMSs to work with us. New training initiatives have been discussed with WMO to ensure that one of the primary purposes of the IABM can



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The Association web site is at
www.iabm.org

be realised. This includes working on proposals for an internationally recognised 'seal'. Email had been used with increasing effect during the past year as a means of communicating regularly with members. Finally he reported that the committee had agreed that new members from countries listed as 'developing' by WMO would be offered free membership.

There was a general discussion on training issues in particular in developing countries and how the IABM can support and encourage these initiatives.

Report of the outgoing Treasurer, Gerald Fleming.

Gerald Fleming reported on the current situation and answered questions. It was agreed to also set the Membership currency to be also in Euros as well as US Dollars.

Election of Directors and Officers.

The following Directors and Officers were elected:

Chairman **Gerald Fleming**

Income / Expenditure for 2000 (In U.S. Dollars)

N.B. Compiled using the following exchange rates:

Secretary **John Teather**

Treasurer **Gerald Fleming**

Vice-Chairmen **Inge Niedek; Dieter Walch**

Membership Secretary **Tomas Molina**

Publications Secretary **Bill Giles**

Ordinary Directors **Philippe Jeanerot; Paul Gross,
Tammy Garrison**

Proposed by John Kermond and seconded by Bill Giles and agreed by all members present.

Resolutions.

None were received.

10. Any other business.

It was proposed by Jim Jagers that next year members of the IABM present papers at the Broadcast Conference to highlight the need for international cooperation and to dispel some of the worries of AMS members. This was agreed.



Our accounts are not yet in stormy waters

It was agreed to also set the membership currency for 2002/2003 to be in Euros € as well as US Dollars \$.



Too much money always goes on paper-clips



CALL FOR PAPERS

31st AMS Conference on Broadcast Meteorology Williamsburg, Virginia 23-27 June 2002

The 31st Conference on Broadcast Meteorology, sponsored by the American Meteorological Society and organized by the AMS Board of Broadcast Meteorology will be held 23-27 June 2002 in Williamsburg, Virginia. General information will be posted on the AMS website (<http://www.ametsoc.org/AMS>)

by mid-February 2002.

Papers are encouraged and solicited in the following areas: 1) American Weather History (particular early American Weather History), 2) Present ideas, systems, issues and products in Broadcast Meteorology, 3) Future issues, systems, practices and products in Broadcast Meteorology, 4) Ideas for improving television weathercasts, communications, and coverage of severe weather.

Please submit your abstracts electronically via the AMS website by 4 January 2002. An abstract volume will be published as part of the final program.

For further information, contact the program chairpersons: Jim Jaggars, Fox 13 WHBQ-TV, 485 South Highland, Memphis, Tennessee, USA, 38111 (Telephone 1-901-320-1362, Fax 1-901-320-1317), E-mail whbq-jimjaggars@foxinc.com), or Lisa Spencer, WSMV-TV, Nashville, Tennessee (Telephone 1-615-353-4444, E-mail Lspencer@wsmv.com).

A meeting of the Public Weather Services (PWS) Expert Team on Media Issues (ET/MI) of WMO was held in Minneapolis, USA from 26 to 30 June 2001, in conjunction with the American Meteorological Society's 30th Conference on Broadcast Meteorology. The meeting was chaired by Gerald Fleming (Chairman of the IABM) and the team had several members of our association.

Under its terms of reference the Expert Team had to develop guidelines on:

- (I) improving the use of official, consistent information;
- (II) improving media relations and
- (III) weather on the Internet.

The team developed guidelines that elaborate a number of strategies on these topics as follows:

- Ensuring good coordination and communication within the NMS and between the NMS and the media
- Designing appropriate and user-friendly public weather services products
- Ensuring good knowledge by the media and public of the NMS's services and the availability of these services
- Making NMS staff prominently available to the media during severe weather events and at other times on a routine basis

As regards approaches to improve relations between NMSs and the media:

- It was recognized that the relationship between the NMSs and the media could be improved in order to address the concerns of both the NMSs and media organizations. The expert team developed guidance materials on best practices covering the subject.

· The guidelines also discuss how NMSs could work with the media during delicate emergency situations on a step-by-step basis with the aim of using the media to

transmit vital information for saving of life and property.

· Recommendations were developed for interaction with the media for the preparation and dissemination of daily weather forecasts, climate outlooks, and participation in joint workshops etc.

· The subject of public education through the media was debated and the advantages of such interaction brought out.

In regard to the provision of weather services on the Internet, a set of guidelines was prepared by the expert team in which, the following points were elaborated:

- The NMS policy in regard to access to weather information (free public access / commercial access / specialized access) needs to be clearly thought out and articulated.
- The content to be placed on a Website should, where possible, be expressed in the form of maps, graphs and charts, making full use of Web page technology.
- Forecasts for the national territory of a NMS should always be reviewed by an experienced forecaster before being issued.
- Hyperlinks should be employed to provide as much background information as possible.
- Web pages need to be updated frequently and consistently.
- Direct model output charts on a Website need to be carefully presented, to ensure no inconsistencies with the official forecast.

· The NMS should ensure that the design and layout of its Web pages are of high quality, to reflect the quality of the

Editors Note

I will also try to get copies to put in the next Newsletter

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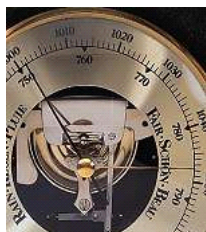
An expert group?

