

CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE
ESPECIALLY AS WATERFOWL HABITAT

Fifth Meeting of the Conference of the Contracting Parties
Kushiro, Japan: 9-16 June 1993

SUMMARY REPORT OF WORKSHOP C:

ESTABLISHMENT OF WETLAND RESERVES

Saturday 12 June: 0900 - 1230; 1400 - 1530

Co-Chairmen: Mr A. Karem (Tunisia)
Mr J. Méndez Arocha (Venezuela)

Secretariat: Mr M. Smart (Assistant Secretary General)
Mr T.A. Jones (IWRB/Ramsar Liaison Officer)

Rapporteurs: Mr R.C. Prentice
Dr M. Herzig Zürcher

(a) Essential Character of Wetlands

Opening the session, and noting that technical presentations to the workshop would be reproduced in the finalized Proceedings of the Conference [see Annexes 1 to 12], the Co-Chairman from Tunisia invited the Assistant Secretary General to present an overview of comments on this subject in the national reports [Annex 1]. The Assistant Secretary General referred the workshop to document DOC. C.5.16, paragraphs 429-455, and to some national reports which mentioned the management actions undertaken at both listed and unlisted sites. The main point was that rather few Contracting Parties had identified priority actions as a step towards developing national wetland policies.

Mr J. McNeely of IUCN presented the first overview paper on the conclusions of the IV World Congress on National Parks and Protected Areas held at Caracas in February 1992 [Annex 2]. Responding to this presentation, the delegation of Bolivia stressed the importance of the direct involvement of local communities in the management of protected areas. The observer from the Brazilian NGO Consorcio Mata Atlantica emphasized that an integrated view of the whole ecosystem was needed for management of protected areas. He also noted that the application of research was crucial to the wise use and conservation of biological diversity. The observer from Honduras indicated that the issue of population pressure on wetlands was important in Central America. The delegation of Switzerland commented that 'monitoring' should be added to the 'study' component of the 'study, use, save' triangular concept for sustainable resource management outlined by Mr McNeely.

The delegation of Kenya presented the second overview paper, on human use of protected areas in Africa, focusing on Amboseli National Park in Kenya [Annex 3]. In response to this presentation, the observer from Honduras noted that

it was not always possible to achieve a balance between agriculture and sustainable resource management; for instance, livestock ranching in South America could be very destructive. The delegation of Kenya responded by indicating that coexistence was the basis of life for people, livestock and wildlife at Amboseli National Park.

The delegation of Senegal indicated that it had been unable to obtain the support of the Senegalese Ministry of Finance for sharing revenue from protected area management with local communities. It asked the delegation of Kenya to indicate how it had succeeded in this matter, and also at what level of the community this revenue was shared. The delegation of Kenya responded by stating that revenue sharing was carried out in appreciation of the important role of local communities in the management of protected areas, and that they were effectively shareholders receiving a regular dividend. Regarding government channels for resource sharing, it was recognized that administrative structures varied between states; in the case of Kenya, the head of state had approved the project, and the Kenya Wildlife Service was a para-statal organization which had control over its own resources. Revenue was shared with local communities through community-based projects such as water supply and schools, not by cash payments.

The delegation of Niger enquired whether background studies had been carried out for the project in Kenya, and indicated that it had experienced similar problems to the delegation of Senegal in obtaining governmental support for revenue-sharing projects. The delegation of Kenya affirmed that many studies had been conducted over a long period prior to the project at Amboseli. The delegation of Morocco provided an example of revenue sharing in a forest area, where a law required that 20% of revenue gained had to be re-invested in the area.

The delegation of Indonesia then presented a technical overview paper on human use of protected areas, focusing on Danau Sentarum Wildlife Reserve in West Kalimantan.

The delegation of France made a technical presentation on river basins in France, describing the development of a methodology for identifying Ramsar sites in river basins, with special reference to the River Loire [Annex 4]. The delegation of Panama congratulated the delegation of France for its excellent presentation and stressed the financial and human resource implications of management planning. The observer from Honduras requested clarification on demarcation of riverine wetland sites. The delegation of France noted that the crux of the problem was whether the whole basin or the immediate floodplain of the river should be included; in the case of the River Loire, the latter option had been selected, although not all habitats included in this zone were wetlands according to the Ramsar definition.

The delegation of Romania made a technical presentation on the Danube Delta Biosphere Reserve, which had been the subject of a major management project [Annex 5].

The delegation of Guinea-Bissau made a presentation on planning in coastal areas of the country, indicating that an urgent application would be made to

the Wetland Conservation Fund in relation to the Lagoa de Cufada Ramsar site [Annex 6].

Mr A. Tsuji of the Japan Wetland Action Network gave a presentation on 'Tidal flat conservation in a crowded country - a historical perspective', describing the loss of tidal flats in Japan and the reasons behind this loss and calling upon the workshop to suggest what the Ramsar Convention might be able to contribute towards the conservation of tidal flats in Hakata Bay, Isahaya Bay, Tokyo Bay and at Fujimae [Annex 7].

The delegation of the Netherlands praised the presentation of the Japanese Wetland Action Network, stating that it was an important contribution towards improving public awareness of the problems facing tidal flats in Japan.

(b) Guidelines for Management Planning

In the afternoon session, the workshop proceeded to review draft Recommendation REC. C.5.7 (DOC. C.5.8, Annex 1) on 'Essential character of wetlands and the need for zonation related to wetland reserves'. The Co-Chairman from Venezuela opened the floor to discussion.

The delegation of Bolivia proposed that close comparison should be made of the original language version of the recommendation with the Spanish version, to ensure that the true essence of the recommendation was accurately reflected.

The delegations of Denmark, France, Guinea and the Netherlands, and the observer from BirdLife International, proposed various amendments to the preamble of the recommendation. Several modifications were offered, which would be incorporated into the main document for final discussion and approval by the Contracting Parties in Plenary Session.

The presentations by Messrs M. Alexander (UK) and D. Bredin (France) described the process established for drawing up management plans in their respective countries [Annex 8]. It was noted that, although developed separately, both processes were very similar.

The Co-Chairman then invited the delegation of Bolivia to make a presentation on the Bolivian Management Seminar [Annex 9]. The delegation of Bolivia explained that the participants at the Bolivian Management Seminar had considered that monitoring and intra-regional cooperation were fundamental activities for promoting the wise use of listed wetlands in the Neotropical Region. The lack of management plans and insufficient information for management planning in the region was highlighted. It was stressed that local populations should not only be consulted during the preparation of the management plan, but should be included in all stages of the planning process.

The Co-Chairman thanked the Bolivian delegation for its presentation and invited the delegation of the United States to make a presentation on Management Plan Preparation [Annex 10]. The presentation stressed that amongst the factors to be taken into account were the original reasons for designation as a Ramsar site and local users' requirements.

The Co-Chairman then opened discussion of draft Recommendation REC. C.5.8 (DOC. C.5.8, Annex 2) on 'Management planning for Ramsar sites and other wetlands' and its annex, containing guidelines on a methodology for the preparation of management plans for wetland reserves.

The delegations of Bolivia, Mexico and Venezuela proposed a revision of the Spanish language version to ensure that the Spanish text accurately reflected the original English version. The Co-Chairman agreed to revise the Spanish texts of all recommendations to ensure their accuracy. The delegation of the United States, supported by the delegation of Morocco, proposed that the 'Ideal management objectives' in the draft should be re-named 'Long-term management objectives'. The delegations of France, Guinea-Bissau and the Netherlands recommended that various minor amendments to both the text of the draft Recommendation and the annex be made.

The observer from WWF suggested that, should the draft recommendation be approved by the Contracting Parties, copies of management plans for Ramsar sites should be submitted to the Bureau. This should be reflected in the text of the first operative paragraph of the recommendation.

The delegation of the Slovak Republic expressed its appreciation at the inclusion of paleoenvironmental values in the major features for the evaluation of a site, but considered that they should figure in a separate sub-heading.

The delegation of Spain stated that the text should act as guidance for those Contracting Parties which did not have existing planning processes. The distinction between mandatory planning and the proposed guidance was stressed. This led to a number of amendments to the draft recommendation.

The Co-Chairman instructed the Secretariat to prepare a revised version of the text of the recommendation and its annex for submission to Plenary Session.

(c) Public Awareness

The Co-Chairman invited the observer from the Wetland Link International programme from Pointe-à-Pierre Wildfowl Trust, Trinidad & Tobago, to present a paper on Wetland Reserves and Public Awareness [Annex 11]. She presented four key proposals as to how wetland reserves, including Ramsar sites, could act as tools for education and public awareness.

The delegation of Japan made a presentation on Public Awareness at Japanese Reserves [Annex 12]. The historic links between Japanese people and wetlands were described with particular reference to Kushiro Marsh. It was stressed that the local residents felt responsible for the recovery and conservation of the Japanese Crane *Grus japonensis*. This involvement in conservation was reflected at international level, with the accession of Japan to the Ramsar Convention in 1980, the hosting of the Asian Wetland Symposium in 1992 and the Kushiro Conference.

The need to increase public awareness and to promote further implementation of the Ramsar Convention in Japan and elsewhere in Asia was emphasized.

The Co-Chairman noted that, because of the shortage of time, discussion of draft Recommendation REC. C.5.9 (DOC. C.5.8, Annex 3) on 'Measures to promote public awareness of wetland values in wetland reserves' should be carried out in Plenary Session, and declared the workshop closed.

CONVENTION RELATIVE AUX ZONES HUMIDES D'IMPORTANCE INTERNATIONALE
PARTICULIEREMENT COMME HABITATS DES OISEAUX D'EAU

Cinquième Session de la Conférence des Parties contractantes
Kushiro, Japon: 9 au 16 juin 1993

RAPPORT RESUME DE L'ATELIER C:

ETABLISSEMENT DE RESERVES DANS LES ZONES HUMIDES

Samedi 12 juin : 09h00 - 12h30; 14h00 - 15h30

Coprésidents: A. Karem (Tunisie)
 J. Méndez Arocha (Venezuela)

Secrétariat: M. Smart (Secrétaire général adjoint)
 T.A. Jones (Attaché de liaison BIROE/Ramsar)

Rapporteurs: R.C. Prentice
 M. Herzig Zürcher

a) Caractères essentiels des réserves de zones humides

En ouvrant la séance, le Coprésident (Tunisie) fait remarquer que les exposés techniques présentés à l'Atelier seront versés aux procès-verbaux de la Conférence [voir Annexes 1 à 12] et invite le Secrétaire général adjoint à donner une vue d'ensemble des commentaires transmis dans les rapports nationaux à ce sujet [Annexe 1]. Le Secrétaire général adjoint renvoie les participants au document DOC. C.5.16, paragraphes 429-455, et à certains rapports nationaux qui mentionnent les mesures de gestion entreprises, que ce soit dans les sites inscrits ou non inscrits. L'essentiel est que très peu de Parties contractantes ont identifié des mesures prioritaires comme moyen de faire progresser l'élaboration de politiques nationales sur les zones humides.

M. J. McNeely, de l'UICN, présente le premier exposé d'introduction sur les conclusions du IVe Congrès mondial sur les Parcs nationaux et les aires protégées, tenu à Caracas en février 1992 [Annexe 2]. Suite à cet exposé, la délégation de la Bolivie souligne l'importance de la participation directe des communautés locales à la gestion des aires protégées. L'observateur de l'ONG brésilienne Consorcio Mata Atlantica souligne qu'en matière de gestion des aires protégées, il importe d'adopter une approche globale de l'écosystème. Il ajoute que les travaux de recherche sont cruciaux pour l'utilisation rationnelle et la conservation de la diversité biologique. L'observateur du Honduras indique que les pressions démographiques sont un grave problème pour les zones humides d'Amérique centrale. La délégation de la Suisse mentionne que la "surveillance continue" devrait être intégrée au volet "Etude" du concept triangulaire "Etude, utilisation, sauvegarde" pour la gestion durable des ressources présenté par M. McNeely.

La délégation du Kenya présente le deuxième exposé sur l'utilisation par l'homme des aires protégées africaines, en prenant pour exemple le Parc national de l'Amboseli au Kenya [Annexe 3]. Réagissant à cet exposé, l'observateur du Honduras fait remarquer qu'il n'est pas toujours possible de parvenir à un équilibre entre agriculture et gestion durable des ressources; par exemple, l'élevage de bétail en Amérique du Sud peut être très destructeur. La délégation du Kenya répond que dans le Parc national de l'Amboseli, la coexistence est l'essence même de la vie des hommes, du bétail et de la faune sauvage.

