EMS Council, 9th Session, Rome, 17 September 2003
Paper No. 10
Agenda Item 6.1
Original language: English

REPORT FROM THE CHAIRMAN OF THE EMS ACCREDITATION COMMITTEE Dr David N Axford

All the activity of the Accreditation Committee has been conducted by E-mail during the period. A Questionnaire was sent out and responses have been collated as shown below. Further responses from the Committee members are now awaited.

Report on Responses to a Questionnaire concerning National Qualifications and Standards – July 2003

List of Members Appointed to the EMS Accreditation Committee *(as at June 2003)*

Country	Members Name	E-Mail Address	Society
Austria	Herrn Dr. Georg Zapletal	georg.zapletal@zamg.ac.at	ÖGM/(Austrian Meteorological Society)
Croatia	Mr Tomislav Kovacic	kovacic@cirus.dhz.hr	HMD/(Croatian Meteorolgical Society);/Met. &Hyd. Service of Croatia
France	Francois Duvernet	francois.duvernet@meteo.fr	Société Météorologique de France
Germany	Prof. Lutz Hasse	lhasse@ifm.uni-kiel.de	DMG/(German Meteorological Society)
Hungary	Pal Ambrosy	ambrozy.p@met.hu	Hungarian Meteorological Society
Italy	Marcello Pagliari	mpagliari@srd.it	UNIMET/(Unione It. di Meteorologia)
Netherlands	Peter Kerkmans	P.Kerkmans@meteocon.nl	NVBM/(Dutch Meteorological Society)
Serbia	Mr. Dragan Radovanovic	radragan@eunet.yu	MDS/(Serbian Meteorological Society)
Switzerland	Peter Rauh	peter.rauh@meteoswiss.ch	IACETH, SGM/(Swiss Met. Society)
United Kingdom	Dr D. N. Axford	David.axford@dial.pipex.com	RMS/(Royal Meteorological Society)

Introduction

In 2002 and early 2003 the Chairman tried to obtain UK funding for a proposal to Benchmark National Occupational Standards for Meteorologists, Weather forecasters and Meteorological Observers in those countries which are members of the European Meteorological Society and the United States of America to quantify as far as possible best practice. After holding out good hopes for some time, in March 2003 the relevant UK Authority eventually said that the economic and political situation was not propitious, and there was little chance of a positive outcome in the near future.

EU sources of funding were also unlikely to be forthcoming at that time (the Iraq conflict was occurring). It was therefore thought useful to make a start by asking Committee members to indicate the current practices in their own countries as far as possible with regard to the following points:

- Qualifications and standards required to practice as a weather observer
- Qualifications and standards required to practice as a weather presenter in the media
- Qualifications and standards required to practice as a weather forecaster for public services such as aviation, marine services, agrometeorological services,..etcetera..
- Qualifications and standards required to practice as a professional meteorological expert/consultant
- Requirements (if any) to meet a defined Code of Practice in carrying out meteorological work

- Requirements (if any) to keep up to date in the relevant expert field through a formal programme of Continuing Professional Development (CPD)

Replies have been received from the members from Austria, Germany, Hungary, Netherlands, Serbia Switzerland and the United Kingdom, and are summarised against each heading in the Table below.

Returns from Questionnaire

A. What Qualifications and standards (if any) are required to practice as a weather observer?

Austria - A printed guide to observation practices (in accordance with WMO-regulations) is to be followed by observers in fulfilment of their task. Introduction to observation routine is given by experienced professionals, later on performance is brushed up by short training sessions on demand - upon checks of report quality.

Germany - I understand that weather observers are trained at our national weather services (I would need to inquire whether WMO regulations on this level are called for).

Hungary - a.) Synoptic stations: During the past 3-4 decades all observers had a Class IV. qualification according to WMO nomenclature (secondary school certificate + training program + on-the-job training + examination). The Chief of a synoptic station had a Class III. qualification (with an additional training program). Due to automatization, the number of observers is decreasing from year to year. Presently besides basic knowledge in meteorology more emphasis is stressed on information and communication technology.
b.) Observers of climate and precipitation stations: There is only an on-the-job training program.

Netherlands – Reply awaited

Serbia - Specialised Meteorological Secondary School (lasting 4 years) is required.

Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge)
- apprenticeship of any kind plus professional experience or A-level certificate
- after entering MeteoSwiss internal professional training and education in Met
- practical training parallel to theory
- final exams and certificate

United Kingdom – a) Government, BBC, Aviation, Safety Services, etc: Appropriate Met Office College course supplemented by OTJ training in the Office and formal inspections of performance at Observing Site. NVQ is encouraged.
b.) Rest, including ITV: None - but many choose to gain appropriate training.