How weather works on the right-hand side of the pond



Europe's Meteorological Satellite Organisation (EUMETSAT)

The organisation is responsible for the launch and operation of the satellites and for delivering satellite data to end-users as well as contributing to the operational monitoring of climate.



To deliver high quality meteorology to the peoples of Europe requires a very high level of co-operation between the Met Services of the various nation states. In particular there are two important, jointly funded organisations that have been established to share the costs.

European Centre for Medium-Range Weather Forecasts (ECMWF)

This is an international organisation based in Reading, Berkshire, supported by the European States of Belgium, Denmark, Federal Republic of Germany, Spain, France, Greece, Ireland, Italy, the Netherlands, Norway, Austria, Portugal, Switzerland, Finland, Sweden, Turkey, United Kingdom.

The Centre also has co-operation agreements with Croatia, Iceland, Hungary, and Slovenia, and has working arrangements with the World Meteorological Organisation (WMO), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), and the African Centre for Meteorological Applications for Development (ACMAD).

Originally a COST (European Co-operation in Science and Technology) project, the Centre was established in 1973 by a Convention. The first real-time medium-range forecasts were made in June 1979. The Centre has been producing operational medium-range weather forecasts since 1 August 1979.

The principal objectives of the Centre are the development of numerical methods for the preparation of medium-range weather forecasts for distribution to the meteorological services of the Member States. Scientific and technical research is directed to the improvement of these forecasts together with collection and storage of appropriate meteorological data. In addition, the Centre makes available a proportion of its computing facilities to its Member States for their research; assists in implementing the programmes of the World Meteorological Organisation; provides advanced training to the scientific staff of the Member States in the field of numerical weather prediction and makes the data in its extensive archives available to outside bodies.

Europe's Meteorological Satellite Organisation (EUMETSAT)

Satellite observations are an essential input to numerical weather prediction systems and also

assist the human forecaster in the diagnosis of potentially hazardous weather developments. Of growing importance is the capacity of weather satellites to gather long term measurements from space in support of climate change studies.

EUMETSAT is an intergovernmental organisation created through an international convention agreed by 17 European Member States: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and the UK. These States fund the EUMETSAT programmes and are the principal users of the systems. EUMETSAT also has three Co-operating States: Republic of Slovakia, Hungary and Poland.

The organisation is responsible for the launch and operation of the satellites and for delivering satellite data to end-users as well as contributing to the operational monitoring of climate. In 1991 it initiated a new programme, the Meteosat Second Generation (MSG), to ensure continuity of observations from geostationary orbit until the latter half of the second decade of the 21st century. At the same time it has become one of the major partners in satellite systems for observing the entire planet, enabling Europe to take its place in monitoring global weather and climate. Its success has not only ensured the availability of key satellite data for Europe but also for many developing countries which now rely on its data and systems.

The Meteosat system is intended primarily to support the National Meteorological Services (NMS) of Member States. The NMS in turn distribute the image data to other end users, notably through the provision of forecasts on television several times a day. Through this particular distribution system it could be said that most of the population of Europe makes direct use of EUMETSAT's imagery.

EUMETNET is a network grouping 18 European National Meteorological Services .

EUMETNET provides a framework to organise co-operative programmes between the Members in the various fields of basic meteorological activities such as observing systems, data processing, basic forecasting products, research and development, training. Through EUMETNET Programmes, the Members develop their collective capability to serve environment management and climate monitoring and to bring to all European users the best



(Continued from page 1)

fidient voice for the profession of Broadcast Meteorology.

The first point to remark on is the very existence of Issue 10 of the IABM News. We had taken a decision to move the journal from the medium of print onto the Web, but the reaction of our members was that they really wanted to see the print newsletter continued. I find it very reassuring that, working as we all are in the high-tech world of broadcasting, with most of us having easy access to the very latest in communication technology, we still place a great importance on the more contemplative practice of reading. As a committee, we want to provide you, the members, with the best service possible given our admittedly limited resources.

This brings me to another change of personnel. For the past few years, the IABM News has been edited by Richard Chapman, while our Webmaster has been Jeremy Hall. Our Secretary, John Teather, has just taken early retirement from his position as Editor, BBC Weather Centre. With more time on his hands, John has now taken over both as Editor of this newsletter and as our Webmaster; we are fortunate indeed to have someone of his breadth of knowledge and experience to take on these tasks. We should, however, note the considerable achievements of Richard, who shaped and improved the IABM News out of all recognition during his tenure in the editors chair, and of Jeremy, who built our website from scratch to give us an impressive presence on the web. To both, we say thank you.

It would be impossible to write at this time without making reference to the terrible events in New York on September 11th. I know I speak for all of our European, African and Asian members when I say to our US colleagues that our thoughts and concerns are with them during these difficult times.

In reflecting on the event it struck me how perverse it was that two of the technologies which help to define modern civilisation - aviation and broadcasting - were turned against such civilisation on that dreadful day. Aviation; in that passenger aircraft were turned into weapons of destruction, broadcasting; in that the events were timed (deliberately, surely) to allow mass destruction to occur, live on television, before our horrified gaze, increasing its impact, if such were possible.

Many of us have worked in aviation meteorology, and all of us work in broadcast meteorology; in both instances our efforts have been directed at ensuring the safe and efficient conduct of the lives of our fellow-citizens. That such technologies could be so abused; to destroy life on the one hand and to traumatise those who witnessed the destruction on the other, was unimaginable. It seems to me that the only possible response, at a professional level, is to redouble our efforts to contribute to the good of our society through our work, both inside and outside the studio. We must strive to uphold the civilising values upon which our societies are built.

