

Code of Practice of BSCE.

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Abstract

At BSCE 14 a proposal for the content of a BSCE Code of Practice was presented (WP5). During the discussion after the presentation it was made clear that a division of such a document into two parts was recommended: one main section with the history, way of working and achievements and a second section with appendices giving all types of details for those who want to have that material. This working paper is a trial to frame a document of information on our work which has the above described nature.

Section I. History and methods of work.

1. The purpose of a BSCE-document type "Code of Practice".

It has been considered valuable to prepare some type of rather short going through of the way of work of BSCE which might be called Code of Practice. In that way and through the distribution of such a document the activities of the Committee could be better known among all interested parties in the air safety work. A special wish on this matter has been expressed by the European Civil Aviation Conference (ECAC). Certainly also International Civil Aviation Organization (ICAO) has a considerable interest in a short account of the type of work which has now been going on for about 15 years time inside BSCE and its working groups.

At BSCE 14 was presented a proposal on the content and appearance of a document type "Code of Practice". In the discussion after the presentation views on the content were given by ECAC saying that a division of the document in two parts seemed to be desirable. A main section could contain the history and ways of working whereas a second section with appendices could give all types of details. In this working paper I am showing a way to rearrange the document according to presented wishes.

A special purpose with this document is, that it can be useful for the development of international work on the bird problems in other regions of the world. For many member states of ICAO international cooperation about these affairs is a condition for successful work. One of the aims is here to help

Ecological features	
- Light factor: prefers shadow-area.	Vinca minor L.
- Light factor: prefers semi-shadow area.	Hedera helix L.
- Light factor: prefers semi-light area.	Galium aparine L.

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other ICAO-regions with the formation of Bird strike committees or other types of regional bodies for the bird problems of aviation. The first step on this way was taken in 1978 with the holding of a workshop on bird hazards for the Far East & Pacific region of ICAO and a second similar event was in 1980 arranged for Africa south of the Sahara. The two workshops were held in Bangkok resp Dakar and it now seems likely that a third activity will take place in Mexico City next year for the benefit of the ICAO memberstates of Central America.

Work is now also under way in most of the BSCE working groups with compilations of procedures, preparations of booklets etc for a detailed documentation of the activities of resp groups and for an exhaustive description of what is or can be done in the field within the sphere of interest of each group. The material from the working groups will then have to be put together and preferably form section II of this document.

The aim of this future main document of BSCE will be to supplement the ICAO documents on bird hazards with the special material that BSCE will have available for the Europe and Mediterranean region which we feel a particular responsibility for. This can be done by going more in details with explanations of both proven technics and experimental ones. By doing so we hope that the work in the field will be made easier and that many questions of how to get on with certain problems can be avoided. -We in BSCE have the feeling that the big task with the preparing of this document is worthwhile because Europe is a rather homogeneous area for bird as well as for aircraft movements and because technics used in airports are in general comparable form one country to another.

2. Short history

A purposeful work with the problems for aviation caused by birds started up in the early nineteen sixties. Introduction of fast, turboengined airplanes had highlighted the increased danger of men and birds sharing the same airspace. Some pioneers arranged 1963 a symposium in Nice for discussions and lectures concerning this new section of air safety work. The results of the symposium were promising so three years later it was decided to begin a continuous, international activity which took form of the establishment of an organization called Bird Strike Committee Europe. The committee held its first meeting 1966 in Frankfurt and thereafter yearly meetings have been arranged until 1978 but from that year on

there is 1,5 years between two consecutive meetings. During the first years only a few West-European states, USA and Canada took part in the BSCE-meetings but in the nineteen seventies the participation was broadened so that 17 states from all parts of Europe sent delegates to the 14th meeting in The Hague 1979. Observers from four international organizations did also attend that conference. Of countries outside Europe has also Israel beside Canada and USA become involved in the activities of BSCE. Canada was in fact asked to help BSCE during its first years of activity as that state was a pioneer in tackling the bird problems of aviation and therefore had gathered a comprehensive experience.

