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WORLD CULTURAL AND NATURAL HERITAGE**

WORLD HERITAGE COMMITTEE

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Information Document : Summary Report and Recommendations of the Mission to Srebarna Nature Reserve, Bulgaria, from 1 to 6 October 1998

SUMMARY

This Information Document contains the summary report and recommendations of the mission to Srebarna Nature Reserve, Bulgaria, from 1 to 6 October 1998. The mission was undertaken by representatives of IUCN, the Ramsar Convention and the UNESCO World Heritage Centre.

The full mission report is currently being compiled to include scientific data and other relevant information provided by the Government and other Bulgarian sources and edited. It will be made available at the time of the twenty-second session of the World Heritage Committee for consultation.

The recommendations of the mission are included in last section of this document (pages 6 – 7). The Committee may wish to consider these recommendations under Agenda Item 7 “State of conservation of properties inscribed in the List of World Heritage List in Danger and World Heritage List” (Working Document WHC-98/CONF.203/7).

SUMMARY REPORT

THE CONSERVATION STATUS OF SREBARNA NATURE RESERVE AND WORLD HERITAGE SITE, BULGARIA

Prepared by R. C. Milne with assistance from Tim Jones (Ramsar Secretariat, Gland, Switzerland) and Gérard Collin (IUCN/MAB, France) under UNESCO/WHC Contract No. 700.647.8.

Srebarna Nature Reserve was inscribed on the World Heritage List in 1983. This 602 ha fresh-water site on the flood plain of the Danube River was acknowledged to be of regional and global significance under criteria iv of the 1983 Operational Guidelines (e.g. "Geological and physiographic formations and precisely outlined area which are habitats of threatened by extinction, plant or animal species with extraordinary and world value from the point of view of science, nature protection or natural beauty"). Specific World Heritage bench-mark values considered by the Advisory Body (IUCN) and the Sixteenth session of the Committee at the time of inscription were: (a) the importance of the area as breeding grounds for 99 bird species most of which are rare or endangered in the world, regional or national scale including in particular the Dalmatian pelican (*Pelecanus crispus* - average 67 pairs) and pygmy cormorant (*Phalacrocorax pygmeus* - average about 20 pairs); (b) use by for migration or wintering (80 species) including use by at least two species (red-breasted goose for wintering and corncrake for nesting) of international importance; (c) an important wetland on the Western Palaearctic migratory bird flyway; and, (d) outstanding (biological) diversity. The nomination per se and IUCN background evaluation documents also noted that: (a) the hill topography (surrounding Lake Srebarna) provided a unique scenic opportunity to observe birds without disturbing them; (b) the reed community (*Phragmites communis*) occupied two thirds of the lake in which the water lily (*Nymphaea alba*) was found and a number of rare marsh plants in the wetland surrounding the lake; and, (c) that the situation (Srebarna Nature Reserve) was not completely natural and was maintained by water management measures.

An ample and historical accumulation of ornithological and plant records provided a partial baseline inventory which supported the IUCN recommendation for inscription of the Srebarna Nature Reserve on the World Heritage List. Of particular significance was the areas importance as a nesting site for the Dalmatian pelican, ferruginous duck (*Aythya nyroca*), the pygmy cormorant and corncrake. As noted by IUCN in its evaluation and brought to the Committee's attention, the Srebarna Nature Reserve was not completely natural at the time of its inscription. The lake and marshland were disconnected from the Danube in 1949 by the construction of a dike between the river and the lake precluding regular annual inundation; subsequent water management measures primarily consisting of drainage canals had also been constructed prior to the time of inscription. Engineering efforts in 1979 to mitigate the impact of the dike construction had not proved successful. Gross estimates of reduced Danube in-flow water quantity and disrupted periodicity were available and accepted during the review process prior to inscription, but neither fully understood, nor adequately interpreted at the time. Quantitative and qualitative data on ground water seepage and surface runoff within the Srebarna Lake drainage, or an analysis of the complex and inter-related ecological and biochemical processes which would have provided a more comprehensive baseline on which

ongoing natural and anthropogenic changes could be assessed were addressed in the nomination evaluation or during the inscription process.