During the past year your committee has put a lot of work into the concept of a World Conference of Broadcast Meteorology; and in doing so we have gained the active support of the World Meteorological Organisation and of the Board of Broadcast Meteorology of the American Meteorological Society. We had originally hoped to have this conference in Geneva in 2002, but following some meetings in and around the AMS Broadcast Conference in Minneapolis, and a hard look at the organisational, logistical and economic considerations, this has now been put back to 2004. This does not represent any dilution of commitment on the part of ourselves or any of our partners; rather a determination to put on a world-class event, and a realisation of the preparatory work involved.

The successful staging of this event will be made all the more difficult by the events of September 11th; many US broadcasters in particular will need to be convinced (as will their News Editors) of the value of travelling to Geneva for such a gathering. I therefore ask you, the members, to promote this idea wherever you can over the next couple of years. Paradoxically I think that it is now more important than ever that, as a world community of weather broadcasters, we join together; not just to discuss those questions which divide us, but to visibly demonstrate the experiences which unite us.

Gerald Fleming - Chairman IABM

Chairman@iabm.org

How to get better forecasts out of the Internet

The great majority of weather forecasts on the Web are simple city forecasts presented as pictograms, maximum and minimum temperatures and (sometimes) wind forecasts. Every Meteorologist knows that the quality of these forecasts is frequently highly suspect!

M Daniel Rousseau of Meteo France has done some work on verifying city forecasts; based on the max and min temperatures forecast for London and Paris. Five website forecasts were

chosen; those of the UK Met Office and Meteo France; the site of French daily newspaper Le Monde, and two well-known US-based sites. Temperatures were verified five times per month over six months, giving a total sample size of 30 forecasts.

In this small sample, the websites of Meteo France and the UKMO were very close, and the best of the five. Of the other three; two were very poor; worse than either climatology or persistence!

The most surprising result, however, was that an average of all the sites produced a better forecast than any of the individual sites. So. It seems, to get the best from the Web, you should surf as many sites as possible, then combine the results of your research

into an "ensemble" forecast. This blended forecast will most likely be better than any individual forecast you can source.

From a talk given to ECAM 2001 by M Daniel Rousseau.

Hungarian Met Service - a case study



The greatest surprise, though, was the presence of a fully-equipped television studio just down the corridor from the forecast office.



The holding of ECAM in Budapest provided an opportunity to examine the operations of the Hungarian Meteorological Service, OMSZ. This organisation has had to cope with the enormous political and societal changes which have affected eastern Europe over the past few decades, while continuing to provide a quality service to the Hungarian people. They can and do, however, draw on a long and distinguished tradition in the mathematical disciplines within Hungary.

The Director of the Hungarian Met Service, Dr Ivan Mersich, gave a talk to the conference during which he characterised the decades of the 50's, 60's, 70's and 80's as being marked by excessive secretiveness and inefficiency. There was during this period a lot of knowledge within OMSZ, but much of this was wasted. During the 1970's there were about 580 employees, rising to about 1000 during the 1980's, when there was a lot of emphasis put on weather modification.

It may come as no surprise to learn that under this regime the forecast for May 1st was invariably for fine weather, whatever the synoptic prognosis! Rather more surprising is that, even in the 70's, the sale of weather data provided about 10% of the total budget.

Drastic measures were taken with the collapse of the communist regime and the advent of a market economy. Staff levels were cut by 70%; from 1000 to about 300! This was achieved by merging three separate forecasting institutions into one; automating much of the observation network, and eliminating the work on weather modification. It was, of course, a very difficult time for all.

Of the current staff of approximately 300, about 120 are at graduate level and 70 of these are meteorologists. Income from business activity now accounts for about 50% of the total annual budget, which approximates 7.5 Million Euro or about 7 Million US\$.

Further information was provided by Karoly Vissy, who conducted a fascinating tour of the OMSZ headquarters. Karoly is a founder member of the IABM, and has been the leading figure in Hungarian weather broadcasting for many years. Now semi-retired from operational work, he still presents the weather on one of the Hungarian public channels 12 to 14 days per month, and has the position of special advisor to the Director, Dr Mersich.

The headquarters building of the OMSZ has been occupied by the Service (or, more correctly, by one of its constituent institutes) for about 100 years. A graceful building in the classical style, it is built round a courtyard in a city-centre location. The main hall displays paintings of previous Directors, together with busts of Hungarians who have distinguished themselves in the mathematical and physical sciences.

The forecast office is in a long bright and airy room. Three clusters of desks define the three principal activities, which are

1. Synoptic analysis and forecasting
2. Aviation forecast services
3. Media forecast services.

In addition there is a briefing area situated to one end of the room, where the forecast teams gather at intervals to discuss and review the developing weather. The quality of the workstations available to the forecasters was seen to advantage in this area, with model and observational data displayed with great clarity.

Our principal interest, of course, centred on the media desk. About ten newspapers are provided with forecasts from this desk; these are generated semi-automatically from model data which has been modified by a forecaster before going to print. Software is a specially adapted version of CorelDraw.

A radio studio in an adjacent room to the forecast office provides the facility to broadcast directly on a



Overview of ECAM

The fifth European Conference on the Applications of Meteorology was held in Budapest, Hungary from the 24th to the 28th of September, in conjunction with the first Annual General Meeting of the European Meteorological Society (EMS).