For some years the Committee had relations to NATO which organization had started work already in the early nineteen sixties in order to reduce the number of collisions. Some civil experts worked partly for NATO with the bird problems of aviation and also belonged to the group of founders of BSCE. The mutual interest in this section of aviation safety work was promoted by NATO through giving economical contributions for research purposes to one of the BSCE working groups (Bird/Radar/Weather). During the first half part of the nineteen seventies, however, this co-operation gradually finished.

The main achievements of BSCE has been reached by its working groups. The establishment of these groups shows the order in which specific problems came up to discussion and had to be solved.

At the beginning it was found very essential to set up some type of observation and warning network and therefore working groups Radar and Transmission were founded. The former group concentrated on the task how to follow bird movements, specially migratory ones, by the aid of radar, whereas the latter had to develop a system for distribution of warnings for high bird intensity.

With experience gained during the first years of work BSCE entered the stage of research and development by forming another two working groups: Bird movement and Bird/Radar/Weather. The members of the Committee in different states prepared, often by the aid of newly founded national committees, maps showing birds main migratory routes and concentration areas. The earlier mentioned Bird/Radar/Weather working group, sponsored by NATO, carried out important studies on the relationship between weather and bird movements also with a considerable help of Canadian authorities for aviation and for wildlife preservation. -It must here also be emphasized that for many years time the strings between BSCE and the Canadian "Associate Committee on Bird Hazards to Aircraft" were of utmost importance for our work.

Pure operational problems had to some extent been taken care of by BSCE itself or by members of its Editing Committee which was formed at a rather early stage, but 1972 working groups were established for Analysis and for Aerodromes. The former group has to analyse bird strike statistics in the best possible way and the latter has to give advice on how to manage the work in the airport in order to reduce the number of bird/aircraft collisions there.

Finally a working group for Structural Testing of Airframes started its work in 1976. The aim of this group is to collect and analyse results of any bird impact structural testing and also to keep informed of any future testing programme.

Over the years there has also been some changes of the activities carried out by the BSCE working groups. Here can be mentioned that the WG Bird/Radar/Weather terminated its work in 1974 and that the WG Transmissions was 1977 transformed to a group for Communications and Flight Procedures with considerably widened tasks.

As BSCE has no funds and therefore not the same type of firm administration as the big international organizations dealing with aviation, the work of the chairman and the earlier mentioned Editing Committee has become the main uniting force. The Editing Committee where all working group chairmen are members, is according to its term of reference "a policy steering committee to assist the chairman of BSCE between and during meetings" (the full term of reference will be included into paragraph 3 of this document). In 1976 a vice chairman of BSCE was elected but the post is now vacant. In order to reduce the workload of the chairman a new post as "liaison officer" was created in 1978 with the aim to take care of the relations with other international bodies.

During the first years of its existence BSCE had rather little contact with ICAO but in the early nineteen seventies some co-operation started up and in 1975 an agreement was reached that the relationship between the two international bodies should be expressed in the following terms:

"The BSCE acts in an advisory capacity to ICAO, working through the European office of ICAO, on matters concerning the hazard to aviation caused by birds".

The co-operational work between BSCE and ICAO has since the middle of the nineteen seventies functioned in the above mentioned way. The ties with the big aviation organization has strengthened considerably not only with the European office but also with the headquarters in Montreal. An important role has in this respect played the ICAO activities with regional workshops on bird hazards which started last year and which is likely to

continue in the early nineteen eighties (see 1.1).

Some co-operation has started also with ECAC which, as mentioned above, has asked BSCE for this type of document. ECAC was also represented at the Third World Conference on Bird Hazards to Aircraft and they have declared their willingness to give help with important BSCE activities on bird hazards which are in the sphere of interest of ECAC. The former chairman and acting liaison officer of BSCE is an observer at the meetings of the ECAC Technical Committee, a fact which facilitates the co-operation between the two European organizations.

The International Air Transport Association (IATA) has during the last few years showed an increasing interest in the bird problems of aviation. A main reason for this is the evidently increasing costs caused by severe collisions between aircraft and birds. It might be mentioned that IATA had several representatives in the earlier mentioned workshops in Bangkok and Dakar.

BSCE has also ties with IFALPA partly depending in the fact that some active BSCE-members are pilots and involved in IFALPA activities too. Another international body of interest for BSCE is IFATCA which had an observer at BSCE 13.