B. What Qualifications and standards (if any) are required to practice as a weather presenter in the media?

Austria – In principle, the choice of presenters is entirely up to the broadcaster. In practice, presenters (radio and TV) do have a university degree in meteorology, a closely related field (e.g., geography) or are about to finish their respective studies. This holds for the Austrian National Broadcast (ORF). Private radio does not afford professional presenters and private TV is just about to commence in Austria.
*Germany** - Weather presenters are selected entirely by TV/Radio stations according to their internal criteria. The DMG suggests that the university degree "Diplom Meteorologe" should be added (if applicable) when the name is shown. However this is not common practice. At radiostations the forecast is typically read by a speaker. At certain stations, at selected times, a telefon interview by a

radio reporter with the meteorologist at the regional weather centre is presented. Typically a Diplom Meteorologe is an interview partner, identified by name without reference to university degrees. Obviously, the stations decide the style of presentation.
Hungary – There are no strict rules. However the Met. Service strives to nominate qualified meteorologists to all TV channels. Now, about 80 % of presenters are meteorologists. For the other 20% the Met. Service offers training courses.
Netherlands – Reply awaited
Serbia – It can be anybody (usually nice looking girls).
Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge) - non-existent
United Kingdom – a) Government, BBC, Aviation, Safety Services, etc: Met Office College course (IFC/FCC/Final qualifying exam) supplemented by OTJ training.

b.) Rest, including ITV: None - but many choose to gain appropriate training or have had training in the past.

C. <u>What Qualifications and standards (if any) are required to practice as a weather forecaster for public services such as aviation, marine services, agrometeorological services,..etcetera..?</u>

Austria – Generally, a university degree is sufficient for employment and internal training will lead to autonomous work. The conditions are different, however, for aviation meteorologists: Graduated meteorologists (no matter whether they just finished studies or have professional experience apart from aviation) first undergo theoretical training at Aviation Control Headquarters for a period of 3 months with final exam (by a commission). Then they are trained on the job for 4 to 6 months at the location (airport) of their future employment; this training ends with a rating of their proficiency. For final exam and proficiency rating a minimum success count of 75% is mandatory. Next is practical work but not yet full professional ranking. Only after submission and acceptance of a seminar paper (dealing with a given topic) are they certified by the Ministry of Transportation for entirely autonomous work and adequate rank (salary). The authorization keeps valid only in case of continuous work in the special field of aviation meteorology. Should the certified person interrupt his or her job for an extended period or change to another field in meteorology or something else, the certification would be withdrawn.
Germany - .At larger airports the weather office is staffed by one or more Dipl.Met and "Wetterberater" meteorologists trained by the national weather services (at their internal schools). This is typical for other fields too (marine, agro, winter road service).
Hungary – University degree in meteorology
Netherlands – Reply awaited
Serbia - A University diploma is required. At Belgrade University the study of meteorology lasts 4 years. Only in the aviation service is an additional license required.
Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge)

- BSc or MSc or equivalent in Natural Sciences
- basic training at Met Office College (IFC) with all the exams
- local training on return and parallel shifts with experienced forecaster

United Kingdom – a) Government, BBC, Aviation, Safety Services, etc: Met Office College course (IFC/FCC/Final qualifying exam) supplemented by OTJ training. NVQ encouraged.

D. <u>What Qualifications and standards (if any) are required to practice as a professional meteorological expert/consultant?</u>

Austria – So far no standards have been laid down. Unlike most other countries, access to the community of registered expert witnesses is handled quite restrictively in Austria. Qualification (meteorologist) includes university degree, 5 years minimum practical work in the special field applied for, an exam by a registered expert witness in the field and an exam by the official Association of Registered Expert Witnesses in law and conduct rules.

Germany - There is no legal restriction to the offer of meteorological services. However, "Industrie und Handels-Kammern" (the Chamber of Commerce?) have the right to acknowledge "Gutachter" (experts/ consultants). Also in court expertise is required without formal prerequisite (e.g. university degree); however, typically, the DWD is called.
Hungary – The situation is quite confused. The majority of the expert functions is supplied by the Met. Service on an official basis. However there is a government order in force according to which a person having a PhD grade (earlier "candidate of science") or higher academic degree, can work as an expert without further formal examination. Also, in the eighties, the Meteorological Society established a committee which had the right to appoint experts after thorough examination of applicants (of course only qualified meteorologists). This practice died out slowly because of the lack of aspirants.
Netherlands – Reply awaited
Serbia – Formally, there is no difference from the previous point. That is to say a University diploma is required. At Belgrade University the study of meteorology lasts 4 years.
Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge) Non-existent
United Kingdom –None formally, but a degree in a physical science and appropriate training (OJT or Met Office College course) is normal in the Met. Office. CMet is now being encouraged in both the Met. Office and some Private Sector firms .