La délégation du Sénégal indique qu'il a été impossible à son pays d'obtenir l'appui du ministère sénégalais des Finances pour la redistribution, aux communautés locales, des recettes provenant de la gestion des aires protégées et demande à la délégation du Kenya comment les Kenyans y sont parvenus et à quel niveau de la communauté le revenu a été partagé. La délégation du Kenya déclare que la redistribution dépend de l'importance du rôle des communautés locales dans la gestion des aires protégées et ajoute que ces communautés sont effectivement des "actionnaires", recevant un dividende régulier. En ce qui concerne les voies gouvernementales chargées de la redistribution des ressources, il est reconnu que les structures administratives varient d'un pays à l'autre; dans le cas du Kenya, le chef de l'Etat a approuvé le projet et c'est le Kenya Wildlife Service, organisation para-étatique, qui gère ses propres ressources. Le revenu est redistribué aux communautés locales par l'intermédiaire de projets communautaires tels que l'adduction d'eau et la construction d'écoles et non par le versement direct d'argent.

La délégation du Niger demande si le Kenya a entrepris des études préliminaires avant d'entamer ce projet et ajoute que le Niger a rencontré le même genre de problème que la délégation du Sénégal pour obtenir un appui gouvernemental. La délégation du Kenya affirme que de nombreuses études ont été conduites bien avant que ne commence le projet de l'Amboseli. La délégation du Maroc donne un exemple de partage des revenus dans une région forestière: une loi exige que 20% du revenu obtenu soit réinvesti dans la région.

La délégation de l'Indonésie présente alors un exposé sur l'utilisation par l'homme des aires protégées en donnant l'exemple de la Réserve de faune de Danau Sentarum, dans l'ouest du Kalimantan.

La délégation de la France présente un exposé technique sur les bassins fluviaux français, décrivant la mise au point d'une méthode d'identification de sites Ramsar dans les bassins fluviaux et faisant tout particulièrement référence à la Loire [Annexe 4]. La délégation du Panama félicite la délégation de la France de son excellent exposé et souligne les implications financières et humaines des plans de gestion. L'observateur du Honduras demande des précisions sur la délimitation de sites dans les zones humides riveraines. La délégation de la France déclare que la difficulté consiste à décider s'il faut inclure le bassin dans son entier ou la plaine d'inondation immédiate; dans le cas de la Loire, c'est cette dernière option qui a été

choisie, bien que tous les habitats figurant dans la zone ne soient pas des zones humides au sens de Ramsar.

La délégation de la Roumanie fait un exposé technique sur la Réserve de la biosphère du delta du Danube, qui fait l'objet d'un vaste plan d'aménagement [Annexe 5].

La délégation de la Guinée-Bissau décrit la planification des régions côtières dans son pays et ajoute que son gouvernement présentera une demande urgente au Fonds de conservation des zones humides en faveur du site Ramsar de la Lagoa de Cufada [Annexe 6].

M. A. Tsuji, du Japan Wetland Action Network, présente un exposé sur "la conservation des zones tidales dans un pays à forte densité de population - perspective historique" qui décrit la disparition des zones tidales au Japon et les raisons qui sous-tendent cette disparition; il demande à l'Atelier de proposer que la Convention de Ramsar contribue à la conservation des zones tidales des baies de Hakata, Isahaya et Tokyo et de Fujimae [Annexe 7].

La délégation des Pays-Bas fait l'éloge de l'exposé présenté par le Japan Wetland Action Network, déclarant qu'il s'agit d'une contribution importante à la sensibilisation du public aux problèmes des zones tidales au Japon.

b) Lignes directrices sur les plans de gestion

A la session de l'après-midi, l'Atelier poursuit l'examen du projet de recommandation REC. C.5.7. "Caractères essentiels des zones humides et nécessité du zonage dans le cas des réserves dans les zones humides". Le Coprésident (Venezuela) ouvre la discussion.

La délégation de la Bolivie propose que l'on compare de près le texte original de la recommandation avec le texte de sa version en espagnol, afin que l'esprit et le sens de la recommandation soient correctement reflétés.

Les délégations du Danemark, de la France, de la Guinée et des Pays-Bas et l'observateur de BirdLife International proposent divers amendements au préambule de la recommandation. Plusieurs modifications sont proposées, qui pourraient être incorporées dans le document principal de la plénière pour discussion finale et approbation par les Parties contractantes.

Les exposés de MM. M. Alexander (Royaume-Uni) et D. Bredin (France) décrivent le processus mis en place pour préparer des plans d'aménagement dans leurs pays respectifs [Annexe 8]. Il est remarqué que, bien qu'élaborés séparément, les deux processus sont très semblables.

Le Coprésident invite alors la délégation de la Bolivie à faire un exposé sur le séminaire bolivien de gestion [Annexe 9]. Cette dernière explique que les participants à ce séminaire ont estimé que la surveillance continue et la coopération intrarégionale étaient des activités fondamentales pour promouvoir l'utilisation rationnelle des zones humides inscrites sur la Liste, dans la région néotropicale. Elle souligne l'absence de plan de gestion et l'insuffisance des informations permettant de planifier la gestion dans la

région et ajoute que les populations locales ne devraient pas seulement être consultées pendant la préparation du plan de gestion mais à toutes les étapes du processus de planification.

Le Coprésident remercie la délégation de la Bolivie et demande à la délégation des Etats-Unis de présenter un exposé sur la préparation des plans de gestion [Annexe 10]. Parmi les facteurs à prendre en compte figurent les raisons qui motivent l'inscription d'un site Ramsar et les besoins des utilisateurs locaux.

Le Coprésident ouvre alors la discussion sur le projet de recommandation REC. C.5.8 "Plans de gestion des sites Ramsar et autres zones humides" et son Annexe contenant des lignes directrices sur les méthodes de préparation applicables aux plans de gestion des réserves dans les zones humides.

Les délégations de la Bolivie, du Mexique et du Venezuela proposent de réviser la version espagnole du texte, afin qu'il reflète fidèlement la version originale anglaise; cette proposition est acceptée par le Coprésident pour toutes les recommandations.

La délégation des Etats-Unis, avec l'appui de la délégation du Maroc, propose de remplacer le sous-titre "Gestion: objectifs idéaux" par "Objectifs de gestion à long terme". Les délégations de la France, de la Guinée-Bissau et des Pays-Bas recommandent de procéder à divers amendements mineurs, tant au texte du projet de recommandation qu'à l'annexe.

L'observateur du WWF suggère que, si la recommandation est approuvée par les Parties contractantes, des copies des plans de gestion des sites Ramsar soient soumises au Bureau. Ce point devrait être reflété dans le texte du premier paragraphe du dispositif de la recommandation.

La délégation de la République slovaque se déclare satisfaite de l'incorporation de valeurs paléo-environnementales dans les principaux critères d'évaluation d'un site mais considère que celles-ci devraient faire l'objet d'un sous-paragraphe particulier.

La délégation de l'Espagne déclare que le texte devrait servir d'orientation pour les Parties contractantes n'ayant pas encore de procédure de planification établie. La distinction entre la planification obligatoire et l'orientation proposée est soulignée. Cette remarque entraîne un certain nombre d'amendements au projet de recommandation.

Le Coprésident donne instruction au Secrétariat de préparer une version révisée du texte de la recommandation et de son annexe et de la soumettre en séance plénière.

c) Sensibilisation du public

Le Coprésident invite l'observatrice du programme Wetland Link International du Pointe-à-Pierre Wildfowl Trust (Trinité-et-Tobago) à présenter un exposé sur les réserves dans les zones humides et la sensibilisation du public [Annexe 11]. Celle-ci énonce quatre propositions clés sur les moyens

d'utiliser les réserves de humides, y compris les sites Ramsar, comme outils pédagogiques et de sensibilisation du public.

La délégation du Japon décrit les mesures de sensibilisation du public prises dans les réserves japonaises [Annexe 12]. Elle rappelle les liens historiques qui existent entre les Japonais et les zones humides, en faisant tout particulièrement référence au Marais de Kushiro. Elle souligne que la population locale se sent responsable de la restauration et de la conservation de la grue japonaise (*Grus japonensis*). Sur le plan international, cet engagement envers la conservation se reflète dans l'adhésion du Japon à la Convention de Ramsar en 1980, l'organisation du Symposium sur les zones humides d'Asie en 1992 et la Conférence de Kushiro en 1993.

La délégation du Japon souligne la nécessité d'améliorer la sensibilisation du public et de promouvoir une meilleure implantation de la Convention de Ramsar au Japon en particulier et en Asie en général.

Le Coprésident annonce que, faute de temps, l'examen du projet de Recommandation REC. C.5.9 "Mesures visant à promouvoir la sensibilisation du public aux valeurs des zones humides" doit être reporté à la séance plénière et annonce la clôture de l'atelier.

CONVENCION RELATIVA A LOS HUMEDALES DE IMPORTANCIA INTERNACIONAL
ESPECIALMENTE COMO HABITAT DE AVES ACUATICAS

Quinta Reunión de la Conferencia de las Partes Contratantes
Kushiro, Japón, 9-16 de junio de 1993

INFORME RESUMIDO DEL TALLER C:

CREACION DE RESERVAS DE HUMEDALES

Sábado 12 de junio: 09.00 - 12.30h; 14.00 - 15.30h

Copresidentes: Sr. A. Karem (Túnez)
Sr. J. Méndez Arocha (Venezuela)

Secretariado: Sr. M. Smart (Secretario General Adjunto)
Sr. T.A. Jones (Responsable de Relaciones IWRB/Ramsar)

Relatores: Sr. R.C. Prentice
Dra. M. Herzig Zürcher

a) Carácter esencial de los humedales

El Copresidente (de la delegación de Túnez) declaró abierta la sesión, dijo que las presentaciones técnicas que se hicieran en el taller se reproducirían en las actas de la Conferencia [véanse los Anexos 1 a 12], e invitó al Secretario General Adjunto a reseñar las observaciones formuladas sobre este tema en los informes nacionales [Anexo 1]. El Secretario General Adjunto señaló a la atención del taller los párrafos 429-455 del documento DOC. C.5.16 y algunos informes nacionales en los que se mencionaban medidas de manejo aplicadas en sitios inscritos o no inscritos en la Lista. El problema principal era que muy pocas Partes Contratantes habían identificado acciones prioritarias con miras a elaborar políticas nacionales sobre humedales.

El señor J. McNeely, de la UICN, presentó la primera ponencia sobre las conclusiones del IV Congreso Mundial sobre Parques Nacionales y Areas Protegidas, celebrado en Caracas en febrero de 1992 [Anexo 2]. En respuesta a esa intervención, la delegación de Bolivia subrayó la importancia de la participación directa de las comunidades locales en el manejo de las áreas protegidas. El observador de la ONG del Brasil, Consorcio Mata Atlántica, hizo hincapié en que era necesario tener una visión integrada de todo el ecosistema para el manejo de esas áreas. Señaló también que la investigación era vital para el uso racional y la conservación de la diversidad biológica. El observador de Honduras indicó que la cuestión de la presión que ejerce la población sobre los humedales era importante en América Central. La delegación de Suiza dijo que debería añadirse el "monitoreo" al componente "estudio" del concepto triangular "estudio, uso, salvaguardia" esbozado por el señor McNeely para el manejo sostenible de los recursos.

La delegación de Kenya presentó la segunda ponencia sobre el uso de las áreas protegidas en Africa, centrándose en el Parque Nacional de Amboseli de Kenya [Anexo 3]. En respuesta a esa intervención, el observador de Honduras dijo que no siempre era posible conseguir un equilibrio entre la agricultura y el manejo sostenible de los recursos. Por ejemplo, en América del Sur la cría de ganado podía ser muy perjudicial. La delegación de Kenya respondió que en el Parque Nacional de Amboseli la vida de la población, el ganado y la fauna silvestre se basaba en la coexistencia.

La delegación del Senegal señaló que no había podido conseguir el apoyo del Ministro de Finanzas del Senegal para compartir los ingresos obtenidos del manejo del área protegida con las comunidades locales, y preguntó a la delegación de Kenya cómo había conseguido resultados satisfactorios en esta cuestión, y también a qué nivel de la comunidad se compartían los ingresos. La delegación de Kenya respondió que los ingresos se compartían para reconocer la importante función que desempeñan las comunidades locales en el manejo de las áreas protegidas y que efectivamente éstas eran accionistas y recibían dividendos regulares. En cuanto a los canales oficiales para la distribución de los recursos, se reconoció que las estructuras administrativas variaban entre los distintos estados; en el caso de Kenya, el Jefe de Estado había aprobado el proyecto, y el Servicio de Fauna Silvestre de Kenya era una organización paraestatal que controlaba sus propios recursos. Los ingresos se compartían con las comunidades locales mediante proyectos comunitarios, como, por ejemplo, suministro de agua y escuelas, y no mediante pagos en efectivo.

La delegación de Níger preguntó si se habían realizado estudios previos para el proyecto de Kenya, e indicó que habían tropezado con problemas similares a los de la delegación del Senegal para conseguir apoyo del gobierno en relación con los proyectos de distribución de ingresos. La delegación de Kenya dijo que se habían realizado varios estudios durante largo tiempo antes de iniciar el proyecto de Amboseli. La delegación de Marruecos citó un ejemplo de distribución de ingresos en una zona forestal, en la que una ley exigía la reinversión en la zona del 20% de los ingresos.