A more comprehensive history of the work of BSCE, specially concerning the annual meetings, was given in paper to BSCE 14: "The first ten years of BSCE" by Vital Ferry. You will there find a list of all lectures given during the period 1966-1975, in all more than 100 papers.

3. Methods of work.

3.1 Terms of Reference of BSCE

The first Terms of Reference of BSCE were defined already at the second meeting of the Committee in the Hague, 1967. After that the document has been changed a few times in order to reflect as well as possible the purpose and the activities of BSCE. The edition of it that is now valid reads as follows:

The Bird Strike Committee Europe shall

- a) collect, analyse and circulate to all concerned data and information related to the bird strike problems in the European Region;

Note: This data and information should include the following:

1. Civil and/or military data collections and results of analyses on bird strikes to aircraft.
2. Results of any studies or examinations undertaken by States in the various fields related to the bird problem.
3. Any information available in the field of design and structural testing of airframes related to their resistance to bird strikes.
4. Any other information having a bearing on the bird strike question and the adding to the solution of the various problems involved.
 - b) study and develop methods to control the presence of birds on and near aerodromes;
 - c) investigate electro-magnetic wave sensing methods (e.g.: radar, invisible light, etc) for observing bird movements;
 - d) develop procedures for the timely warning of pilots concerned where the existence of a bird hazard has positively been established;
 - e) develop procedures, if appropriate, for the initiation by air traffic control of avoiding action where the existence of a bird hazard has positively been established;
 - f) develop procedures enabling a quick and reliable exchange of messages regarding bird hazard warnings;
 - g) develop any material (e.g.: maps, back-ground information, etc) intended for inclusion in Aeronautical Information Publications;
 - h) aim at a uniform application, throughout the European Region, of the methods and procedures and the use of material developed in accordance with b) to g) above provided suitable trials have proved their feasibility, and monitor developments in this respect.

3.2 Functions of the chairman and vice chairman.

An outline of the different media and of the ways of working of BSCE is given in appendix 1. It is evident from that sketch and from what is earlier mentioned in paragraph 2 that the main point of the work of BSCE is laid on the chairman, vice chairman and from 1978 also the liaison officer as well as to some extent the Editing Committee. Even if BSCE has no real secretariat, all functions of the Committee being carried out by people working only part time with the bird problems of aviation, there is quite an important workload mainly consisting of correspondence. Studying the register of letters from 1980 written by the chairman, the total number comes up to about 100. Of these were one third to the liaison officer and two members of the Editing Committee.

A considerable part of this correspondence deals with preparational work before future meetings and also to a minor part concluding work after meetings. Many other tasks are, however, going on between meetings dealing with our international contacts, for instance the co-operation with ICAO. Another third of the letters were sent to representatives for national committees in different countries with content of various art. Also the direct contact with international organizations and governmental authorities in many countries have resulted in many letters. The chairman is also responsible for smaller meetings with members of the Editing Committee or part of it which may have to be held in the periods between the main meetings of BSCE.

3.3 Aim with and tasks for the liaison officer.

The three year old function as liaison officer which was at BSCE 13 entrusted to the resigning chairman has the aim to facilitate and improve the co-operation with other international bodies. The chairman's report from the meeting in Berne reads in this respect: "The liaison officer was specially charged to visit all relevant authorities at a convenient level, to obtain better liaison and understanding." There is also a special intention of BSCE that the creation of this post will facilitate the work of the chairman and reduce his workload. Among other important tasks that has been dealt with during the last years can be mentioned the EEC Council Directive on bird conservation and the idea to start direct co-operation with the international ornithology through contacts with the 18:th International Ornithological Congress.

3.4 Way of working of the Editing Committee.

The main functions of the BSCE Editing Committee have over the years been to evaluate the working papers to be presented at the ordinary meetings and to participate in the preparation of recommendations and of other text to be included in the Report of resp. meetings. In the periods between meetings there has been, as is earlier mentioned, a considerable correspondence between the chairman, vice chairman and liaison officer on one hand and the other members of the Editing Committee on the other hand. A few smaller meetings have also taken place for preparational work and to some extent also for the practice of the committee function as a policy steering body. The total purpose of and tasks for the Editing Committee is given in its "Terms of Reference" which is attached to this document as appendix 2.

3.5 BSCE meetings.

From the start of BSCE in 1966 and until 1978 the Committee had annual meetings. One of the decisions at the 13:th meeting in Berne 1978 was, that the period between two consecutive meetings should be expanded to 1.5 years. As a main reason for this decision was said that the Committee had "passed its earliest era and that in a later phase of activity the demands for frequent conferences must be looked upon as less weighty."

The ordinary meetings of BSCE including its working groups have been the main forum for new ideas about how to tackle the bird problems of aviation in Europe. That has been done principally through presentations of papers dealing with all sections of this flight safety work but also by decisions made at the plenary sessions giving recommendations on how to work with the bird problems. The number of working papers has from a modest beginning been increased to about 10 during the last meetings. More details about this important part of the work is given in the earlier mentioned working paper No 1 to BSCE 14.

When it comes to recommendations and conclusions from the meetings can be mentioned as an important example the very first one from the first Committee meeting which was held in Frankfurt/Main in 20-21 July 1966 (in fact the name Bird Strike Committee Europe did not show up until the 4th meeting in 1969) That conclusion reads:

"The methods and possibilities for scaring birds off the air-bases developed and practiced by member countries should be regarded as a guidance for the respective measures to be taken by the other national Committees for Flight Safety".

Another conclusion of general nature is the first one from the second meeting of the Committee:

"Planning of new airfields should be undertaken in close co-operation with national bird strike working groups".

-That sentence is still valid.

The recommendations from the last meetings go more in details and refer to the activities of the different working groups. We have, however, also had a few general recommendations of general nature.

The participation at the BSCE meetings has increased and broadened considerably over the years. At the first meetings there were mainly military and ornithologists present to a number of 20-25, whereas during the last meetings we have had 70-100 participants belonging to a great variety of professions (see app 1).

3.6 The functioning of the BSCE working groups.

Already in the earlier paragraphs has been mentioned shortly about the significance of the work of the BSCE working groups, which forms altogether a very considerable part of the total activities of the Committee.

Naturally the most important part of the activities of the six working groups are carried out in connection with the ordinary meetings of BSCE. Each W.G. has a chairman and a vice chairman who have their tasks to prepare, carry through and do the supplementary work of the W.G. meetings. These include normally a handling of recommendations from the previous meeting, presentations of papers which are of an interest limited to the field of activities of that working group, discussions after the lectures which may lead to new recommendations, etc.

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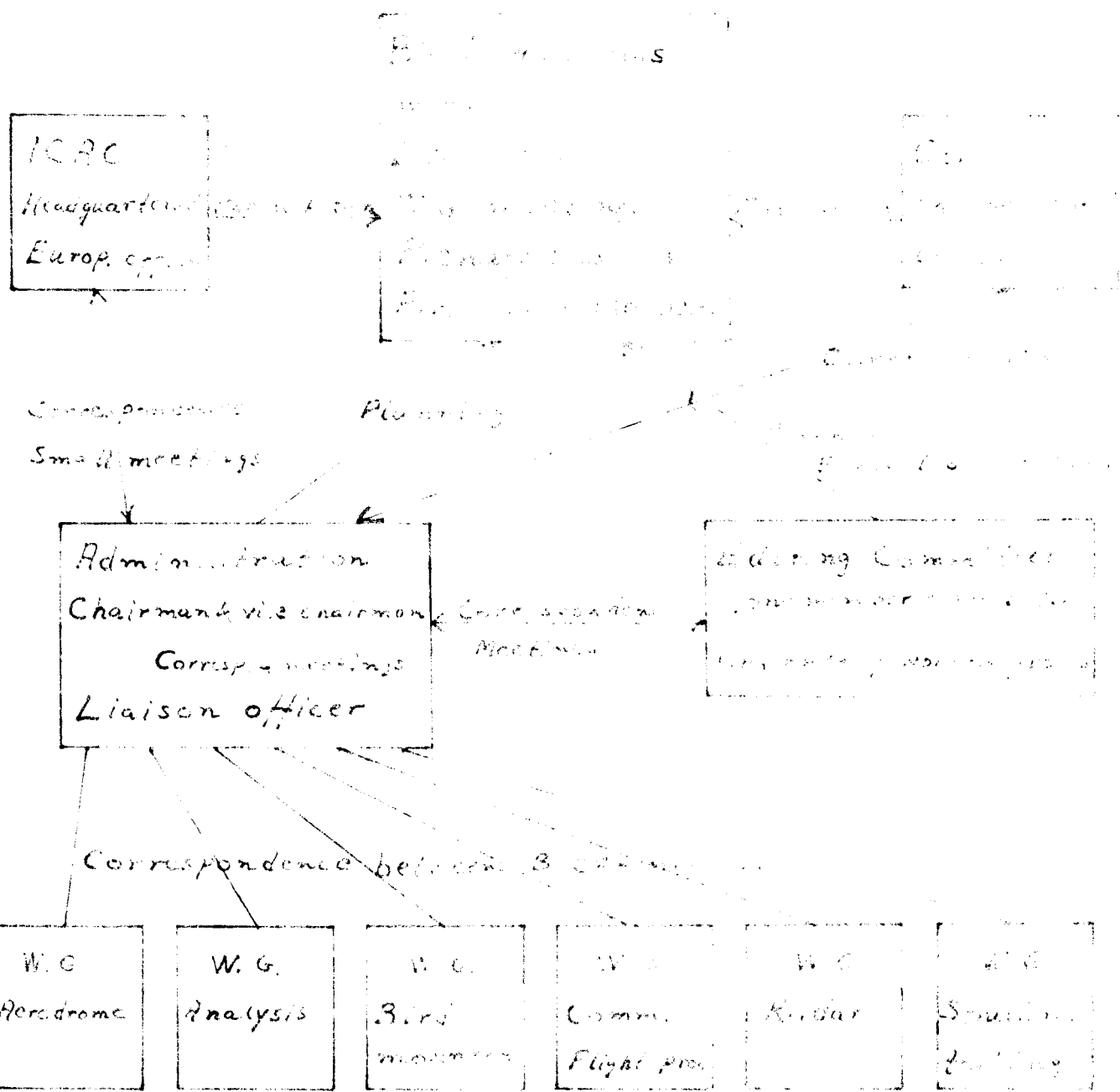
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There is certainly also some activeness going on inside the working groups during the long periods between the BSCE meetings. Preparations of questionnaires and analysis of results from them, compiling of experiences in the form of brochures and booklets, etc, are examples of tht type of work. Almost the entirety of tht work has to be managed by corre- spondence but a few times special working group meetings have taken place.

The intention of this section of the document is just to give information on how WG:s are functioning whereas the descrip- tion of the content of the work is given in section II.

Way of work



Participants at meetings

Representatives for:
 Authorities for civil aviation, military aviation
 Organizations, governmental, non-governmental
 Airlines, Pilots and their organizations, flight instructors
 Zoological, environmental, agricultural and other clubs, etc.

TERMS OF REFERENCE OF THE EDITING COMMITTEE, BSCE

1. An Editing Committee is appointed as a policy steering committee to assist the Chairman of the BSCE before and during Meetings. The main tasks of the Editing Committee are:
 - a) study, evaluate and select papers to be presented to the Working Group and the Plenary Meeting;
 - b) during each BSCE Meeting participate in preparing recommendations, proposals for text for inclusion in the Report, also, where necessary, any other report of a working group;
 - c) at the end of each BSCE Meeting participate in preparing the Report of the meeting and prepare the follow-up action of recommendations;
 - d) assist the BSCE Chairman in formulating draft Policy Statements.
2. The Editing Committee should consist of:
 - (i) The BSCE Chairman and Vice Chairman;
 - (ii) The previous BSCE Chairmen, if possible;
 - (iii) The Chairman of each BSCE Working Group;
 - (iv) The observer from IOAO;
 - (v) A representative of the host State.
3. The BSCE Chairman acts also as the chairman of this committee and is entitled to call meetings of the Editing Committee as and when required during BSCE Meetings.
4. The conclusions of the Editing Committee should be presented to the Plenary Meeting of the BSCE for action. Alternatively the members of the BSCE should be kept informed of the activity of the Editing Committee between full meetings of the BSCE.