E. <u>What requirements (if any) are there to meet a defined Code of Practice in carrying out meteorological work?</u>

Austria – No code defined yet
Germany - As far as I know there are no legal requirements. For this reason the Deutsche Meteorologische Gesellschaft (DMG) has started its program on certification.
Hungary – There is no Code of Practice. However the Meteorological Service strives to formulate an Act in Meteorology, which would contain also Code of Practice and Code of Ethics. Only the preliminary steps have been taken in this direction.
Netherlands – Reply awaited
Serbia – There is no official requirements, but there is a strong need for this among the meteorological community.
Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge) non-existent
United Kingdom –None (but CMet includes a Code of Conduct)

F. <u>What requirements (if any) are there to keep up to date in the relevant expert field through a formal programme of Continuing Professional Development (CPD)?</u>
Austria – No formal program defined yet.
Germany - As far as I know there is no formal programme of CPD. Training at the national weather services is at their own requirements. DMG requires a three-annual renewal of certification, however without a formal programme of CPD.
Hungary – None
Netherlands – Reply awaited
Serbia – There is no official requirements, but there is a strong need for this among the meteorological community.
Switzerland – (only valid for MeteoSwiss, Private Sector has no such standards to my knowledge) - 5% of work time should be used for CPD, in practice less than that is actually done.
United Kingdom – None but encouraged in the Met. Office. (CMet requires that CPD is undertaken and there is a formal three yearly review).
**** There are two national weather services in Germany: Deutscher Wetterdienst (DWD, civilian) and Geophysikalischer Beratungsdienst (military). Additionally there are growing numbers of private weather firms offering meteorological services to the public including radio and TV stations. It appears that there is***

no legal restriction to offering weather forecasting/consulting services except for the rules of the ICAO.

Other Points made in replies

Germany

There is a need to agree into a definition of "Meteorologist". The following is suggested:
B1 Weather presenter (e.g. at TV) trained in meteorology on the job or short termed course, typical a journalist or TV speaker.
B2 Observer/Technician in a meteorological service, with some specialized training e.g. in forecasting, also meteorological observers??
B3 Meteorologist with training in an institution of higher education of 3 years (6 terms), with atmospheric sciences as main topic.
B4 Meteorologist with a University study of Meteorology or equivalent of 4 years (8 terms) and an additional thesis.
B5 Private business "weather services"

It is understood that some of the differences in national practices are due to different legal rules for consultants in general. Lutz Hass is glad that we now start to consider a European "Certified Consulting Meteorologist"! Some 15 or 20 years ago he talked with John Wieringa of the Netherlands about Consulting Meteorologists. Jon was about to receive an AMS certification as Consulting Meteorologist. They agreed that a European certification would be preferable to taking an AMS one. Lutz suggested an initiative towards a European certification - considering an initiative from one of the mayor European meteorological societies might be more difficult. He is pleased that we now have an EMS and that we are considering the problems of an EMS certification.
Lutz considers that DMG and EMS should not embark on programmes for weather presenters or weather consultants believing that for these jobs the rules are made by those who pay. He sees Certification of Consulting Meteorologists as an additional qualification for consultants with the purpose "Spreu vom Weizen zu trennen" (to separate the chaff from the wheat). He notes that activities are restricted by the rules of the European Community calling for freedom of occupation.

Hungary

In Hungary there are quite old government regulations according to which academicians, scientists having a doctor's degree and candidate degree on academy level can work as chartered specialists without any formal accreditation. The PhD degree was introduced much later and now it substitutes the earlier candidate degree. It is not clear, whether the old regulation is valid also for persons having PhD degree.
The Hungarian Meteorological Society, as the member of the Federation of Technical and Scientific Societies accepted the proposed scheme for accreditation of this body about ten years ago. In principle we use this system for persons not having high scientific degree (but having diploma in meteorology), but in practice there are no such applications. It must be mention that a very great part of technical expertise is given by the Meteorological Service, where the data and the knowledge are concentrated. In this way I am afraid, our society has no enough experience in forming an internationally acceptable accreditation scheme.

Conclusions

To be added after circulation for confirmation and comments from all Committee members