A continuación, la delegación de Indonesia presentó una ponencia técnica sobre el uso humano de las áreas protegidas, centrándose en la Reserva de Fauna Silvestre de Danau Sentarum en la zona occidental de Kalimantan.

La delegación de Francia hizo una presentación técnica sobre las cuencas hidrográficas del país, y describió el desarrollo de una metodología para identificar sitios Ramsar en ellas, refiriéndose en especial al río Loira [Anexo 4]. La delegación de Panamá felicitó a la delegación de Francia por la excelente presentación y recalcó la implicación de los recursos financieros y humanos en la planificación del manejo. El observador de Honduras pidió aclaraciones sobre la demarcación de los humedales fluviales. La delegación de Francia dijo que el problema fundamental era determinar si debía incluirse toda la cuenca o la llanura aluvial inmediata del río. En el caso del Loira, se había elegido esta última opción aunque no todos los hábitats incluidos en esa zona eran humedales según la definición de Ramsar.

La delegación de Rumania hizo una presentación técnica sobre la Reserva de la Biosfera del delta del Danubio que había estado sujeta a un importante proyecto de manejo [Anexo 5].

La delegación de Guinea-Bissau hizo una presentación sobre planificación en las zonas costeras del país, e indicó que debería formularse una solicitud urgente al Fondo para la Conservación de los Humedales, en relación con el sitio Ramsar de Lagoa de Cufada [Anexo 6].

El señor A. Tsuji, de Red de Acción sobre Humedales en Japón, hizo una presentación sobre "conservación del bajo mareal en países muy poblados, una perspectiva histórica", en la que describió la pérdida del bajo mareal en el Japón y los motivos a los que ésta obedecía, y pidió al taller que propusiera lo que la Convención de Ramsar podría hacer para contribuir a la conservación del bajo mareal en las bahías de Hakata, Isahaya y Tokyo y en Fujimae [Anexo 7].

La delegación de los Países Bajos encomió la intervención de Red de Acción sobre Humedales en Japón y dijo que suponía una importante contribución a la concienciación pública sobre el problema del bajo mareal en el Japón.

b) Directrices para el Manejo

En la sesión de la tarde, el taller procedió al examen del proyecto de Recomendación REC. C.5.7 sobre "Características esenciales de los Humedales y necesidad de zonificación de las reservas de humedales". El Copresidente (de la delegación de Venezuela) abrió el turno de oradores.

La delegación de Bolivia propuso que se efectuara una minuciosa comparación de la versión en idioma original con la versión española, a fin de garantizar que reflejara con precisión la esencia de la recomendación.

Las delegaciones de Dinamarca, Francia, Guinea y los Países Bajos y el observador de BirdLife International propusieron varias enmiendas al preámbulo de la recomendación. Se presentaron algunas modificaciones que se incorporarían al documento principal de la plenaria para su examen final y la aprobación de las Partes Contratantes en la sesión plenaria.

En sus intervenciones, los señores M. Alexander (Reino Unido) y D. Bredin (Francia) describieron los procedimientos establecidos para la elaboración de planes de manejo en sus respectivos países [Anexo 8]. Se señaló que, aunque se habían realizado independientemente, ambos procesos era muy similares.

Acto seguido, el Copresidente (Venezuela) invitó a la delegación de Bolivia a hacer una presentación sobre el Seminario de Manejo Boliviano [Anexo 9]. La delegación de Bolivia explicó a los participantes que dicho seminario consideró que el monitoreo y la cooperación intra-regional eran actividades fundamentales para la promoción del uso racional de los humedales de la región neotropical incluidos en la Lista. Se puso de relieve la carencia de planes de manejo y la escasez de información para la planificación del manejo en la región. Se subrayó que no sólo debería consultarse a las poblaciones locales durante la preparación del plan de manejo, sino que éstas también deberían participar en todas las etapas del proceso de planificación.

El Copresidente agradeció la intervención de la delegación de Bolivia e invitó a la delegación de los Estados Unidos a hacer su presentación sobre preparación del plan de manejo [Anexo 10]. La presentación recalcó que entre los factores que debían tomarse en consideración cabía citar los motivos que originaron la designación de un sitio Ramsar y las necesidades de los usuarios locales.

A continuación, el Copresidente abrió el debate sobre la Recomendación provisional REC. C.5.8 sobre " Planificación y Manejo de los sitios Ramsar y otros humedales" y su anexo, que contenían directrices sobre una metodología para la preparación de planes de manejo de reservas de humedales.

Las delegaciones de Bolivia, México y Venezuela propusieron que se efectuara una revisión de la versión española a fin de que el texto reflejara con precisión la versión original inglesa. El Copresidente estuvo de acuerdo en revisar las versiones en español de todas las recomendaciones con objeto de garantizar su exactitud. La delegación de los Estados Unidos, respaldada por la delegación de Marruecos, propuso remplazar el título del proyecto "objetivos ideales de manejo" por "objetivos de manejo a largo plazo". Las delegaciones de Francia, Guinea-Bissau y los Países Bajos recomendaron la introducción de varias enmiendas de escasa importancia tanto en el texto de la recomendación provisional como el anexo.

El observador del WWF propuso que, si las Partes Contratantes aprobaban el proyecto de recomendación, se presentaran a la Oficina ejemplares de los planes de manejo para los sitios Ramsar. Esto debería reflejarse en el texto del primer párrafo operativo de la recomendación.

La delegación de la República Eslovaca expresó su satisfacción por el hecho de que se hubieran incluido los valores paleoambientales entre los principales criterios para la evaluación de un sitio, pero estimó que deberían figurar en un subapartado separado.

La delegación de España dijo que el texto debería servir de orientación para las Partes Contratantes que no contaban con procesos de planificación. Recalcó la distinción entre la planificación mandatoria y la orientación propuesta. Esto condujo a una serie de enmiendas al proyecto de Recomendación.

El Copresidente encargó al Secretariado que preparará una versión revisada del texto de la recomendación y de su anexo.

c) Concienciación Pública

El Copresidente invitó al observador del programa Wetland Link International, de Pointe-à-Pierre Wildfowl Trust, Trinidad & Tabago, a presentar una ponencia sobre reservas de humedales y concienciación pública [Anexo 11]. La observadora hizo cuatro propuestas importantes sobre la forma en que las reservas de humedales, incluyendo los sitios Ramsar podrían utilizarse con fines educativos y de concienciación pública.

La delegación del Japón hizo una presentación acerca de la concienciación pública sobre las reservas japonesas [Anexo 12]. Se describieron los vínculos históricos existentes entre la población y los humedales en el Japón y en particular se hizo referencia a la ciénaga de Kushiro. Se subrayó que los residentes locales se sentían responsables de la recuperación y conservación de la Grulla japonesa, *Grus Japonensis*. Esta participación en actividades de conservación se había reflejado a nivel internacional con la adhesión del Japón a la Convención de Ramsar en 1980, y la celebración en el país del Simposio sobre los Humedales Asiáticos, en 1992, y de la Conferencia de Kushiro.

Se subrayó que era necesario incrementar la concienciación pública y promover la aplicación de la Convención de Ramsar en el Japón y en el resto de Asia.

El Copresidente indicó que, debido a la falta de tiempo, la discusión del proyecto de recomendación REC. 5.9 sobre "Medidas para fomentar la conciencia pública del valor de los humedales en las reservas de humedales" deberá proseguir en la sesión plenaria, y declaró terminado el taller.

SUMMARY OF COMMENTS IN NATIONAL REPORTS

presented by M. Smart, Ramsar Convention Bureau

Document C.5.16 ('Review of national reports submitted by the Contracting Parties and Review of the implementation of the Convention since Montreux') summarizes information contained in the 38 national reports which had been received by the Bureau by April 1993, and reviews implementation since Montreux on the basis of data available to the Bureau. In this document, paragraphs 429-455 present comments from section 3.4 of the national reports under which Contracting Parties were requested to comment on 'Progress towards priority actions at particular wetlands, especially establishment and wardening of nature reserves in non-listed wetlands'. Paragraphs 265-283 cover 'Action, notably management, at listed wetlands'.

The 'Guidelines on the implementation of the wise use concept' adopted at Montreux suggested that, where Contracting Parties were unable at least for the moment to adopt national policies, they should identify 'priority actions at national level', including action at particular wetlands. While paragraphs 429-455 present a number of urgent actions and priorities, they suggest that rather few Contracting Parties have identified priority actions as a halfway house to national policies.

The US report notes the value of technology exchange through technical meetings. Ramsar regional meetings held over the last triennium (eg. the Bolivian meeting of Ramsar site managers from the Neotropical region, or the meeting of management experts in Wales) have proved very effective and the meeting in Senegal for North and West Africa requested further technical meetings of this kind.

THE NEW PARADIGM FOR PROTECTED AREAS
IMPLICATIONS FOR WETLANDS

presented by J.A. McNeely, Chief Biodiversity Officer,
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Abstract: Since the first national park was created at Yellowstone in the USA in 1872, over 20,000 protected areas have been established. Virtually all countries have seen the wisdom of protected areas, which now cover over 5 percent of the earth's land surface. However, many of these protected areas exist only on paper, not on the ground. Most are suffering from a combination of threats, including pollution, over-exploitation, encroachment, poaching, and many others. In a period of growing demands on resources and shrinking government budgets, new approaches are required to ensure the sustainability of protected areas. Meeting in Caracas, Venezuela from 10-21 February 1992, the IV World Congress on National Parks and Protected Areas recommended that first and foremost, protected areas must be designed and managed in order to provide tangible and intangible benefits to society. This will involve integrating protected areas into larger planning frameworks, expanding support for protected areas, strengthening the capacity to manage protected areas, and expanding international cooperation in the finance, development and management of protected areas. These approaches will be especially relevant for protected wetlands, which have a number of special characteristics. Because of the flow of water, wetlands tend to be even less isolated from their surroundings than are most other types of habitats. Wetlands are often transitory habitats, making them especially vulnerable to changes brought about by climate change. Wetlands tend to be especially productive of resources useful to people, such as fish; and perform important services, such as pollution control. And wetlands are especially important for migratory species, especially as waterfowl. All of these characteristics call for management actions which are specifically designed to ensure that wetland protected areas are able to provide sustainable benefits to local human communities, the nation, and the world at large.

Introduction

Modern protected areas were born over a hundred years ago in the frontier of the North American West, at a time when the indigenous population was being displaced by immigrants (often accompanied by considerable violence). The Yellowstone region was occupied by a rich mixture of Shoshone, Crow, and Blackfoot, but to the European immigrants it was a 'wilderness' which needed to be 'conquered'. The North American model of the 'pristine National Park' which began in Yellowstone in 1872 grew slowly at first, but beginning in the 1960s many more countries established national parks which excluded people. Experience quickly showed, however, that most parts of the world already had

people living there, or at least had people with legitimate historical claims on the land.

In recognition of the reality that conserving nature required more flexible approaches to management, many countries began to develop ways to augment the strictly protected national parks, such as game reserves, watershed protection forests, indigenous reserves, recreation forests, and many others. Over 20,000 protected areas have now been established, covering over 5 percent of the globe (an area roughly equivalent to twice the size of India). Only 1,470 of these are national parks of the Yellowstone model, while the rest are given a wide variety of other designations (IUCN, 1990); Australia alone has at least 45 kinds of protected areas. To bring some order to this chaos of terms, IUCN (1978) established ten categories of protected areas based on management objectives. This was subsequently reduced to eight categories (1984) and then six categories (1993).

The different terms are far more than just names. While continuing to support the idea that some areas are so important for national objectives that the highest degree of protection from human influence is required, it was also recognized that the ideal of national parks being places without significant human influence was not always reflected in practice; in South America, for example, a recent IUCN study found that some 86% of national parks had permanent resident human populations (Amend and Amend, 1992). Further, both governments and international conservation organizations recognized that new management approaches are needed to build a more positive relationship with the people who live in and around protected areas. This new perspective was first given full legitimacy in the *World Conservation Strategy* (IUCN, 1980) and was converted into practical advice at the IIIrd World National Parks Congress (Bali, Indonesia, October 1992). The title of the Congress proceedings, *National Parks, Conservation and Development: The Role of Protected Areas in Sustaining Society*, (McNeely and Miller, 1984) gives a clear indication of the new directions being advocated.

After a decade of experience with the new approach, many important lessons have been learned. Many of these were brought together at the IVth World Congress on National Parks and Protected Areas, which was held in Caracas, Venezuela, in February 1992. A number of publications have already resulted from the Congress (McNeely, 1993; Barzetti, 1993; Thorsell, 1992; Harmon, 1992) and many more are in progress. The Caracas Congress provided an opportunity to reassess the current status and trends of protected areas and to synthesize the lessons learned to date. While this paper is too short to cover all the details (see McNeely 1993 for these), the following indicates the general shape of the new paradigm for protected areas at the end of the 20th century.