During the period between 1985 and 1990, the adverse effects of the protracted draught in the Balkan peninsula combined with the cumulative effects of historical and recent regional and international anthropogenic influence reached more readily observable proportions in Lake Srebarna. The latter causal agents included the continued exclusion of river inundation, regulation of annual Danube flood crests by the Romanian Iron Gates control structure, the previous elimination (1979) of local traditional land use practice (reed harvest and burning), the introduction of more modern agricultural practices (chemical fertilizers and insecticides) and increased domestic animal populations into the surrounding arable drainage. Among the net adverse results documented in ongoing monitoring studies by the Bulgarian Academy of Science were increased levels of dissolved nitrogen and phosphate, increased sedimentation and turbidity, a decreased water column and lake volume, increased primary productivity and significant changes in the structure of phytoplankton populations, accelerated eutrophication (the transition from lake to marsh), the decline of biodiversity (particularly fish species), diminished utilization of the area by rare and threatened resident and migratory bird species, and reduced nesting success ratios of key breeding bird species determined to be of World Heritage significance.

Without a periodic fluctuation in water level and a flushing action by Danube flooding, previously floating reed beds coalesced and stabilized leaving nesting colonies more vulnerable to disturbance and predation .

Informed by IUCN in 1991 of the Srebarna situation, and recognizing the rapid accumulation of deteriorating ecological indices and diminishing World Heritage values, and in consultation with the Bulgarian authorities, and after consideration of removing Srebarna from the World Heritage List and while awaiting the results of further studies, the Sixteenth session of the World Heritage Committee (1992) inscribed Srebarna on the List of World Heritage In Danger. The Committee further accepted the State Party's indication that it was undertaking efforts to mitigate the adverse impacts on Srebarna through additional assessment, data analysis, monitoring, additional water provision by canal construction and ecosystem restoration. Subsequently, Srebarna Lake was additionally placed on the Montreux Record (register of sites in need of priority conservation action) of the Ramsar Convention in 1993.

Conservation status reports from the Bulgarian authorities were provided to the Committee in 1994 and 1995. During its Nineteenth session (1995), the Committee examined a substantive state of conservation report from the Bulgarian authorities. It was indicated that the successful completion of a canal re-establishing a connection between the Danube River and Srebarna Lake for the first time since 1949 had been achieved with bilateral assistance (USAID) and was operational with control structures (1995); a permanent Reserve Administration had been established (1994) and intensive monitoring studies were ongoing. Upon advice from IUCN and based on encouraging Ramsar Secretariat mission findings, the Committee at this session requested a further substantive conservation status report from the State Party for consideration in 1998 and retained Srebarna on the Danger List. In 1996, the Committee examined a monitoring report prepared by the Ramsar Secretariat indicating that the new canal and water control structure were operational allowing water into Srebarna Lake and that the Dalmatian pelican nesting colony had been re-established at higher than pre-inscription levels. Through a 35,000SF allocation from the Ramsar Small Grants Fund (1997), the development of a management plan for Srebarna was initiated by the Bulgarian

authorities. Further status reports were examined by the Committee in 1997, and by the Bureau in June 1998. As had been requested by the Committee, the State Party submitted a substantive Threat Mitigation Status Report 1992-1998 by 1September 1998, signed by the Minister of the Environment and Waters.

In response to the Bureau's suggestion, the State Party invited a mission to Bulgaria for verification of the results of the measures undertaken to mitigate threats to the integrity of Srebarna. That mission was undertaken 1 - 6 October 1998 by expert representatives of IUCN, the Ramsar Secretariat and the Centre. The Mission was facilitated by the UNESCO National Commission and the Ministry of Environment and Waters (MoEW), Sofia, Bulgaria. During the mission, team members met and examined relevant issues with key MoEW officials, leading scientists in appropriate disciplines (with the exception of historical ecology) from the Bulgarian Academy of Sciences and Central Laboratory of General Ecological, Srebarna Nature Reserve management staff, representatives of the conservation NGO community and vested interest groups including elected officials and community representatives from the three towns near to Srebarna.

Based on discussions, a review of existing data and field assessment, the mission concluded that significant affirmative actions and investments have been made by the Bulgarian authorities to investigate, analyze and mitigate threats to Srebarna's World Heritage values as defined at inscription in 1983. Positive results include:

A. Re-establishment of a seasonal connection between the Danube and the Srebarna Lake and surrounding wetlands for the first time since 1949 which since its operation (1995) has resulted in increasing the water volume and water column, dilution and/or reduction of dissolved nitrogen and phosphate levels, lowered turbidity, re-established phytoplankton population structure and increased fish species diversity to pre 1983 levels.

B. The 1998 breeding success ratio of the nesting colony of Dalmatian pelicans significantly exceeded 1980s average population levels; 80 breeding pairs produced 99 successfully fledged chicks in a marked improvement over inscription and post-inscription levels. The Dalmatian Pelican Society verified the statistical average number of breeding pairs were only 52.2 pairs with a much lower breeding success level of .79 in 1979-90. The sixty breeding pairs of pygmy comorant (1988) also reflects a similar significant key species response to more favourable ecological conditions now present. Other globally significant breeding rare water bird species including the corncrake and ferruginous duck, as well as regionally significant breeding species have responded in a dramatic and positive way with almost all of the most important species now returning to nest at pre-inscription levels. Improved ecological conditions have also allowed the return of the water *lily (Nymphea alba*).

C. Administratively, significant legislation (Draft Protected Areas Act - No. 802-01-16) has been promulgated by the MoEW, approved by the Council of Ministers, and is under a second review in the National Assembly. The intent of this legislation is to strengthen conservation in Bulgaria in general and harmonise Bulgarian protected area classification with international standards including relevant European Union Directives. Elements of the draft legislation have specific application to the effective management of Srebarna. Inherent will be the required decision with respect to continuing Srebarna as a "strict" nature reserve excluding all non-scientific activities, or reclassified as a "maintained" reserve allowing for a more flexible and necessary restorative management regime.

A small but competent staff has been established for the Srebarna Nature Reserve management and is currently co-operating well with the Academy of Science on ongoing monitoring activities; an automated weather recording facility is in place and will facilitate the latter effort. Both management staff and Academy researchers appear on excellent terms with local community leadership which would be necessary to establishing effective buffer zone cooperation. With Ramsar funding, the necessary integrated management planning process has been initiated, although a product may be still 18 months away and does not appear to adequately involve public participation, nor address ethno-historical and socio-economic considerations; the plan outline does not necessarily translate into an action plan in its current form. The Minister, MoEW, indicated both a desire and determination that Srebarna be removed from the List of World Heritage In Danger and has guided administrative efforts toward this end.

D. The State Party has been responsive to the Committee in providing detailed and timely information required for consideration and analysis of the state of conservation for Srebarna. It has met both the terms and conditions of the Committee's suggestions without reservation. Under the terms of the Convention, Bulgarian authorities have successfully sought outside technical and funding assistance where it would facilitate their efforts to restore Srebarna to 1983 conditions, or better.

Therefore, the Committee may wish to consider recommendations:

1. Commending the State Party for extra-ordinary efforts to restore Srebarna environmental conditions and World Heritage values to 1983 standards, or better;

2. Encouraging the State Party to accelerate their interdisciplinary management planning and threat mitigation efforts and continue to pursue their intensive monitoring to assure continued ecological restoration so that the area may be removed from the List of World Heritage In Danger at such time as it can be demonstrated that such recovery appears sustainable;

3. Encouraging the State Party to seek necessary cooperation with Romania to assure that the feeding areas and flyways for the Srebarna breeding Dalmatian pelican population offer safe haven, and based on the terms of the Convention (Article 6.3) seek to establish a more favourable hydraulic regime of the Danube River;

4. Encouraging the State Party to actively participate in regional and international scientific, and management exchanges to further benefit the management of all the Danube River wetland resources;

5. Encouraging the State Party to explore the ways and means to collaborate with other States Parties sharing resident and migratory bird species and populations to collectively consider the merits of a "serial-like" or composite transboundary "Danube Wetland World Heritage Site" to link and embrace all suitable and qualified areas which collectively represent a globally significant and outstanding natural and cultural resource;

6. Advising the State Party that the Committee will consider removing Srebarna from the List of World Heritage In Danger upon the passage of pending Draft Protected Areas Act (No.

802-01-16) or substantively similar conservation legislation, the satisfactory and timely completion of the Srebarna Management Plan with the establishment of effective resource management regime and buffer zone management compatible with restoring and maintaining World Heritage values, and the provision of data to support indices of sustained World Heritage value recovery through the year 2000.

The Committee may also wish to suggest to the State Party the advantages of involving local community and NGO representation in the management planning process and in the formulation of specific co-operative actions which may be required in the management of the buffer zone and adjacent Lake Srebarna drainage area. Further, the State Party may wish to consider the value of acquiring additional scientific data and information including ethno-historical and paleo-botanical analysis of lake sediments prior to dredging activity, complete aerial photographic records for management planning and restoration purposes and the development of a Srebarna Action Plan establishing management and environmental eduction, interpretation priorities and requirements to supplement the Srebarna Management Plan as outlined. Considering the inter-relatedness and select mutually supportive objectives of the World Heritage Convention, Ramsar Convention, the Man and the Biosphere Progamme (MAB), the Committee may wish to encourage the State Party to continue strengthen participation in these Conventions and Programmes.