ECAM is a bi-annual conference, interleaving with the complementary ECAC, which concentrates on the Applications of Climatology. While it is principally a scientific conference devoted to examining scientific issues, it has become, almost by default, the main forum in which all the players in European Meteorology; Met Services, private sector weather firms, international weather organisations and academics can meet as equals to discuss and debate matters of mutual concern, both scientific and otherwise.

This ECAM was enlivened by incorporating the first Annual Meeting of the EMS. Europe has long had a variety of active National Meteorological Societies; the EMS is a coming-together of these societies to establish an organisation that can address issues that need a European-wide perspective.

In general terms, contributions to the ECAM part of the conference concentrated on the more scientific and technical issues; those to the EMS part mainly on philosophical and policy considerations.

ECAM was divided into three themes; the Use of Forecasting Tools, the Application of Meteorology, and Commercialisation and Service Providing. The format was for fifteen-minute talks, followed by one or two brief questions. Side-by-side with these were poster sessions

(three in all) where various aspects of the topics under discussion could be examined and discussed in more depth on a one-to-one basis.

The EMS took as its theme "The Future of Meteorology in Europe"; inviting many eminent speakers (including the President of WMO, John Zillman) and conducting a round table discussion based on questions submitted from the floor.

If there could be a criticism of the conference, it would be that the sheer number and diversity of the contributions made it very hard work to maintain concentration and "keep up" with proceedings, and did not encourage deeper and more vigorous questioning of the speakers after each presentation.

While the conference did not deal with broadcast issues specifically, other than as one of the "industries" that must be serviced with weather information, many of the issues discussed were of interest to weather broadcasters; and in particular those which dealt with the interface between public and private sector organisations and the exchange of weather data.

Thus, ECAM/EMS was a rich source of material for anyone with an interest in meteorology. We will, over the next few issues of the IABM News, be bringing you some articles based on the contributions at this conference; in this issue we publish the thoughts of some of those who address the issues of the links between the public sector and private sector parts of our business.



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The Hungarian city of Budapest

Interventions made by Tomas Molina and John Teather on behalf of the IABM at the fifty-third Session of the Executive Council of WMO on 11th and 12th June 2001



The IABM interventions are often controversial

Once the taxpayers are convinced of the important role of the NWS in the prediction of weather that save their lives and properties the government funding is much easier.



Its hard walking the fine line between passion and offence

6.1 Public Weather Services Programme

Mr Chairman

This is our second year at the Executive Council, and we want to highlight at this point the good spirit of co-operation and understanding we have found at the WMO secretariat, especially with the people of Information and Public Affairs (IPA) and Public Weather Services (PWS). We greatly support the heading of co-operation between WMO and the media and the private sector, both also part of the meteorology community, and members of our association.

To reach the highest standards of quality in meteorology is a role that has to be played co-operatively by all the members of this family. The private sector and the media will help the National Weather Services (NWSs) and WMO to achieve the targets of the weather information diffusion to the general public and will help to increase the visibility of the NWSs and WMO.

We, as an Association, ask WMO to give maximum support of the global severe weather information web site that is being developed and tested with the Hong Kong weather service. It is important to have a single voice for severe weather events, and an easy access to the watches and warnings issued by the NWS would greatly help our members.

Training is a very important area in the quest to reinforce NWSs visibility, as the wrong person on-screen can reflect badly on the NWS. The Association is committed in providing help with this training process. NWSs need to ensure that only people who are 'tele-visual' are used to present weather on their behalf. To this end the selection and training process must be improved. Members of the IABM are willing to help in this process. Currently the BBC and the UK Met Office are working on establishing a training facility and programme to specifically address this issue.

12.1 Role and Operation on NMS

Mr. President

We want to congratulate the WMO on the survey about the role of the National Weather Services (NWS). It is important to know the wiliness and the fears of every NWS of each nation to better understand and plan the world meteorology in a

whole. It is interesting to highlight that in the second level of importance in this survey is the level of funding of the NWS from the government budget. In fifth position is the role of the NWS, and after this the relation they have with the media. In twelve position is the image of the NWS. In all the cases it is very important for all the NWS to increase the visibility of the NWS in their countries.

From the IABM perspective all these points are related to the visibility of the NWS to the general public, and it has to be done through the media. Once the taxpayers are convinced of the important role of the NWS in the prediction of weather that save their lives and properties the government funding is much easier. In the IABM we always recommend our members to release the watches and warnings issued by the NWS and give attribution of the information to the NWS. We also recommend our members to work closely with their NWS.

At this point we would also encourage the NWS to strength the relationship they have with the media, in the conviction that the co-operation will be workable for both parts, and especially for the quality and quantity of weather information that finally reaches the public.

We also encourage WMO that the planned high level conference planned for 2003 will also take place with the broadcast meteorologist participation.

Blame the €

Those of you who pay your subscription by credit card may be wondering why it has not, as yet, been collected for the current year.

Blame the EU!! Or, more precisely, the EURO. The software which is used by your treasurer to collect credit card subscriptions from members needed to be changed so that it was "Euro compatible". Many credit cards also now have a three-digit "verification code" printed on the rear of the card, close to the band where you sign your name. This code is used in telephone transactions, to ensure that the person ordering the goods or services was actually in possession of the credit card in question. The older software did not allow for this extra safety feature.

A new version of the credit card software was duly supplied by our bank; loaded onto the PC of your Treasurer, and the necessary training provided. Collection of subscriptions will now proceed over the next month or so.

If your credit card has, over the past year or two, been lost / stolen / eaten by the dog etc and you have a new card then please supply updated card details (number and expiry date) to the Treasurer so that your subscription payment can be processed. Details can be accepted via email to gflaming@eircom.net but security considerations suggest that by fax would be safer; the fax number is intl + 353 53 45721.

In due course it may be necessary to supply the three-digit "security code" to the Treasurer in addition to card number and expiry date. For the present, however, this will not be necessary.

As and from 2002 subscriptions to the IABM will be payable in either US Dollars or in Euros. The rates will be unchanged for the coming year, and the relevant Euro amount will be calculated by reference to the prevailing Dollar/Euro exchange rate in early 2002.

To those who have already paid their sub by cheque or bank draft we say "thank you". To those who have neither paid nor supplied card details, please take this reminder to regularise the position before the end of the year.

Mug up on your graphics!

At the fifth MUG meeting, held in Paris from May 9th to 11th 2001 the RTÉ / Met Éireann weather broadcast was judged to be best overall presentation



amongst the participating groups.

What is the MUG? MUG stands for the Metacast Users Group. The weather graphics system used by Met Éireann in supplying weather services to the Irish public service broadcaster, RTÉ, is known as Metacast Ultra; hence the involvement in the Metacast Users Group.

Met Éireann meteorologists have a proud record on involvement with the national broadcaster in bringing weather forecasts to the television viewer. One George Callaghan kicked off on the first full day of Irish television transmission, New Years Day 1962. In the early days of television the weather charts were drawn by hand, or relied on the ubiquitous magnetic symbols placed on metal maps.

RTÉ caught up with this development of computer-based weather graphics rather late in the day; such graphics reached Irish television screens in 1988, using a locally-produced computer package.

Time passed and weather graphics systems became more complex. In 1998 Met Éireann acquired the Metacast Ultra weather graphics package so that it could offer a "turnkey" service to broadcasters in Ireland. This package was developed by a small Norwegian firm, Metaphor AS (who are corporate members of the IABM, and have recently been renamed / rebranded as WeatherOne). Ultra is readily

compatible with both Met Éireann's in-house HirLam weather model and the globally-reaching ECMWF model.

Metacast Ultra is in use in many television stations; the majority of which are in the United States. The non-US users; mainly European but including broadcasters from the Middle East and the Far East, (and also CNN; US-based but with worldwide coverage), gather annually for the MUG, or the Metacast Users Group meeting. The meeting this year was held in Paris under the auspices of French channel TFI.

In the midst of all the technical discussion that forms the meat of such a gathering the participants took time to view tapes of each others weather presentations, and engaged in a friendly contest to select the best.

The presentations were judged on their meteorological content, on their creative use of the Ultra graphics system to tell the weather story; on their ability to "connect" with the viewer, and so on.

In a close finish Gerald Fleming, showing a farming forecast



which was broadcast on RTÉ 1 on Sunday, February 4th, edged out Peter Tanev of Danish channel TV2 to claim the top spot.

The trophy - a simple, elegant bowl of Norwegian pewter - now resides in Dublin; the Met Éireann broadcast team have added the endorsement of their fellow professionals in weather broadcasting to that of the Irish public.

To strengthen the ties between the MUG and the IABM, the new MUG president is Tomas Molina of TV3 Catalunya, who will host the 2002 meeting in Barcelona.

The Editor is sorry that this issue is dominated by stories about Europe. In the next issue He would like to publish more stories from USA and around the world.

So please get busy writing and email them to the Editor at secre-

UK Met Office was unhappy with the Association

Earlier this year there was an interchange of letters between the UK Met Office and the IABM which culminated in a meeting between both parties held in May. Here follows the letters and record of the meeting reproduced in full.

Met Office London Road Bracknell Berkshire RG12 2SZ United Kingdom

Tel: 0845 300 0300 Fax: 0845 300 1300 www.metoffice.com

24 January 2001

Dear Ms Niedek

As the Met Office's corporate member of IABM, may I respond to the criticism made of my organisation by the IABM at the meeting of WMO CBS, held in Geneva, December 4th 2000 and later displayed on the IABM web-site.

Speaking on behalf of the IABM, John Teather stated that ECOMET is a cartel designed to fix and control the price of basic weather data and that each year the costs go up. John then went on to criticise the Met Office specifically for in effect denying access of certain data and products to the broadcasters and hence the public.

It is wrong to say that ECOMET is a price fixing cartel. It isn't. The ECOMET grouping has been judged to be an appropriate and legitimate body by the relevant authority - the European Commission. The prices for the data and products of its members are not fixed by ECOMET. Each individual member of ECOMET sets its prices for the data and products that are generated by that individual member. Incidentally, the Met Office has been reducing its prices for data in recent years and will continue to do so.

We have consistently recognised the needs of the broadcasting community and have worked with them to expand the range of information available to the public. Within the United Kingdom the Public Met. Service provides a wide range of information, forecasts and warnings designed to inform and protect the public going about their daily lives. These services are funded by Government and made freely available to broadcasters. These services are made available to the media "In the public interest". Media organisations often seem to confuse this with "Of interest to the public". There are many additional products available and supplied to broadcasters which help attract viewers and listeners to their station. It is clearly in the broadcasters interest to do this and correctly the costs of these additional products are met by the organisations receiving them.

There is much value in the contributions that IABM have made in their short time as observers at WMO. The IABM engagements in the debates at WMO Executive Council were very constructive, and were applauded as such by the UK delegation at the time. The Met Office firmly recognises and welcomes the vital role that IABM can play as a WMO observer in improving public weather services in the coming years. But we believe that we are less likely to achieve that commonly sought goal if we proceed through unannounced public criticism of our own members.

Dear Mr Reed

Thank you for your letter of 24th January 2001, copied to Sandy Maer of the BBC. For some time now the IABM have been trying to engage the meteorological "establishment" in Europe in a discussion on the availability and pricing of weather data. In this context, your communication is very welcome.

In your letter you criticise the intervention made at the recent CBS meeting by the IABM, represented by Mr. John Teather, the Honorary Secretary of our association, and his comments on ECOMET. In support of these comments he used, as an example, aspects of the current relationship between the BBC and the UK Met Office, which was naturally the situation most familiar to him. The comments, however, were directed at all the European NMHS's, and their subsidiary bodies EUMETSAT and ECOMET. I will answer your points in turn.

The IABM has a well established and published policy on data commercialisation. We fully accept that broadcasters should contribute towards the cost of weather information. The IABM does not represent broadcast companies, it

represents the people involved in the work of weather broadcasting. Its members do not necessarily have a say at financial level within their broadcast organisations. I have enclosed a copy of our paper on this matter.

The particular problem with respect to weather information in Europe is that there is effectively only one supplier - EUMETSAT for satellite imagery, ECOMET for data, through the NMHS's - and the appropriate payment rate cannot therefore be set by "market forces". Neither is there a regulatory structure to oversee issues of pricing and service. The dictionary definition of the term "cartel" is: *'an informal association of manufacturers or suppliers to maintain prices at a high level, and control production, marketing arrangements etc'* (Concise OED 1991). There is no suggestion here as to whether the association in question has been deemed legitimate or otherwise. From the users perspective, this describes exactly why ECOMET was established, and what it does.

The members of the IABM represent the public face of Meteorology. They want access to the best possible information in order to do a good job, and to enhance the reliability of the forecasts they present. They are frequently in the position of needing quality data, but are not in control of the budgets required to acquire that data.

At a committee meeting of the IABM held on the Sunday before the CBS meeting to which you refer, the matter of data policy was discussed. Despite many representations on this subject over a number of years, little progress had been made. Many of our members are directly affected by these policies. We received a complaint only that morning over new pricing arrangements of the Swiss NMS and its dealings with the state broadcaster SRG. We have received similar complaints from members in Norway, Finland, Germany and Spain, to name just a selection of other countries. It was resolved at our committee meeting that if there were an appropriate point in the CBS meeting, then we should raise the issue yet again.

In his intervention, John Teather represented the stated policy of the IABM. Both the BBC and the UK Met Office are big worldwide players in this business, market leaders in their respective arenas and widely respected. He used as an illustration to the point the problems between these two organisations over data commercialisation. You refer to a distinction between "in the public interest" and "of interest to the public". The distinction is valid, but who defines the boundaries between these two categories? Surely this is an area where dialogue with the end-user would be valuable.

I note with interest that you copied your letter to the BBC. I might observe that this whole issue has perhaps more to do with the relationship between the BBC and the UK Met Office, than between the UK Met Office and the IABM. In our experience there is hardly a public service broadcaster in Europe that has a satisfactory relationship with its corresponding NMHS. We do not suggest that the shortcomings are always on the side of the NMHS's. However, the role of the members of the IABM is to broadcast informed, timely and complete information to our viewing and listening public. We feel that the market position set up by the European NMHS's frequently militates against this ambition.

I welcome your compliments on the value of the IABM and the contribution it has made. If we appear as representatives of broadcasting with the meteorological community, and make arguments in support of the broadcast industry, please remember that we are also representatives of meteorology within the broadcast community, where we must continually argue for the primacy of good meteorology within weather broadcasting.

We are aware that, in the days following our intervention at CBS, representatives of the UKMO arranged to have our contribution removed from the record of the debate. We think that this is counter-productive. Ignoring the problems, or pretending that they do not exist, will not make them go away. We will readily concede that a meeting of CBS is not the ideal forum at which such matters should be raised. However we have attempted, without success, to commence a dialogue on data policy with the councils of EUMETSAT and ECOMET. If we are not granted a voice at these fora, where else can we raise our concerns?

The UK Met Office could, through its membership and leading role in both these organisations, act as a bridge between the worlds of meteorology and broadcasting in Europe, and facilitate the idea of discussion and dialogue. Perhaps formal meetings with the Councils could be preceded by informal discussions through the ICWED framework. Surely talking - and listening - to each other can only be beneficial. In our spirit of openness we would like to add a copy of your letter and this reply to our web-site to accompany the report of the intervention that is already there. Would this course of action be agreeable to you? We will also circulate these to our other members, so that they are fully involved in the debate.

In conclusion I would like to thank you again for taking the time and trouble to write to me. It is easy to sit down and discuss matters with those of like mind. It is a much greater challenge to commence a dialogue with those who hold conflicting opinion, with a view to arriving at honourable compromise. The IABM has always been ready is ready to engage in dialogue; perhaps this exchange of views can be a starting-point.

Yours etc

Inge Niedek, Chairman

cc. Sandy Maeer, Controller Transmission Broadcasting and Presentation, BBC.

A meeting was held between the Met office and the IABM on 14th May 2001 to resolve a number of issues between the two organisations. These issues emerged following comments made by the IABM at a meeting of the WMO in December 2000. In correspondence following these comments it became apparent that there were a number of issues of interest to both organisations and that those would best be resolved at a meeting.

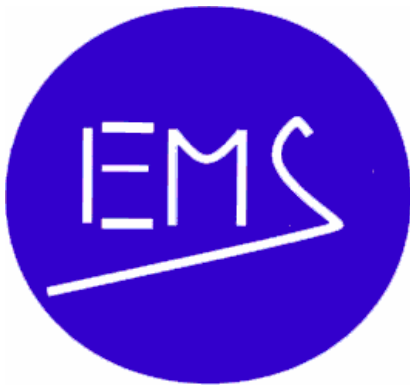
Nigel Reed and Stewart Wass from the Met Office met Inge Niedek (chairperson of IABM) at her office at ZDF in Mainz. The purpose of this meeting was to establish improved communications between the IABM and Met Office and establish areas of common interest.

A wide-ranging discussion covered the role of ECOMET, relationships between broadcasters and National Met Services, and the relationship between the IABM and WMO. It was apparent that the IABM and Met Office can agree on a range of issues, particularly on the need for broadcasters to have access to high quality meteorological data at a reasonable cost.

A number of actions and statements were identified and agreed to meet the concerns of the two organisations and develop areas of common interest: -

1. The Met Office will contact ECOMET and seek to establish if there is a mechanism by which IABM can discuss relevant issues directly with ECOMET.
2. The Met Office will try to identify an appropriate forum to discuss issues such as the relationship between National Meteorological Services, weather broadcasters and broadcast organisations. In particular issues to do with the quality and cost of meteorological information available to the broadcast community.
3. The IABM supports and encourages on screen accreditation for the Public Met Services when they are the suppliers of services to broadcast organisations.

First Annual Meeting of the European Meteorological Society



Tuesday 25 September 2001 was an historic day for the European Meteorological Society (EMS). It marked the opening, in Budapest, of EMS's First Annual Meeting. In the womb of the Fifth European

Conference of Applied Meteorology (ECAM) it met EMS's avowed aim of providing a forum by which the Meteorological Societies of Europe provide for the European meteorological community, be they researchers, forecasters, policy-makers, back-room people, presenters or users, pleasant neutral surroundings where they listen to one another and return home to make better-informed and better-based decisions.

EMS was conceived in 1993, during the First European Conference on the Applications of Meteorology (ECAM 93) organized by the National Meteorological Services of Europe in Oxford (UK). A second meeting of unofficial representatives of Meteorological Societies took place in 1995 during ECAM-95 in Toulouse

(France) and led to decisions to:

- establish closer contacts between the European Meteorological Societies;
- issue a Newsletter reporting on the activities of the EMSs;
- prepare a European Catalogue of Training Opportunities in Meteorology (ECTOM),

(a compilation of the meteorological courses taught at European universities, meteorological institutes and specialized schools for the education and training of professional meteorologists).

At a third meeting, during ECAM 97, in Lindau (Germany), Rene Morin, its future first President, launched the idea of a single European Meteorological Society. The EMS was formally established on 14 September 1999, during ECAM 99, in Norrköping (Sweden) with a constitution guaranteeing it as a Society of (mostly national) meteorological Societies and a mission statement which fosters the development of, and does not allow it to work against, the interests of its constituent societies.

In early October 2001, EMS has 24 Member Societies from 23 European countries: Austria, Belgium, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy (2 Societies), The Former Yugoslav Republic of Macedonia, The Netherlands, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

During 2001 it has encouraged interested bodies to join as Associate Members. So far, 14 have joined, including Europe-wide organizations such as the European Centre for Medium-Range Weather Forecasts (ECMWF), the European Meteorological Satellite Organization (EUMETSAT) and the European Space Or-

(Continued on page 15)

(Continued from page 14)

ganization (ESA), National Meteorological Services, equipment manufacturers and private-sector providers of meteorological services.

The First EMS Annual Meeting addressed "The future of meteorology in Europe". Speakers included Dr John Zillman (President of the World Meteorological Organization (WMO)), the Directors of ECMWF and EUMETSAT, and a substantial list of other eminent speakers. All were very well received by the audience attending the combined 350-strong ECAM and EMS meetings.

Also during ECAM 2001, the EMS Council met. One of its decisions was to appoint Tanja Cegnar of Slovenia to chair an EMS Committee on the Media. She will now set about getting people to work with her to consider what contribution EMS may make in this field. The Committee is intended to:

- Investigate ways in which presenters have an impact on the public. Stimulate the dialogue between journalists and meteorologists.
- Serve as a forum for the exchange of experience between meteorologists working in media in different countries.
- Co-operate with weather-presenter members of the AMS and IABM, and to implement future co-operation with IWF.
- Co-ordinate and possibly co-organize meteorological education activities for journalists (courses, workshops...).
- Prepare press conferences and information kits for journalists (short communications for special occasions like severe weather, unusual weather or climate phenomena).
- Organize courses and workshops on presentation skills for meteorologists, and prepare wording to be used with public to explain weather and climate.
- Establish a bibliography and video-tape archive for meteorologists working with media, taking account of different levels (also for those who only occasionally have to give a statement or have to prepare a public information).
- Prepare guidelines for different levels, media and occasions.
- An aim which is tentative at present is to harmonize (future) accreditation protocols (or seals of approval) in European countries.

The EMS Media committee will comprise delegates from Member Societies and Associate Members of the EMS. Each Member or Associate Member will have the right to delegate one member of the Media committee. Members of the Committee will normally serve for an initial period of two years and be eligible for re-election. The Committee will include at least one EMS Councillor and will report to the EMS Council.

Stan Cornford - Royal Met Society and Vice-President EMS

Any Port in a storm?

Tied to your PC and thinking of holidays? Cant get away from work? Now, courtesy of the US Navy, you can "see the world" - or at least get a visualisation of some of the major ports of the Mediterranean right from your own desk.

With such a large fleet the losses to the US Navy through collisions and groundings are far from negligible; there were ten such incidents in the year 2000. The Mediterranean basin poses particularly difficult challenges to navigation, with complex topography and many marked local effects in the complicated interaction of land, sea and atmosphere. Strong winds and severe winds are common in the region, making it difficult for captains unfamiliar with the localities to pick safe passages and moorings.

As an aid to ships officers the Naval Research Laboratory has combined nav aids, weather and so on into visualisations of many Mediterranean ports; these visualisations can offer



direct assistance to officers as they guide their vessels into secure anchorage. Also included are descriptions of seasonal hazards; with wind chill and heat hazard tables provided for each location.

All of this is available on the NRL website at the following address:

www.nrlmry.navy.mil/-cannon/medports/

Alternatively the information is available for free on CD-ROM from Sam Brand at brand@nrlmry.navy.mil

From a talk given to ECAM 2001 by Sam Brand of the Naval Research Laboratory.

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Visit our website at
www.iabm.org

The Association is only as strong as its membership.

Help give volume to our debate by encouraging your colleagues to join.

When they ask 'what's in it for me' simply tell them that if they want to be treated seriously - then the profession they work in needs to be recognised internationally.

The IABM has observer status at the World Meteorological Organisation. This enables the Association to represent the views and needs of our profession at the highest level possible.

It's not what the Association can do for you - its what you can do for the Association!

There is an online application form on the website - or email your details to membership@iabm.org

El Niño is returning.....

Forecasts models for the central and eastern tropical Pacific run during August this year (2001) are predicting a weak El Niño event for the next six to nine months, according to the World Meteorological Organization (WMO) and the International Research Institute for Climate Prediction (IRI) contributing to the UN Inter-agency Task Force on Natural Disaster Reduction.

Experts do not anticipate any rapid warming that would herald the onset of a major El Niño event in the central and eastern tropical Pacific region. After a prolonged La Niña phase that began in mid-1998 and continued into early 2001, central tropical Pacific surface temperatures returned to near normal (neutral) state by the middle of the year. They are now starting to become slightly warmer than normal, but only slowly. Most expert interpretations do not anticipate any rapid warming that would herald the onset of a major El Niño event in the next few months. Objective dynamic and statistical forecast models support this projection.

Although some are predicting cooling, nearly all models are forecasting in the range from neutral to warming (of a magnitude typical of a weak El Niño) in the central and eastern tropical Pacific over the next 6-9 month period. During June, surface westerly winds in the western Pacific generated conditions beneath the surface of the Pacific that may lead to more substantial warming of Sea Surface Temperatures (SSTs) in the central Pacific in the coming month. Such short-term climate fluctuations are common and at this time, this is not expected to be a significant factor for the development of a major El Niño

event over the remainder of the year.

The above prognosis for El Niño should not lead to the conclusion of an absence of climate fluctuations in the coming months, even in the Pacific. Seasonal climate fluctuations have many other causes, involving factors other than SST, or other patterns of SST. In particular, regional climate fluctuations can be driven by SST patterns in the tropical Atlantic and tropical Indian Oceans. A current feature that has drawn expert attention is an area of warmer than normal SST in the central Indian Ocean. This may have consequences in the coming months for regional climate fluctuations over the Indian Ocean and adjacent continental regions.

More detailed regional interpretations are likely to be generated routinely by the climate forecasting community over the coming months and will be made available, for example, through National Meteorological Services. Forecasts of Atlantic and Indian Ocean SST development are currently of very limited quality. This is due to inadequate observations of conditions beneath the ocean surface, and by the lack of understanding of the mechanisms of the SST changes in these ocean basins.

The situation in the tropical Pacific will continue to be carefully monitored over the coming months to keep the best information available. In summary, the slow, weak warming that is underway in the central and eastern tropical Pacific may be sufficient and persistent enough to become classified by some schemes as a weak El Niño by the end of 2001 or early into 2002. However, developments in the Pacific need to be kept under review. If such weak warming does prevail, the consensus remains that impacts are likely to be weak, or localised if they are more severe, and mostly confined to the tropical

Pacific basin. Such a situation could, nevertheless, become a cause of concern in some areas and there is a need to continue to convey the strength of the prevailing and expected conditions as they evolve.

FACTS REMINDER

During El Niño events, the central and eastern tropical Pacific Ocean surface temperatures become substantially warmer than normal. During La Niña events, the surface temperatures get colder than normal. Such temperature changes can drive major climate fluctuations around the globe of which the 1982/1983 and the 1997/1998 events are the most recent examples. Severe drought affected the western Pacific region, especially communities in Papua New Guinea and Indonesia but also north-eastern Brazil. Ecuador and northern Peru were severely hit by excessive rainfall and floods while winter storms rocked peoples lives in Chile and California (USA).

The forecasting of these Pacific Ocean developments is undertaken in a number of ways. Complex computer models project the evolution of the tropical Pacific Ocean from its currently observed state. Statistical forecast models can also capture some of the precursors of these developments. Expert analysis of the current situation also adds further value, especially in interpreting the implications of the evolving situation below the ocean surface. All forecast methods try to capture the dynamics of the ocean-atmosphere interactions within the climate system.

The meteorological and oceanographic data allowing El Niño and La Niña episodes to be monitored and fore-