People and Protected Areas

Protected areas cannot co-exist in the long term with communities which are hostile to them. But when placed in a proper context, protected areas can make significant contributions to human welfare. Many protected areas face pressure from increasing populations whose economic well-being has suffered from

cumulative neglect of land and other resources. For protected area managers, detailed knowledge of the people whose lives are affected by the establishment and management of parks is as important as information about the plant and animal species to be conserved. The cultural and socio-economic characteristics of local people form the basis for measures to promote the sustainable use of natural resources, alleviate poverty, raise the quality of human life and create positive support for protected areas.

Because of conflicts between different uses for lands important for conservation, or between different economic interests with different objectives, protected area managers must give considerable attention to new approaches to resolving conflicts. The most important step is to get all sides of a conflict to sit down and try to recognize the validity of the opposing views and search for common ground. It is also important to identify the various 'stakeholders' involved in the conflict, and to identify their interests. While conflicts will not go away, protected area managers can become more effective in dealing with the conflicts which are an inevitable part of modern management and seek more opportunities for cooperation.

Human communities living in and around protected areas often have important and long-standing relationships with these areas. Local and indigenous communities may depend on the resources of these areas for their livelihood and cultural survival. Increasingly, the resources which justify establishment of protected areas include cultural landscapes and adapted natural systems created by long-established human activity. These relationships embrace cultural identity, spirituality and subsistence practices, which frequently contribute to the maintenance of biological diversity. Protected areas should thus be seen as making important contributions to conserving cultural diversity as well as biological diversity.

The relationships between people and land have too often been ignored and even destroyed by well-intentioned but insensitive resource conservation and management initiatives. Community participation and equity are necessary components in decision-making processes, with mutual respect among cultures. Customary tenure systems, traditional knowledge and practices, and the differential role of men and women in communities, must be respected and built upon in designing and implementing conservation plans.

At the same time, community involvement does not mean opening the national parks to all comers, any more than a banker would seek customers by opening the vault. Rather, a wise protected area manager, like a wise banker, uses the park's assets as a base upon which to build customer satisfaction, investment, and interest.

Conserving Biodiversity

It may seem obvious that protected areas contribute to conserving biodiversity. But, as pointed out in the *Global Biodiversity Strategy*, (WRI, IUCN, UNEP, 1992) relatively few protected areas have yet given full attention to the biodiversity issue. Therefore all countries should review their protected area systems and identify additional sites of critical importance

for conservation of biological diversity; where appropriate, these areas should be accorded strict protection. Harvesting of timber should be relocated from primary to secondary forests and tree plantations in previously deforested areas; or -- where this is not possible -- sustainable forest harvesting systems which favour natural species diversity should be developed and introduced outside of protected areas.

In the new Convention on Biological Diversity, signed by over 150 countries at the United Nations Conference on Environment and Development in Rio de Janeiro in June 1992, it was agreed that countries are sovereign and have control over the use of their own genetic resources, and that they need to act to protect their interests in the growing market for biological resources. Improving the management of protected areas is an essential element in doing so. The Convention on Biological Diversity includes strong support for protected areas, but it needs to be supported by an international forum which would be created to establish conservation norms and facilitate long-term planning and coordination.

Approaches developed for conserving biodiversity on land may not always be appropriate in the sea, so a major effort is required to create well-managed marine protected areas. This may require new concepts, or the broader application of concepts such as zoning, where strictly-protected core zones are surrounded by much larger areas of varying intensity of human use. Marine protected areas encompassing complete large marine ecosystems, and including strictly protected areas, should be based on administrative arrangements which coordinate the different jurisdictions of adjacent land and sea areas. Strictly protected core areas need to be buffered by well-managed zones of regulated use, with an outer area of cooperation -- a large marine ecosystem that all agencies and interested parties have agreed to manage and protect jointly.

Conservation at a Regional Scale

Protected areas have sometimes been seen as islands of nature and tranquility, surrounded by incompatible land uses. But such an 'island mentality' is fatal in the long run, because protected areas will not be able to conserve biodiversity if they are surrounded by degraded habitats that limit gene-flow, alter nutrient and water cycles and produce regional and global climate change that may lead ultimately to the disappearance of these 'island parks'. Protected areas therefore need to be part of broader regional approaches to land management. The term 'bio-region' has been used to describe extensive areas of land and water which include protected areas and surrounding lands, preferably including complete watersheds, where all agencies and interested parties have agreed to collaborative management.

Water is a major unifying component of a bio-region, and a drainage basin provides a natural unit for land and water management. Since protected areas can make an important contribution to the management of water in natural ecosystems though maintaining hydrological processes, close cooperation is needed among diverse disciplines and interest groups, beginning by defining the roles played by protected areas in managing catchments and the impact of

changes in quantity and quality of freshwater on the diversity and productivity of natural ecosystems.

Both drainage basins and many international boundaries are marked by mountains, many of which have protected area status. Therefore, bio-regions often also include major mountain ranges and greater attention needs to be given to the problems of mountain protected areas and their status within bio-regions. Protected areas which occur along international boundaries call for international cooperation for which the bio-region approach also provides a framework.

The importance of the bio-regional approach is emphasized by the threat of climate change, a critical and urgent hazard to all ecosystems and species, including those in coastal and marine environments. Protected areas are not immune to these threats and most are too small for the continued survival of existing ecosystems and species in a changing world. Governments should involve protected area managers in programmes to determine which habitats and species are at risk on a regional scale, develop networks of protected areas actively involved in monitoring global change, and take active measures to extend the coverage of systems and species threatened by global climatic change. Special attention needs to be given to establishing large areas, areas with a wide altitudinal range, and corridors between protected areas -- all elements of the bio-regional approach.

Funding for Protected Areas

Many governments expect protected areas to 'pay their own way'. Some protected areas are in fact highly profitable, earning very considerable foreign exchange for their countries (especially from tourism). More broadly, protected areas make important economic contributions through helping to maintain clean air, pure water, a green earth, and a balance of creatures; these functions enable humans to obtain the food, fibre, energy, and other material needs for survival. Many of the benefits are unquantifiable, however, and rather like schools, police forces, or hospitals, relatively few protected areas are able to capture the 'profits' from the benefits they provide to society.

Three major economic challenges face protected areas. First, the full benefits of protected areas are seldom recognized, so an appropriate balance between benefits and costs is not easily apparent to decision-makers and it is seldom made clear how increased investments will result in increased benefits, either to local populations or to the general public, Second, many of these benefits are outside the current concepts of economics, and an excessive reliance on calculation of benefits should be avoided; the question of distribution of benefits is especially important; and is sufficiently addressed by current economic models. And third, greatly increased investments for protected areas will be helpful only if the investments are part of an overall development package; pumping too much money into a protected area in an unbalanced way can do more harm than good, and lack of money may be a less important constraint than excessive expenditures in sectors that threaten or undermine protected areas.

New responses to insufficient or unbalanced investment in protected areas include innovative funding mechanisms (such as trust funds, dedicated funding of receipts from tourism, debt-for-nature swaps), and giving more responsibility for protected areas to NGOs, the private sector, local communities, and land-owners. But governments have the prime responsibility for protected area management, in view of their key role as national assets and the generalized benefits these sites provide to society. Conservation investments are as essential to the welfare of society, as legitimate a public investment, as defense, communications, justice, health, and education. Protected areas benefit the nation -- that is why some of the best ones are called 'national parks' -- and the world -- that is why outstanding sites are recognized under the World Heritage Convention.

Making protected areas part of regional development plans can help ensure an appropriate balance between costs and benefits. The Global Environment Facility is providing hundreds of millions of dollars for conservation, and some of this money will be spent on protected areas. A grant scheme for park management using funds from the Global Environmental Facility should be implemented, and the GEF might be encouraged to establish trust funds and other long-term funding mechanisms for protected area systems.

Building Stronger Support for Conservation

To build stronger support for conservation, contributions are required from all parts of society -- young and old, rich and poor, male and female, private and public. Many current institutions are far too weak to carry the conservation message effectively to the public, calling for a vigorous international programme in support of protected areas.

Such a programme should build from the ground up, being organized in the first instance through regional cooperation between countries. An essential element of regional programmes to support protected areas is building the capacity to conserve. Training of protected area managers is required at all levels, emphasizing the concepts, methods, and techniques necessary for staff to be fully aware and effective in their responsibility towards the conservation of nature and the human communities in and around protected areas.

As shortcomings of government policies on protected area conservation become more apparent, increased support from non-governmental approaches is also required. Local communities, private land owners, non-governmental organizations and government must all be part of evolving new partnerships for the management of land and natural resources. Non-governmental land owners and users need to be encouraged to take conservation actions on behalf of the broader community. All countries should adopt partnership initiatives which encourage and reward private land owners and users -- be they communities or individuals -- for their conservation management actions. Such initiatives can identify appropriate roles for private and community interests in protected areas strategies, and incorporate partnership approaches in regional planning, sectoral policies, and legal frameworks.

In a time of changing national security needs, the military could play an important role in conservation. The military can be deployed for protection of critical sites, regeneration of deforested areas, scientific research, managing defense lands (many of which are in remote areas and are important for conservation), and monitoring pollution. Greater efforts are required to involve the military as allies in support of protected areas.

Implications for Wetlands

Most of the above points can be applied to protected wetlands in a relatively straight-forward manner, but it is perhaps useful to consider a few of the special characteristics of wetlands and what these characteristics might mean for those seeking to manage wetlands. These are briefly discussed below, building on several principles:

1. Wetlands are part of regional landscapes

Because of the flow of water, wetlands tend to be even less isolated from their surroundings than are most other types of habitats. This requires that managers give full consideration to where their water is coming from, what happens to it upstream, and who is benefitting from it downstream. Managers of protected areas with significant wetlands therefore need to conceive of their sites as part of much larger systems, establishing close working relationships with those having an interest in the hydrological functions of the area.

2. Wetlands are transitory habitats

In an eco-historical sense, most wetlands are transitory. Most wetlands are the result of climate changes in the past -- the vast wetlands of Canada, Russia, and Scandinavia, for example, were formed when the great glaciers retreated at the end of the Pleistocene. Continuing climate change may well lead to the loss of these wetlands, and to the creation of others. In time (often relatively short), most wetlands will evolve into another type of habitat, forcing the protected area manager to manage transitory habitats. Sometimes human interventions can augment wetlands, for example by timing releases from reservoirs; but more often these human disruptions are a hazard to wetlands. Wetland managers therefore need to work closely with scientists who are conducting research on maintaining dynamic ecosystems, coordinate their efforts with the sectors of government which are working on climate change issues, and ensure that the concerns of the wetland are fully addressed in regional land-use and development plans.

3. Wetlands produce many goods and services useful to people

While all protected areas provide goods and services, wetlands are often especially productive and useful to people. In northern Europe, for example, some 85 percent of the total primary production of the Baltic Sea supports fish catches (Folke, Hammer, and Janssen, 1991). Many other goods and services can be quoted, ranging from flood control to pollution abatement to fisheries production. A wise wetland manager will seek to document the full range of

benefits that the wetland is providing, and include this information in public education efforts. Quantifying these benefits will often support arguments for larger budgets designed to ensure a consistent delivery of goods and services. Another major challenge for wetland managers is to design management practices that will promote sustainable use rather than over-exploitation, enabling local people and the nation to earn benefits from the wetland without compromising the values which it was established to conserve.

4. Wetlands are important for migratory species

Wetlands are a crucial part of the migratory patterns of many fish and birds, again underlining the importance of international cooperation. Wetlands might therefore be conceived as 'stepping stones' rather than 'islands', requiring the manager to give special attention to the international aspects of his management practices. Certain habitats may be especially important during certain times of year when large numbers of migrants are using the wetland; special habitat management procedures (such as flooding, artificial feeding, or limitations on hunting or fishing) might need to be implemented during such periods. Such coordinated action requires effective communication between the wetland and other 'stepping stones' along the migratory chain. The importance of the wetlands as part of a migratory system can often be an effective part of public education efforts.

All of these characteristics call for management actions which are specifically designed to ensure that wetland protected areas are able to provide sustainable benefits to local human communities, the nation, and the world at large.

Conclusion

Protected area managers must have no illusions about the severity of the problems they will be facing in coming years. Tomorrow's conflicts will be even more difficult than today's, as resource scarcity, economic imbalance, and continuing use of inappropriate technology form a witch's brew of challenges to protected areas, and to sustainable use of the environment as a whole. But such challenges mean that protected areas have an even more important part to play in securing a productive future for humanity.

HUMAN USE OF PROTECTED AREAS IN AFRICA:
AMBOSALI NATIONAL PARK (KENYA) AS A CASE STUDY

presented by A. Koyo, Kenya Wildlife Service, Nairobi, Kenya

Amboseli National Park, located in the southern part of Kenya, and lying in the rain shadow of Mt. Kilimanjaro is indisputably the most popular protected area in the country. Over 300,000 visitors tour the park every year despite its relatively small size of 392 km². Apart from the abundant wildlife resources other attractions are the view of Mt. Kilimanjaro, the natural springs and swamps which teem with scores of species of waterfowl and the dynamic cultures and traditions of the local Masai communities. The National Park lies within a large ecosystem that covers almost 20,000 km² of land which is used mainly as group ranches by the local pastoral communities. Being in the rain shadow of the mountain, the ecosystem including the park is dry with less than 2,000 mm of rainfall per year. Thus, the Amboseli Swamps, covering almost 1,200 hectares are the only permanent source of water and fodder in the whole range and provide the lifeline to thousands of wildlife, livestock and human beings.

When the Government acquired Amboseli Park from the local authority in 1974, an agreement was signed with local communities that the Government would supply them with water outside the park or else they would retain their traditional right to enter the park with their livestock to fetch water. Water in this regard is pumped from the swamps in the park to watering points outside. Dams and boreholes have also been dug in appropriate places in the ranches to trap ground and rain water whenever possible. Although the Government, through KWS has a very strong commitment to honour its pledge to supply water to the communities, there have been occasions when water could not be pumped due to unavoidable circumstances. In such instances people and their livestock are allowed access to the swamps in the park. This bilateral agreement has eased tension and removed confrontation which used to be the hallmark between the local communities and park administration. It is also mutually recognized by both parties that they need each other for their long term survival. Although the park must be managed and conserved to sustain its natural qualities this would not be achieved in the long run by discarding the welfare of the people living around the protected areas.

Wildlife populations, on the other hand, concentrate in the park - particularly in the swamps in the dry seasons and move out immediately when it starts to rain. The National Park sometimes remains with only a handful of wildlife populations in the rainy seasons as greater concentrations disperse out into the ranches and even beyond. Wildlife dispersal in the ranches used to be viewed with scepticism by the local communities and many animals were speared and killed during their dispersal errands. People viewed animals very negatively as a source of transmissible diseases to livestock and damage to property including human life. The situations was exacerbated by the discontinuation of compensation by the Government for loss or damage caused by wildlife except death to human beings. People sought to defend themselves

from wildlife raids by proposing to sub-divide the group ranches to individual holdings so that each person could fence his lot and thereby cut off wildlife migration routes.

To further ensure that local communities benefitted from wildlife resources directly, KWS - through its community wildlife service initiated a revenue sharing programme in December 1989. Within this scheme, local communities in the dispersal areas around the parks are given 25% of the revenue collected from tourism in the park for the development of community-based infrastructure i.e. schools, health facilities, dips, roads, community centres, bursaries, etc. Amboseli is the highest revenue collector in the country and this arrangement has been very effective in ensuring direct benefit as a substantial amount of income is obtained by the communities on a regular basis.

The communities are also encouraged and assisted to use wildlife resources in the ranches for tourism purposes through the construction of roads, camp sites, picnic sites, etc. to enable tourists to visit their areas and ranches especially during migrations in the wet seasons when the park's wildlife attractions diminish with a corresponding increase in the ranches. Local communities have responded positively to these initiatives and very many tourists now visit the dispersal areas in the ranches to view game and the rich cultural attractions which have been enhanced by the construction of cultural villages in appropriate places. The arrangements to re-route tourists from the park has a profound benefit of relieving pressure on the park itself which shows clear evidence of being over-utilized by both man, livestock and wildlife. In that regard the park gets an opportunity in the wet seasons to recover and regenerate its ecological potentials so as to be able to withstand pressure in the following dry season. The local communities charge entry fees from tourists who go to the ranches and improve their income further by sale of their traditional merchandise. They also sell concession rights to tour operators to construct exclusive camp sites, picnic sites, etc. in their areas.

Other community wildlife service activities being promoted include game farming of which ostrich rearing is the most popular around Amboseli. In some instances they collect eggs and sell to the well-established ostrich farmers in other parts of the country. Game farming is however still in its rudimentary stage and a lot of extension work has to be carried out to make it cost-effective and beneficial to the majority of the people. At present only a few individuals benefit by exploiting the lack of technical capacity by the majority of ranch owners.

In the outer reaches of the ranches, the communities may apply for wildlife use rights in which case they are allowed by KWS to hunt some specific species and numbers of wildlife to obtain meat and other products for domestic use or sale to improve their income. Consumptive use of wildlife is, however, only granted upon satisfactory evidence that the operation would not undermine the National Park and that it would be done on a sustainable yield basis. The community or individuals concerned must also have the capacity to carry out the programme prudently. The wildlife use right scheme has become very popular

in the Amboseli area with a lot of activities in all five group ranches, and a lot of revenue is being generated to the benefit of the people concerned.

Other community use of the protected area is the free passage rights to the tourist lodges, shopping and community centres situated in the park to work, do shopping or sell their products to the tourists or resident workers in the park. Conservation education programmes are conducted among the local communities. KWS - through its conservation education unit carries out educational activities among the local schools and institutions within and around Amboseli. In these programmes the focus is on the youth and is aimed at informing and creating awareness on the importance of wildlife and environmental conservation. The programmes are administered through workshops, seminars, talks, discussions, literature distributions, films, and other audio visual aids. On the other hand, KWS CWS carries out extension programmes on adult members of the ranches, other institutions in the area and policy makers on a wide range of wildlife conservation programmes including revenue sharing, game farming, environmental protection, especially soil, water, forestry conservation as well as wildlife management techniques to enable the communities concerned to conserve effectively wildlife resources in their areas. Educational excursions are also organised for local communities to visit the park to learn and have first hand experience on conservation activities.

Amboseli has proved that protected areas cannot survive without the goodwill of the local people who must be involved in the conservation process. People's attitude to wildlife and protected areas would only change positively if they get tangible benefits from the resources and when their welfare is effectively provided for. The long-term survival of African protected areas relies closely on what the authorities concerned do to convince the local communities through practical benefits, that the resources belong to them. This is particularly important as human populations expand and the demand for land and other resources increase. Most African States have adopted the concept of community participation in conservation programmes within and outside the protected areas.

L'INSCRIPTION DE COURS D'EAU ET SITES FLUVIAUX SUR LA LISTE RAMSAR

préparé par P. Bazin, M. Thauront et M. Maury pour le compte du
ministère français de l'Environnement, Direction de la Nature
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Résumé: Les cours d'eau sont des zones humides au sens de la Convention de Ramsar. Ils constituent même parfois des zones humides d'une importance exceptionnelle, par leur taille, leurs fonctions hydrologiques et écologiques multiples, ainsi que leur diversité d'habitats naturels. Pourtant, les sites fluviaux inscrits sur la "Liste des zones humides d'importance internationale" sont très peu nombreux. Il n'y figure aucun système fluvial en tant que tel. Le ministère français de l'Environnement a commandé au Bureau d'études Ecosphère un travail méthodologique préparatoire à l'inscription sur la Liste des cours d'eau et sites fluviaux français, ainsi qu'une réflexion sur la délimitation du site à retenir dans le cas du fleuve Loire.

Sur les cours d'eau, une "shadow list" pléthorique de sites répondant aux critères d'importance internationale serait difficile à réaliser et d'une efficacité douteuse. Nous préconisons l'approche d'un "échantillon représentatif" de l'intérêt et de la spécificité des cours d'eau du pays. Cet échantillon, sur un domaine encore peu abordé par la Convention, nous semble à l'échelle de ce qu'un pays, aussi volontariste soit-il, peut raisonnablement engager à court terme. Il sera une base expérimentale permettant de développer le concept d'utilisation rationnelle dans des situations variées. La France ne manque pas d'atouts avec la nouvelle loi sur l'eau pour progresser dans ce sens, mais cela ne débutera que sur un petit nombre de sites marqués par un minimum de consensus de départ.

1. Comment appliquer les critères d'importance de la Convention au cours d'eau ?

Préalables:

Les lignes directrices ne sont pas utilisées dans ce chapitre, sur le conseil du Bureau de Ramsar.

Terminologie employée:

Critères: critères d'importance internationale pour les zones humides au sens de la Convention de Ramsar (Cf annexe I de la REC. C.4.2 [Rév.])

Hydrosystème: écosystème fluvial considéré dans sa globalité, comprenant le lit mineur, le lit majeur, les interrelations fonctionnelles avec les eaux souterraines et le bassin versant

Descripteurs: paramètres appliqués aux hydrosystèmes français permettant de caractériser leur intérêt au regard des critères.

1.1 Méthode d'utilisation des critères

Trois critères ont été adoptés par la Convention pour identifier les zones humides d'importance internationale. Ils se réfèrent respectivement à la représentativité ou l'unicité de la zone humide considérée, à la valeur de celle-ci du point de vue de la faune et de la flore et enfin à sa valeur du point de vue des oiseaux d'eau.

Sur ces critères et leur utilisation pour des systèmes de cours d'eau, nous pouvons tout d'abord effectuer les observations suivantes:

- le critère relatif aux oiseaux d'eau a été le seul utilisé jusqu'à présent en France, et convient précisément assez mal pour souligner l'importance des cours d'eau;
- chaque critère fait appel à un certain nombre de notions qui peuvent parfois s'apprécier à l'aide de descripteurs quantifiables, ou parfois restent purement qualitatifs;
- il n'existe pas de frontières infranchissables entre chaque critère, les manières d'apprécier chacun d'eux se recoupent en partie. Par exemple, l'unicité ou la représentativité (critère 1) - notions qualitatives - peuvent être jugées partiellement grâce à des descripteurs "seuil" - transmettant donc des informations quantifiables - comme la présence ou l'absence d'une espèce particulièrement rare, ce qui relève normalement du critère 2;
- pour les cours d'eau plus encore peut-être que pour les autres zones humides, la dimension du système considéré joue un rôle primordial pour juger de l'importance d'un site. Selon que l'on inclue un bassin versant ou un tronçon de vallée, les notions de valeur, de rôle hydrologique, d'unicité, etc... ne seront pas les mêmes.

Sur la base de ces considérations, nous suggérons la méthode d'utilisation des critères présentée ci-après.

Préalablement, nous dressons l'inventaire des caractéristiques permettant de décrire les sites fluviaux de façon pertinente dans le contexte français, tout en établissant un lien avec les notions utilisées dans les critères. Nous aboutissons ainsi à un ensemble de descripteurs (voir para. 1.2). Ces descripteurs sont de trois types:

- ils peuvent déterminer à eux seuls des seuils d'importance internationale lorsqu'ils définissent une donnée quantifiable au regard des critères (20.000 oiseaux d'eau, présence d'une population viable de *Mustela lutreola*...),
- ils peuvent déterminer des échelles qualitatives, dans lesquelles on recherchera les sites présentant des valeurs maximales dans ces échelles, ou la meilleure combinaison de valeurs positives pour plusieurs descripteurs (représentativité, valeur pour la faune et la flore...),

- ils peuvent enfin rester essentiellement descriptifs et correspondre à un cadre typologique, essentiel pour établir la notion de représentativité.

L'ensemble de ces descripteurs doit refléter globalement les divers types d'importance que peuvent revêtir les cours d'eau français selon les critères.

La grille d'évaluation obtenue permettra d'identifier des sites à inscrire sur la Liste des zones humides d'importance internationale. Ceci peut alors se faire de deux façons:

- inscrire sur la Liste le maximum de sites correspondant d'après les descripteurs aux critères d'importance internationale;
- inscrire sur la Liste un échantillon composé d'un nombre limité de sites, de sorte que tous les descripteurs soient représentés dans l'échantillon au moins une fois, si possible avec une valeur maximale. Cet échantillon illustrerait ainsi l'intérêt du patrimoine français en la matière.

Nous estimons que la deuxième méthode est meilleure, et nous avons proposé pour ce faire un exemple d'échantillon possible (voir para. 2).

1.2 Descripteurs à prendre en compte

Découpage biogéographique: la France est au carrefour des quatre subdivisions biogéographiques de l'Europe - atlantique, méditerranéenne, alpine et continentale. Cette spécificité est enrichie par certains corridors fluviaux qui permettent la remontée d'influences méditerranéennes par exemple dans d'autres zones. Une zone de moyennes montagnes peut être également retenue, qui présente certaines particularités. Ce découpage a un intérêt typologique.

Typologies des cours d'eau: une étude fondamentale est actuellement en cours pour établir une typologie unifiée des cours d'eau français. Dans l'état actuel des choses, une dizaine de typologies peuvent être utilisées. On abordera notamment les aspects liés à la taille, la structure des réseaux hydrographiques, les caractéristiques géologiques, géomorphologiques, hydrogéologiques, on utilisera enfin les classifications biocénétiques, piscicoles, ornithologiques et les données relatives à la qualité de l'eau. Ces descripteurs essentiellement typologiques pourront aussi avoir une répercussion en termes qualitatifs (type de fonctionnement très caractéristique ou inhabituel, qualité des eaux...). La taille des systèmes considérés influençant considérablement les autres descripteurs, elle sera considérée comme une typologie en soi devant se refléter dans l'échantillon: ainsi l'échantillon devrait comporter au moins un exemple de bassin versant complet, des hydrosystèmes limités aux affluents principaux, des portions plus ou moins restreintes d'hydrosystèmes.

Ecologie et espèces des cours d'eau: les approches biotypologiques sont déjà évoquées dans le paragraphe précédent pour guider la recherche de systèmes représentatifs. Il s'agit principalement ici d'identifier les espèces et les

types d'habitats naturels présentant à la fois un fort intérêt du point de vue de la protection de la nature et pouvant être considérés comme des indicateurs pertinents des zones humides fluviales. Du point de vue des habitats, les types de rivières décrits par la directive 92/43/CEE concernant la conservation des habitats naturels ainsi que de la faune et de la flore sauvages sont utilisés. Concernant les espèces, seules celles particulièrement inféodées aux cours d'eau sont repérées, et non celles présentes mais caractéristiques de milieux existant aussi ailleurs (les sources utilisées sont: les "Red Data Books" de l'UICN, les données du Conseil de l'Europe, la Convention de Berne, les directives communautaires "habitats" et "oiseaux"). Les descripteurs définis ainsi permettront d'établir des seuils, mais aussi selon les cas des échelles qualitatives ou même d'avoir un intérêt typologique (*Castor fiber*, par exemple, n'est pas particulièrement menacé mais son habitat semble devoir absolument être représenté dans l'échantillon). Plus de 80 espèces de faune ont ainsi été repérés, ainsi que 9 espèces végétales et 11 types d'habitats naturels.

Degré d'artificialisation des cours d'eau: la recherche de sites quasiment "naturels" est l'un des objectifs envisageables. Dans cette perspective, on s'attachera à déterminer le "degré de naturalité" de systèmes considérés, ainsi que le degré d'irréversibilité des impacts écologiques dus aux aménagements, selon une échelle qualitative.

2. Echantillon de zones humides en sites fluviaux français répondant aux critères

- Bassins versants
 - La Leyre (un bassin côtier atlantique très peu aménagé)
 - Un bassin côtier méditerranéen
- Hydrosystèmes
 - Le système Loire-Allier avec certains affluents (voir développement plus loin)
 - Le systèmes Saône-Doubs avec certains affluents
 - L'Adour avec certains affluents
 - L'Ill et la partie française du Rhin (à compléter par concertation avec d'autres pays)
 - Un cours d'eau montagnard Corse (espèces endémiques)
 - Un cours d'eau montagnard pyrénéen (espèces endémiques)
 - Un ou deux cours d'eau méditerranéens répondant aux habitats de l'annexe de la directive habitats

- Un ou deux cours d'eau alpins répondant aux habitats de l'annexe de la directives habitats
- Deux fleuves côtiers bretons, normands ou du nord
- Portions d'hydrosystèmes:
 - Secteurs des colonies de *Nycticorax nycticorax* sur la Garonne
 - Des tronçons de la Charente, de l'Isère, la Dordogne, du Lot et du Rhône pour les espèces menacées présentes
 - Une partie de cours d'eau souterrain

Il faut y rajouter les parties d'hydrosystèmes déjà présentes dans les 8 sites déjà inscrits par la France sur la Liste.

L'échantillon proposé plus loin pour le bassin de la Loire répond à lui seul à plus des deux tiers des descripteurs retenus.

3. Délimitation des sites choisis pour être proposés sur la Liste Ramsar

D'une façon générale et théorique, le périmètre d'un site devrait être défini en considérant d'abord les caractéristiques pour lesquelles le site a été jugé d'importance internationale, puis en englobant dans le périmètre les territoires nécessaires au maintien de ces caractéristiques. Cette démarche a été utilisée auparavant de façon large pour des types de zones humides "classiques" par la France, qui a désigné des sites vastes où des activités humaines considérables cohabitent avec les écosystèmes.

Seul sera traité ici le cas des grands cours d'eau, a priori le plus difficile.

Le cas du bassin de la Loire va permettre à la fois de tester la méthode de "l'échantillon représentatif", et d'aborder le délicat problème de la délimitation. En effet, le bassin de la Loire représente 1/5ème du territoire national et il va bien falloir y sélectionner les hydrosystèmes majeurs au sens de Ramsar. Ensuite la délimitation des zones proposées à l'inscription sur la Liste fera l'objet d'une deuxième discussion.

3.1 Proposition d'un échantillon sur le bassin de la Loire

L'utilisation de la grille de descripteurs est retracée par une série de cartes dont quelques exemples sont présentés. On aboutit à une sélection d'hydrosystèmes relativement peu nombreux (carte) au sein desquels les axes de la Loire et de l'Allier s'individualisent nettement. Cela peut être un élément de validation de la grille des descripteurs retenus, car ces deux fleuves sont unanimement reconnus par la classe scientifique comme les "fleurons" du patrimoine écologique des cours d'eau français. L'échantillon ainsi défini intègre l'ensemble des descripteurs rencontrés dans le bassin versant entier. Il représente tout de même un linéaire important de cours d'eau, environ 2 000 kilomètres.

3.2 Délimitation du site proposé

La problématique particulière des cours d'eau, avec les notions de corridor, de bassin versant et d'interrelations fonctionnelles, incitent à envisager des ensembles vastes; à l'inverse les considérations de faisabilité suggèrent de rechercher une dimension acceptable pour la mise en oeuvre d'une protection satisfaisante et notamment du principe d'utilisation rationnelle.

A ce stade apparaît inévitablement l'alternative selon laquelle on pourrait avoir un type unique de limite, ou au contraire développer des concepts de "zone centrale" et "zone tampon". Nous nous en sommes tenus dans le cadre de cette réflexion théorique à une délimitation unique. En effet, les cas existant en France de démarches faisant appel à des notions de zones tampon n'ont jusqu'à présent jamais donné satisfaction. Par ailleurs la difficulté de proposer une limite dans chaque cas concret s'en serait trouvée multipliée par deux.

Le lit mineur en tant que principal vecteur des flux amont-aval est obligatoirement inclus en totalité (dans le cas de la France cet espace est assez bien représenté par le Domaine Public Fluvial).

L'inclusion de larges parties du bassin versant supposerait que le concept de développement durable soit suffisamment répandu pour influencer des politiques globales d'aménagement du territoire. Nous sommes restés prudents dans cette voie. Certes la nouvelle loi sur l'eau, adoptée en 1992, met l'accent sur la nécessité de protéger non seulement les écosystèmes aquatiques et les zones humides, mais aussi leur bon fonctionnement. Mais les indications données par la Convention pour la délimitation des sites Ramsar ne permettent en principe d'y inclure que de façon modérée des territoires ne correspondant pas strictement à la définition de "zone humide". Finalement, seules les parties hautes des bassins versants, moins habitées par l'homme et dont le rôle régulateur est facilement admis, pourraient selon nous faire l'objet dès à présent d'une réflexion pour leur inclusion dans le site Ramsar.

Ensuite, le lit majeur doit être concerné, au moins partiellement. Inclure la totalité, repérée par exemple par les zones d'alluvions récentes, est cohérent d'un point de vue de l'unité fonctionnelle. Il nous semble par contre peu probable qu'un impact significatif sur les pratiques locales d'aménagement et de gestion puisse être enregistré en délimitant le site Ramsar de cette façon.

Il reste donc à définir, transversalement, l'extension optimale de la zone. Dans le cas de la Loire, nous proposons d'utiliser préférentiellement les notions de crues décennales et d'inter-digues. En effet, les territoires ainsi délimités englobent la majorité des habitats naturels d'intérêt biologique, et sont le théâtre privilégié de l'activité morphodynamique du fleuve. Ils sont également cartographiés par les services administratifs et donc facilement repérables. Enfin ils épargnent les espaces fortement anthropisés, ne correspondant pas actuellement à la définition de "zones humides" dont l'inclusion dans la zone Ramsar pourrait poser des problèmes de concertation.

Deux "coups de zoom" sur des secteurs de la Loire permettent d'utiliser cette approche.

Cette approche reste liée au contexte du bassin de la Loire, et nous n'en avons pas vérifié le caractère transposable à d'autres cours d'eau. Le Comité National de la Convention de Ramsar en France, auquel ces résultats ont été présentés, les approuve dans sa majorité mais non à l'unanimité. D'un point de vue biologique l'extension des crues décennales est parfois considérée comme insuffisante; d'un point de vue pratique l'inscription sur la Liste d'un ensemble tout de même aussi vaste soulève des interrogations.

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DANUBE DELTA BIOSPHERE RESERVE (DDBR)
PRESENT STATE AND MANAGERIAL TRENDS

prepared by M.T. Gomoiu, Danube Delta Biological Reserve, Romania

Abstract: The Danube Delta is the largest wetland in Europe in a near natural state having a high diversity of species and habitats, being also: 1) a significant potential for economic resources; 2) a natural biofilter of the Danube River waters before they merge into the Black Sea; 3) a major geographic nesting centre and crossing-road of the migration routes of many birds; 4) an aesthetical and recreational source for tourism and leisure; 5) a major cynegetic zone; 6) an important component of the European and world natural heritage.

The value of the Delta as a biological buffer and as one of the last unique natural habitats of significant size and wildlife area has been on a steady decline. In order to stop the decline and to protect the Delta, in 1990 the Danube Delta and its genetic annexes were declared a biosphere reserve and soon after that, the DDBR was given recognition as a Ramsar Convention site.

Some aspects concerning the complex problems of the conservation state and management trends in the DDBR are presented in the paper. After a short historical review, some remarks are made on the management objectives for the DDBR Programme, developed at the International Planning Seminar, held in Uzlina, Romania in September 1991. The author also presents how the results of monitoring and research are used by the authorities for the evaluation of the state of the deltaic ecosystems, as well as for the management of the DDBR.

LA PLANIFICATION COTIERE DE GUINEE-BISSAU

présenté par R. Miranda et C.C. Maretti,
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1. Introduction

Le gouvernement de Guinée-Bissau a invité l'UICN à venir en 1989 dans le cadre d'une aide à la définition d'une stratégie nationale de conservation. La première phase (1989-1991) a eu comme élément "moteur" le projet de planification côtière. Le partenaire initial principal a été la Direction Générale des Services Forestiers et de Chasse - DGFC, avec la collaboration de l'Institut National des Etudes et Recherches - INEP.

Pour la deuxième phase (1991-1994), il y a plusieurs partenaires, plusieurs actions et projets, dont l'Institut National d'Etudes et Recherche (INEP), la Direcção General do Fomento da Pesca Artesanal" du Ministère de la Pêche (DGFPA/MP), le Conseil National de l'Environnement (CNE) et diverses ONGs.

Le document présenté aujourd'hui essaie d'expliquer les actions entreprises dans le cadre du développement durable de la zone côtière de Guinée-Bissau.

2. Le contexte national

La Guinée-Bissau jouit d'une position géographique particulièrement privilégiée au sein des pays du Sahel.

Elle est constituée d'une zone continentale de plateaux qui englobe un écosystème de savanes et de forêts sèches ouvertes, d'une forêt dense de mangroves et de bas-fonds. De plus, elle est pénétrée par un important réseau estuarien et renferme de nombreuses îles ayant des caractéristiques physiques, biologiques et culturelles d'une importance tant régionale que nationale.

Le climat se caractérise par l'existence de deux saisons bien définies: la saison sèche et l'hivernage. Celle-ci connaît, ces quinze dernières années, une extrême irrégularité, ce qui affecte tout le système de production agricole traditionnelle.

L'isoyette de la ceinture nord-est a enregistré une diminution pluviométrique significative, de 1200 à 1000 mm, accompagnée d'une dégradation de la végétation et des sols. Cet argument renforce la thèse selon laquelle la désertification menace le pays, et que son entrée se fait par le nord-ouest. Néanmoins, l'isoyette augmente vers le sud où l'on enregistre une précipitation annuelle, encore généreuse, de 2 250 mm.

La végétation varie du nord au sud, selon les fréquences pluviométriques et le type de sols existants. Ainsi, sans rentrer dans une classification purement botanique, le pays se divise en deux principales ceintures végétatives:

- la végétation de la zone côtière, avec prédominance de palmeraies, des espèces de mangroves et des rizières, renferme des forêts sèches ouvertes localisées sur le plateau. Cette zone côtière s'étend du nord-est au sud-ouest, avec un important réseau de cours d'eau;
- la végétation de l'intérieur, au nord-est, est caractérisée par la présence de savanes arbustives sèches et de forêts claires, avec des arbres de petite taille; sur les plateaux du sud, l'on rencontre des forêts denses ouvertes, considérées encore sub-humides où il n'existe que très peu de forêts primaires¹. Des points verts importants sont également observés dans le bassin du fleuve Cacine/Canamina.

Dans l'ensemble des ceintures mentionnées, l'on trouve des végétations de transition, notamment sur le plateau central du pays.

Selon les données préliminaires du dernier recensement de la population, celle-ci compte, en 1991, 983 362 habitants, avec un taux de croissance annuelle de 2,3%. Il existe une diversité ethnique, avec prédominance des Balantes (30%), essentiellement riziculteurs, des Peulhs (20%), éminents éleveurs, des Manjacques (14%), qui habitent la frange côtière, et enfin les Mandingues (12%).

L'économie de la Guinée-Bissau est encore une économie de subsistance. Le pays fait partie des "pays les moins développés" (revenu annuel "per capita" = 180 USD; espoir de vie = 40 ans; taux d'analphabétisme = 70%; mortalité infantile = 15%).

L'objectif primordial de l'autosuffisance alimentaire est encore loin d'être atteint et le pays aura recours à l'aide internationale, durant de longues années. Aussi l'importation de céréales est-elle nécessaire, notamment celle du riz, dont l'importation a atteint, ces dernières années 43 mille tonnes, d'une valeur de 10 millions de USD (CF Rapport BM, cité dans le document de Planification côtière, 1992).

La population rurale pratique surtout la riziculture, tout en diversifiant avec d'autres céréales, telles que les mils et le sorgho, selon l'éthnie.

Du fait de l'importance commerciale de la noix d'anacardier, principal produit d'exportation (et de troc avec le riz) qui en 1990 enregistre un apport d'une valeur de 11,6 millions de USD, l'on constate une augmentation de la plantation de cette espèce pratiquée par les villageois et par les agriculteurs modernes.

¹ La taille et les caractéristiques de ces forêts dans la "Brousse de Cantanhez" a attiré l'attention de trois ONGs nationales et de l'UICN qui, ensemble, ont démarré des actions de développement durable.

3. La zone côtière de Guinée-Bissau

3.1 Eléments physico-biologiques

La zone côtière inclue définit les aires terrestres sous l'influence de la mer et vice versa, mais se sont les objectifs du travail qui doivent définir les limites de la zone côtière. La salinité s'étend sur plus de 100 km à l'intérieur, d'où l'existence de la mangrove et des activités côtières à l'intérieur du continent. On a choisi comme limite l'existence des plaines salées importantes.

Pour faire la liaison entre ces limites, on a parcouru les divisions des bassins versants. Le continent se prolonge vers la mer pour les îles, les bancs et la plate-forme continentale. La plate-forme n'est pas profonde; elle atteint environ 20 m à 12 miles de la limite des îles. Cette partie terrestre occupe donc le tiers des terres immergées du pays. La zone exclusive pour la pêche artisanale est définie par la ligne de 6 miles et l'autre zone incluant la pêche semi-industrielle par la ligne de 12 miles nautiques commençant à partir de la limite des îles. Cette dernière est donc prise comme limite maritime. On a aussi pris en compte les influences extérieures à la zone.

3.1.1 Zone maritime

La plate-forme continentale face au sud de la Guinée-Bissau représente la plus grande largeur de toute la côte occidentale d'Afrique (150 km). Elle est peu profonde² avec une grande zone de transition entre la mer et le continent.

Il y a la rencontre des courants du Sud (venant du golfe de la Guinée), avec un courant froid du Nord d'où une thermocline qui oscille saisonnièrement et permet l'arrivée de nutriments en hiver. Il y a aussi des "upwellings" au large avec une grande production de phytoplancton. Au niveau saisonnier, ces changements (Nord-Sud) sont les plus importants. Par contre, quotidiennement, les marées conditionnent les masses d'eau et leur contenu.

3.1.2 Rias et les aires terrestres

Sur la côte, il n'y a pratiquement pas de cours d'eau douce permanent, mais un grand nombre de drainages à la saison des pluies. Les rias ont des escavations géomorphologiques de relatives significations et présentent des différenciations subtiles mais importantes. Quelques vallées fluvio-estuariennes ont d'importantes plaines de sédimentation pré-actuelle, normalement colonisées par les mangroves et savanes herbacées et parfois avec une grande utilisation pour la riziculture. La riziculture se pratique au centre nord et sud de la zone côtière de Guinée-Bissau. Au nord, elles sont déjà dégradées depuis longtemps, les rizières salées du centre-nord ont

² Dans la zone jusqu'à la ligne de 6 miles, la profondeur moyenne doit être inférieure à 5 m.

aujourd'hui de grands problèmes³. Au sud, elles ont une bonne productivité et présentent une expansion à certains endroits.

Sur les hautes terres, le sol latéritique était colonisé au début par la forêt. Ces forêts s'échelonnaient sur des forêts sèches et demi-sèches au nord et au sud des forêts sub-humides. L'occupation donne un nouveau paysage: l'utilisation sélective a favorisé l'existence des palmeraies au nord-ouest et dans les îles; au centre-sud, à partir d'une déficience pédologique, les feux de brousse favorisent l'existence des forêts sèches bien ouvertes et/ou savanes arborisées. Pour des raisons historiques, il y a plutôt des forêts dégradées au nord, et des aires agricoles, urbaines et de jachères anciennes au centre-nord.

3.2 Caractéristiques socio-économiques

La Guinée-Bissau a une économie basée sur l'exploitation des ressources naturelles, surtout l'agriculture.

3.2.2 Agriculture

C'est l'activité la plus importante avec 75% de la population active. Elle est surtout de subsistance familiale pour une production alimentaire (riz et grains). Elle est déficitaire depuis quelques décennies. Les deux systèmes plus importants sont: la riziculture inondée sur sol de mangrove et la riziculture pluviale sur brûlis.

3.2.3 Pêche

La Guinée-Bissau a beaucoup de difficultés pour l'exploitation de sa plus grande richesse naturelle, les ressources halieutiques. Les activités nationales de pêche, tant artisanales, commerciales qu'industrielles sont minimes par rapport au potentiel et à la demande.

La pêche industrielle est réalisée par le biais de concession de licences. Elle représente la plus importante entrée de devises (plus de la moitié du PNB et du budget général de l'Etat). Elle se concentre trop aujourd'hui sur la pêche des crevettes, ayant comme "partenaire" principal la CE. La plus importante productivité (incluant les pêches prédatrices) vient des pêcheurs étrangers (surtout sénégalais).

Il y a eu aussi une augmentation de la pêche de subsistance ces dernières années à cause des besoins alimentaires. La cueillette des mollusques et crustacés est devenue la plus importante source de protéines consommables sur la base journalière dans les villages côtiers.

³ Normalement attribué à la chute de pluviométrie, le processus de dégradation a aussi des causes socio-économiques.

3.2.3 Forêts

Le secteur forestier est important à cause de sa valeur socio-économique et environnementale. Les forêts, reconnues pour la diversité de leurs espèces, sont soumises à une exploitation industrielle qui se concentre dans l'abattage de celles qui sont les plus nobles et qui jouissent d'une importance économique certaine au niveau de l'exportation.

Tel est le cas de la *Kaya senegalensis* (Bissilao), du *Pterocarpus erinaceus* (Pau sangue), de l'*Azelia africana* (Pauconta) et du *Bombax costatum* (Poilao), espèces parmi lesquelles les trois premières représentent 80% du bois utilisé sur le marché local, et 100% des exportations - environ 9 000 tonnes pour une valeur de 2,4 millions de USD, en 1990.

3.2.4 Tourisme

Le pays a une grande potentialité touristique mais il n'y a pas de politique cohérente. Par conséquent, les décisions sont ponctuelles; on assiste à la dégradation des structures déjà mises en place; il n'y a pas d'évaluation des impacts socio-environnementaux et il y a le risque de compromettre définitivement l'image du pays.

4. Le Problème

L'évolution du processus socio-économique dans un Etat aussi jeune que celui de la Guinée-Bissau, qui a vécu la première étape de l'indépendance avec un modèle de système économique centralisé, démontre que se profilent d'importants bouleversements dus à la libéralisation économique, décidée en 1983, dans le cadre du programme d'ajustement structurel (PAS).

Le pays a été soumis aux mesures de stabilisation prescrites par la Banque Mondiale et le FMI, et une trop forte dévaluation de la monnaie a provoqué un dérapage que le GOGB cherche à contrôler. Et les ressources naturelles, qui constituent la base de l'économie nationale, sont actuellement soumises, dans le cadre de cette libéralisation, à une exploitation anarchique et parfois déraisonnable dont l'impact sur l'environnement est direct.

Voyons donc le cadre de la situation actuelle:

- La Guinée-Bissau est un pays en voie d'organisation où les ressources humaines et naturelles représentent les deux piliers de son développement (CF Rapport de mission UICN/ENA, 1991).

Après l'indépendance, l'absence d'une économie nationale solide a induit à un recours intensif de la coopération internationale. Les projets de développement ont été conçus sans tenir compte des vrais enjeux de la population rurale et sans une coordination des actions préconisées.

La communauté internationale a donc soutenu un grand nombre de projets, proposant d'augmenter la production agricole, sans que soient établies les règles devant permettre d'éviter la dégradation du milieu et le déséquilibre au niveau des processus écologiques.

Aujourd'hui, le pays est en plein processus de libéralisation économique et au début de la démocratisation.

- Le milieu naturel, à l'intérieur du pays, est soumis à de très fortes pressions humaines, notamment du fait des pratiques culturelles déjà mentionnées, de la chasse, de l'exploitation intensive des forêts, et dans quelques zones proches des points d'eau, du surpâturage.
- Le phénomène constant de l'érosion, la tendance à la monoculture de l'anacardier (*Anacardium occidentale*) et la diminution du temps de jachère, ne contribuent pas à la réalisation d'une bonne productivité des céréales, qui constituent la base de l'alimentation des populations.
- Les bas-fonds souffrent de salinisation et d'acidification qui réduisent considérablement les espaces destinés à la riziculture inondée.

Par voie de conséquence, le paysan cherche les zones arborisées des plateaux afin de défricher et de produire le riz du pam-pam, pour obtenir toutefois une production peu rentable. Par ailleurs, à la fin de deux années, la superficie défrichée n'est plus abandonnée, comme auparavant, étant donné l'existence des plantations d'anacardier, réalisées en ligne et ayant déjà atteint la taille de production.

Ceci constitue le plus grand risque de l'expansion de cette espèce, qui modifie progressivement les écosystèmes et réduit les sols convenant aux cultures vivrières.

- Concernant l'exploitation des forêts, elle est très importante pour les stratégies de survie des populations rurales côtières; il y a eu une croissance de production de charbon de bois et de bois de feu. De plus, la politique d'obtention rapide de devises stimule l'exportation de bois brut. Ces raisons liées à la culture sur brûlis, la fruticulture et les feux de brousse sont responsables du défrichement de 50 000 ha./année. Ces activités sont les plus graves car la politique de reboisement ne fonctionne pas.
- Les autres sous-produits forestiers, y compris la faune, sont l'objet d'une gestion inadéquate. Le pays consomme surtout le bois de feu et le charbon de bois, pour un total d'environ 1 000 000 m²/an de bois, afin de satisfaire ses besoins énergétiques (CF MDRA, 1990, le Rapport Final du Projet Pl. Côtière, 1992).

La chasse clandestine est très pratiquée par la grande majorité des touristes amateurs ou professionnels de la chasse qui arrivent dans le pays et ne reçoivent pas un encadrement approprié permettant de faire respecter la loi en vigueur, réglementant la chasse. Aussi, les statistiques sont-elles loin d'être fiables.

D'autre part, les activités de charbonisation, la décision récente du GOGB d'exporter du charbon de bois vers le Sénégal, l'exploitation incontrôlable de boracés et l'incapacité des institutions publiques de procéder à une fiscalisation et à un contrôle efficaces viennent renforcer cette exploitation effrénée.

- En ce qui concerne la pêche, elle représente une des plus importantes richesses du pays. Malheureusement ce secteur nécessite une plus grande connaissance du potentiel existant, afin de permettre l'application d'un plan de gestion conséquent et durable, apportant des bénéfices réels à l'économie nationale.

L'absence d'une possibilité de gestion des ressources halieutiques, le GOGB se préparant encore pour discuter et approuver la loi portant sur la pêche, ainsi que leur exploitation, presque exclusive par les étrangers risquent de compromettre, à long terme, non seulement les revenus de l'Etat mais également les conditions de vie des populations vivant sur le littoral et pour lesquelles poissons et coquillages constituent une partie essentielle de l'alimentation (CF Rapport d'activités PL. Côtière, 1990).

- Finalement, et toujours sur la base de la perception des problèmes nationaux en matière d'utilisation des ressources naturelles, il y a le tourisme qui est un secteur qui se prépare à multiplier ses activités en procédant à la promotion des paysages et de diversité culturelle de la Guinée-Bissau.

L'impact des réalisations, dans ce domaine, est encore très peu perceptible, tant au niveau économique qu'écologique et social. Pourtant, au niveau des décideurs, persiste une mentalité qui se fonde sur la croyance du concours traditionnel absolu de la mer, de la plage et du soleil pour satisfaire les besoins en matière de tourisme, et sur l'implantation nécessaire d'infrastructures lourdes et onéreuses.

Enfin, dans le cadre du PAS, on peut citer quelques résultats:

- l'exploitation, prédatrice des ressources halieutiques;
- incitation à l'exportation par opposition au manque de politique des prix et incitation à la production/commercialisation/consommation des produits locaux;
- exode rural.

5. Le projet de planification de la zone côtière

Portas et O. Costa écrivaient en 1991 que "les problèmes liés au développement socio-économique ne peuvent pas recevoir de solutions à long terme que si ils sont pour autant abordés dans le cadre d'un processus de planification dans lequel les vecteurs écologiques, sociaux et économiques reçoivent l'attention voulue".

Cette affirmation cadre parfaitement avec le cas bissau-guinéen pour lequel on peut constater que la réflexion sur le concept même du développement est minime.

La notion de préservation est négligée au niveau des décisions, même à une époque où l'expression "développement durable" est devenue habituelle.

Le processus actuel de la Guinée-Bissau s'oriente vers la mercantilisation, la commercialisation et l'exploitation intensive des ressources. Les orientations sont dictées par des organismes internationaux (Banque Mondiale, FMI), sans tenir compte des mécanismes de conservation et de contrôle des "stocks" des ressources naturelles. Les soucis des équilibres sociaux et environnementaux ne sont pas atteints par manque de participation populaire.

La zone côtière a été choisie car il n'est pas possible d'y tester un modèle de développement basé sur la planification des espaces et sur une stratégie cohérente d'exploitation des ressources.

Plus de la moitié de la population totale (environ 65%) y exerce les activités économiques les plus diverses, du fait de la richesse biologique qui existe dans les environnements aquatiques et terrestres. Cette zone est la plus riche en ressources pour l'alimentation et pour l'obtention de devises. La productivité de la côte de Guinée-Bissau a une importance pour la manutention du potentiel des ressources halieutiques au niveau régional. Elle a aussi une importance au niveau international pour la conservation (quantité et diversité des oiseaux, espèces maritimes menacées, extension de la mangrove).

Pourtant, la planification vise à optimiser la vocation des sols et des aptitudes spécifiques des populations qui les exploitent, et aujourd'hui, les recommandations, émanant d'études de terrain pendant la première phase, touchent les axes suivants:

- la pratique harmonieuse d'activités complémentaires, telles que la pêche, l'agriculture, l'exploitation forestière, le tourisme et la conservation;
- la satisfaction des besoins fondamentaux des populations locales;
- la garantie de la régénération des ressources naturelles;
- la définition des zones de conservation pour le maintien de la reproduction génétique et de la productivité naturelle des milieux.

Il est donc nécessaire que les décideurs et les utilisateurs prennent conscience que cette zone doit être gérée en tenant compte des aspects de fragilité qui la caractérisent. Cela se traduit par la liaison entre les actions de conservation et de développement et par la priorité aux enjeux des populations locales.

6. Aspects méthodologiques et d'implantation sur le terrain

Au départ la Direction du projet a cherché à établir un lien de coopération et de coordination des actions à entreprendre avec les différents intervenants auprès des communautés rurales. Dans cette perspective, des protocoles d'accord spécifiques ont été élaborés et signés entre l'UICN/MDRA et le CECI - Agence Canadienne de Coopération -, et aussi avec le PNUD - Programme des Nations Unies pour le Développement -, compte tenu des actions déjà entreprises par les organisations mentionnées, dans le cas spécifique de l'archipel de Bijagos.

On a donc réussi à concrétiser presque simultanément avec des équipes différentes les études bio-physiques et socio-économiques (équipe UICN/MDRA/INEP - zone continentale), l'étude/enquête préliminaire sur la faune sauvage au niveau national (équipe CECI/MDRA/UICN).

Concernant les aspects socio-économiques, l'essentiel des enquêtes a été effectué auprès des populations villageoises au niveau des familles, d'une part, et au niveau des villages d'autre part.

Un questionnaire spécifique a également été élaboré à l'intention des autorités locales et des projets locaux de développement.

En ce qui concerne les aspects bio-physiques, le travail a consisté à décrire les principales unités environnementales en évaluant leurs potentiels et en les confrontant à leur mode d'utilisation actuelle.

La dynamique du littoral a été analysée sous l'angle du processus d'érosion et de sédimentation.

Le travail de terrain a été complété par une dizaine de consultations réalisées par des chercheurs de l'INEP (bibliographie du littoral, critères socio-économiques pour la récupération des sols de mangroves à des fins rizicoles, contribution à l'élaboration d'un questionnaire socio-économique pour l'archipel de Bijagos), par des cadres de la Direction de l'Hydraulique Agricole et des Sols - DHAS - (critères pédologiques pour l'occupation des sols, viabilité des différentes zones de mangroves pour la riziculture) et par le ministère de la Pêche (évaluation économique du secteur, les potentialités biologiques, synthèse des résultats obtenus par les différentes missions océanographiques).

7. Quelques conclusions de la planification côtière en Guinée-Bissau

- L'on constate encore un certain manque de synergie de la part des institutions de l'Etat et de l'organe de recensement chargé de la politique environnementale (Conseil National de l'Environnement) concernant les aspects de coordination et d'orientation stratégique;
- il y a un manque de participation des communautés locales dans les prises de solutions;

- les ressources halieutiques font partie de plus en plus de l'alimentation/des économies des populations rurales, ainsi que les produits de l'écosystème de mangroves;
- il existe une bonne connaissance "traditionnelle" de la population dans l'aménagement durable de l'environnement. De même façon, elle est très consciente et sensible aux problèmes de dégradation et des risques de disparition des richesses naturelles;
- l'effort de planification du développement durable signifie rationalisation dans la gestion des principales ressources naturelles (donc d'importance économique). Cela paraît contradictoire face aux besoins élémentaires des populations et à la politique gouvernementale d'exportation pour l'obtention de devises. Il est donc absolument nécessaire de travailler avec plusieurs intervenants et de renforcer les organisations et les capacités locales;
- il continue à être important de faire le travail au niveau national, surtout pour une meilleure implication de la société. Dans les régions spécifiques, on souligne aussi l'importance de la participation populaire pour aboutir à des résultats concrets.

Le travail de terrain et l'analyse des recherches de la Planification côtière a :

- reconnu les TUFES (Types d'unités familiales d'exploitation) que représentent les capacités, les vocations et les besoins pour les actions de développement (voir tableau);
- fait des propositions aux niveaux général, régional et structurel, avec les recommandations pour le gouvernement, les ONGs, les techniciens, etc.;
- proposé la réglementation des bauges plus au moins restrictives à la pêche: de subsistance, artisanale et artisanale avancée. Zones et époques de mise en défense;
- proposé la création d'aires protégées (4 parcs nationaux, 1 réserve de la biosphère et des forêts classées).

8. Quelques résultats de la Planification côtière

- Le débat des thèmes importants: planification, participation de sociétés "traditionnelles" locales, besoin de travaux trans-disciplinaires et inter-institutionnels, mise en place des aires protégées avec la population locale à partir de sa conception et de l'importance des mangroves et des ressources halieutiques pour aujourd'hui et l'avenir du pays;
- la consolidation de la liaison entre développement et conservation, démontée par l'exemple du plan de développement durable de la région

Bolama-Bijagos, à comprendre plutôt au niveau de la conservation (mise en place du Parc national des îles de Orango et création de la réserve de la biosphère);

- la négociation pour la mise en place du Parc national des mangroves de la Ria Cacheu;
- la négociation pour la mise en place du Parc national des forêts de Cantanhez par les ONGs nationales;
- la mise en place d'un projet d'appui pour la pêche durable, avec la priorité pour les populations locales;
- la création du Bureau national de Planification côtière, UICN/MDRA/DGFC (priorité sur les mangroves et création des parcs);
- la création de la Cellule d'Etudes environnementales à l'INEP, avec comme première action la coordination pour la mise en place du plan de développement durable de la région Bolama-Bijagos et la possibilité de la réserve de la biosphère;
- la création du CNE (Conseil national environnemental);
- l'inscription d'un site à la Convention de Ramsar (Lagoa de Cufada).

9. Les perspectives

De 1992 à 1994, deuxième phase du projet: l'objectif est de préparer une proposition de loi pour l'utilisation durable des mangroves et la création d'aires protégées, afin de permettre l'implantation de trois à quatre parcs nationaux, soit:

- le Parc national des mangroves de Cacheu, au nord du pays, avec une superficie de 540 km² (20% de noyau de préservation);
- le Parc national de l'île d'Orango, avec 680 km² (30% de noyau de préservation);
- le Parc national du lac de Cufada, avec 890 km² (40% de noyau de préservation);
- le Parc national de Cantanhez, avec 680 km² (40% de noyau de préservation).

Dans le cadre de l'élaboration du plan de développement intégré des îles de Bijagos, une équipe UICN/CECI/MDRA travaille dans la collecte des données, de façon à appuyer la coordination du programme de développement. Les efforts ont été concertés dans la définition des vocations des différentes îles (vocations agricole, touristique, forestière, de protection, etc.) et des propositions

de réglementation de la pêche artisanale visant à préserver les méthodes traditionnelles.

Cacheu et Orango comptent avec leurs équipes respectives qui travaillent à l'identification des besoins des populations locales et leur mode d'utilisation des ressources environnantes.

Le mot d'ordre est celui de la "négociation" car la création de ces zones de conservation va entraîner un certain nombre de réglementations auxquelles les populations concernées ne sont pas prêtes à se plier spontanément.

Il est donc essentiel d'étudier avec elles les modalités permettant de compenser ces restrictions par des avantages au moins équivalents.

WETLAND CONSERVATION IN A CROWDED COUNTRY - A HISTORICAL PERSPECTIVE

presented by A. Tsuji, Save Fujimae Association/
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This paper limits itself to a discussion of Japan's tidal flat wetlands and coastal shores as these are the most seriously threatened of Japan's internationally important wetlands.

Japan's principal tidal flats: A Place for Co-existence between Birds and Humans

There are three geographic requirements for the formation of a large tidal flat: 1) a large river, 2) an embayment, 3) tidal change. These three requirements are in general only met in along the coasts of central and southern Japan. These areas have also been the centre of human activity since ancient times. In particular, Japan's three great conurbations are located along the shores of Tokoy Bay, Ise Bay, and Osaka Bay. Human populations in these three great urban centres account for 47.8% of Japan's total population of 124 millions; specifically, 32 millions in the Kanto District (Tokoy/Kawasaki/Yokohama), 10 million in the Chubu District (Nagoya), and 16 million in the Kansai District (Osaka/Kobe).

Progress of Landfill Projects, a Critical Type of Development for Tidal Flats

According to the results of surveys published by the Environment Agency in 1992, Japan had 82,621 ha. of tidal flats in 1945, and 51,462 ha. in 1991, a loss of about 40 percent. However, in Tokyo Bay, Ise Bay and Osaka Bay, the loss has been almost complete.

Most of these losses occurred during the period from 1962 to 1972-1974 when current policies encouraging rapid economic growth called for successive rounds of landfill to create industrial land in coastal areas. This continued until the oil shocks of the early 1970's slowed growth.

This spate of runaway development did not go forward without resistance. It was able to proceed in spite of desperate resistance by fishermen due to the following factors: National Development Plans which have equated 'development' with 'prosperity', the technique of dredged landfill, and the trend for development to follow government leadership.

In particular, the last factor allowed the Public Waterways Land Reclamation Law to be utilized to the very limits of its applicability. This law has functioned as a mechanism to remove existing rights to affected coastal resources.

Natural Values of Tidal Flats Ignored

Because short-term profitability was the standard used by the authorities to judge the pros and cons of landfill, existing fisheries and proposed

development projects were simply compared like balance sheets, without taking into account any of the other values which are lost as a result of landfill.

Conservation movements to save tidal flats and protect declining populations of resident and migratory shorebirds arose around the country, but ordinary citizens, like local residents, were not considered to have a legitimate interest in these matters.

The technique of dredged landfill, compared to relatively less destructive types of land reclamation, destroys not only the area which is filled, but also the area where landfill material is dredged up, and the resulting water pollution affects a large area of the bay, prompting the next round of fishing right forfeiture as catches decline.

The pace of landfill in Ise Bay, Nagoya, has progressed at a rate ten times faster than the former natural rate of land formation, and it will probably take hundreds of years before the sand and mud dredged up from the sea bottom offshore builds up again to form new tidal flats.

The Environment Agency, