

RAMSAR CONVENTION MONITORING PROCEDURE

REPORT No. 7

KEOLADEO NATIONAL PARK, BHARATPUR, INDIA

General Introduction

1. Each Contracting Party to the Ramsar Convention (“Convention on Wetlands of International Importance especially as Waterfowl Habitat”, Ramsar, 1.971) “shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance” (Article 2.1 of the Convention). The Contracting Parties “shall designate at least one wetland to be included in the List” (Article 2.4) and “shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List” (Article 3.1). Furthermore, each Contracting Party, “shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the list has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference. Information on such changes shall be passed without delay to the organization or government responsible for continuing bureau duties” (Article 3.2).
2. These are the principal stipulations of the Convention concerning wetlands included in the Ramsar List. Successive meetings of the Conference of the Contracting Parties (held in 1980 at Cagliari, Italy, in 1984 at Groningen, Netherlands and in 1987 at Regina, Canada) have devoted special attention to the conservation of listed wetlands and to the best ways of avoiding ‘change in ecological character’.
3. Conference Document C.3.6 of the Regina meeting (“Review of national reports submitted by Contracting Parties and Review of implementation of the Convention since the second meeting in Groningen, Netherlands in May 1984”) included a section (paragraphs 66 to 107) entitled “Changes in the ecological character of listed wetlands”. This section recalls that it is “essential that, after a wetland has been designated for the List, its conservation status should be maintained”, and that “the concept of preventing ‘change in the ecological character’ is fundamental to the Ramsar Convention”. Paragraphs 74 to 107 then review the various wetlands on the List where such changes have occurred, are occurring, or are likely to occur.
4. During the discussion of these paragraphs, several delegates emphasized the importance of avoiding changes of this kind in listed wetlands and the Conference approved a Recommendation (C .3.9) on this matter. The Recommendation (text attached to the present document) urges Contracting Parties to take swift and effective action to prevent any further degradation of sites and to restore, as far as possible, the value of degraded sites; the Recommendation requests Contracting Parties in whose territory are located the sites identified in Conference Document C.3.6 as having incurred or being threatened by damage, to report to the Convention Bureau the actions undertaken to safeguard these sites.

5. At the fourth Meeting of the Ramsar Convention Standing Committee, the members (Pakistan, Canada, Chile, Netherlands, Poland, Switzerland, Tunisia and USA) and observers (United Kingdom, IUCN, IWRB and WWF) considered the best way of promoting the implementation of Recommendation C.3.9. A "Monitoring Procedure" (the text of which is attached to the present document) was adopted by the Standing Committee as a procedure to monitor Ramsar sites, and has been used since February 1988 by the Convention Bureau.

Bharatpur - General

6. India became a Contracting Party to the Ramsar Convention with its accession of 1 October 1981 - Keoladeo National Park was one of the two sites designated by India at the time of accession for inclusion on the Ramsar List of Wetlands of International Importance.

The area (2873 ha) was declared a National Park on 10 March 1982, and accepted as a World Heritage Site in December 1985. Previously the private duck shooting preserve of the Maharaja of Bharatpur since the 1850s, the area was designated as bird sanctuary on 13 March 1956. The last big shoot was held in 1964.

7. The site is described in the Ramsar Directory as a freshwater swamp which is part of the Indogangetic Great Plains. For much of the year, however, the wetland area is only some 1,000 ha. The area is flooded in the monsoon (July-September) to an average depth of 1-2m. From October to January the water level gradually falls, and from February the land begins to dry out. By June only some water remains. The environment is partly man-made with dykes dividing the area into 10 units, each with a system of sluice gates to control water level. It is unlikely that the site would support such numbers of waterfowl as it does without the addition of water from Ajan Bund, a man-made impoundment. Soils are predominantly alluvial - some clay has formed as a result of the periodic inundations. The mean annual precipitation is 662mm, with rain falling on an average of 36 days per year. The aquatic vegetation is rich and provides a valuable food source for waterfowl.

The site supports some 369 bird species and is considered to be one of the world's best and richest bird areas. It is the major wintering ground of the western population of the endangered Siberian Crane (*Grus leucogeranus*).

8. Water levels in the park are regulated to benefit waterfowl. The boundaries of the park are delineated by a 32km long, 2m high stone wall which prevents human and domestic livestock from trespassing. There is dense human settlement surrounding the park with no possibility of creating a buffer zone. Grazing and the collection of firewood and khus grass (*Vetiveria zizanioides*) were phased out in 1983, although the collection of grass by local villagers is being permitted again, following the departure of the migratory birds in March. The absence of grazing has caused management problems as vegetation has blocked several water channels.

Current Situation

9. I had the opportunity to make a brief visit to the Keoladeo National Park during a mission to India for consultations with government officials in New Delhi. It was my first visit to the site since 1983 when grazing had been banned and I had expected to see significant changes in the character of the park. Happily, due to a variety of circumstances discussed below, this was not the case. Even though the breeding season for many species had already passed, tremendous numbers of birds could be seen, and I was told that it was anticipated that waterfowl numbers this year would exceed all previous records.

There was plenty of water in the park and infestation of vegetation did not appear to be a major problem at this time. This could be explained by certain management measures now in place such as the bulldozing of areas during the dry season and the regular cutting of vegetation, but more likely as the consequence of two extreme years of drought followed by record rainfall and water levels this year. The problem of increased vegetation and plant succession will remain as one of the most important management issues facing the park.

10. Special attention should be drawn to the status of the endangered Siberian crane. As noted above, the largest part of the western population of this species winters at the park. By the beginning of December some 19 individuals had arrived in the Park (I was able to see all 19) and it is anticipated that more will come once areas outside the park become drier. Since counts were begun in 1981, numbers of Siberian cranes in the park have decreased from 41 individuals to 31 in 1987-88. There is great concern about the species. In particular, some exploitation and habitat loss along the migration route through Afghanistan and Pakistan are thought to be increasing, although solid information is lacking. One further point; due to the infestation of vegetation in the park, the habitat is thought to become less suitable for the species in that greater effort is required for feeding.

Management Issues and Requirements

11. Cooperation with Local People

A few years back there was considerable trouble with local people including violent clashes and loss of life. These were related to access to the park and the use of its resources for the local population and for livestock. As noted above, all grazing was phased out of the park in 1983 as this was not considered compatible with the area's national park status.

I have heard that slowly bridges are being built to the local population by means of employment opportunities within the park and the renewal of opportunities to remove grass. Nonetheless, it was also reported that certain fires in the park in the past couple of years may have been deliberately set by disgruntled neighbours.

12. Grazing - Infestation of Vegetation

When grazing of domestic livestock was phased out in 1983 it was said that a steady increase in the numbers of livestock had led to overgrazing. As a political matter it was not thought possible to limit the numbers of livestock or restrict access to only certain local people. Indeed, it was said that some of the grazing operations were carried out as commercial enterprises with livestock brought from considerable distances. Following the ban on grazing there were serious problems with local villagers and there has been a change in the ecology of the park. Large infestations of weeds and successions of plant growth have resulted in the loss of much of the wetland area of the park, destroying considerable habitat for wetland species.

It should be noted that there are some 1000 feral cattle in the park, but these naturally prefer grazing in the dry areas of the park. In fact there is concern over the need to control the population of these cattle since there are few predator species in the park.

Remedial measures taken to date to control plant growth have included the manual removal of weeds and the bulldozing of areas during the dry season to expose roots to the sun. These have had utility, although do not seem sufficient or appropriate for the long-term. For example, the bulldozing operation has significant impact upon turtles which burrow into the mud during the dry season.

Consideration is now being given to controlled burning operations as a further measure to limit grass species.

Ultimately, it would seem essential to increase the ungulate population in the park. However, it is felt to be unacceptable on political grounds to maintain the park's own herd of cattle in the area. Thought is being given to the introduction of buffalo or increasing numbers of other wild ungulates.

Finally, as a related point, work needs to be done to remove siltation, especially along the canal leading to the park.

13. Pollution

As yet little work has been done on the question of pollution, although the Bombay Natural History Society's (BNHS) Research Centre has initiated some monitoring and testing of water quality. The park is surrounded by both agricultural and industrial areas. As an artificial area, the park is fed by external sources of water. The vast majority of fish species found in the park breed outside of the park and are brought in the park as fingerlings. The question of external water quality is hence of crucial importance for the viability of the park. There is a real benefit in avoiding the build up of pollutants in that water supplies are brought in each year, but of course, this factor also increases the danger of isolated instances of catastrophic pollution when water is diverted into the site.

Increased attention needs to be paid to water quality both within and outside of the park.

14. External Land Use

As noted above there is no possibility to create a buffer zone around the park. The park cannot be considered in isolation, however. It is dependent upon external sources of water and the majority of bird species in the park leave the park for feeding purposes. Although there have not been major problems with surrounding land owners with these matters, an effort should be made to develop a comprehensive management for land-use in the vicinity of the park. It is unclear if a sufficient legal basis exists for such an effort.

15. Research and Training

The BNHS centre is doing impressive work on a wide variety of wetland subjects: zoology, limnology and socio-economic studies. This work should be intensified. I understood from discussions in New Delhi that the central government was prepared to support and enhance this operation as a national research centre. It would seem essential that the broad approach of the centre be maintained, i.e. with a focus upon wetland management as opposed to any particular disciplines. In this way such a centre could be of considerable benefit for wetland managers in other parts of the country and throughout the region.

It would be very significant if the centre might be equipped as a training facility as well as a research centre, a matter related to the following paragraph on information and accommodation.

16. Public Information - Accommodation

There is a great need for an interpretation facility at the entrance of the park. Attractive and informative materials for visitors would be highly desirable as well as displays and lectures/slide shows to acquaint visitors with the park and its fauna and flora.

It would be highly desirable to have facilities to accommodate groups of students and/or senior researchers. At present there are limited accommodation facilities available in the region. The Bharatpur Lodge within the park is an impressive facility, but it is small and is priced beyond the means of most national visitors. Efforts in this regard would also pay dividends, no doubt, with the local population.

Conclusion

17. The Keoladeo National Park is a unique treasure. It has been maintained over the years as the habitat for numerous species. As an artificial area the site requires considerable management efforts to maintain the conditions necessary to continue to attract wildlife. A management plan for the site is now under elaboration.

I was most impressed with the knowledge and competence of the local staff, both in the park and at the BNHS Centre. It is also extremely gratifying to see the level of commitment for the site indicated by the officials at the Ministry of Environment in New Delhi.

It is clear that the required expertise is present at Bharatpur to undertake necessary management measures and that sufficient financial and other support will be forthcoming from the central government for those purposes.

At present there does not therefore appear to be a specific need for external sources of support or intervention. I indicated to the park officials and to the officers of the Ministry of Environment that the Ramsar Bureau stands prepared to assist, as we are able and if necessary to seek external support for their management efforts for this unique wetland of international importance.

I now assume that the Ramsar Bureau will be kept informed about the status of this site which will figure predominantly in the national report of India for the fourth meeting of the Conference of the Contracting Parties at Montreux, Switzerland in 1990.

Daniel Navid
Secretary General
Ramsar Convention Bureau
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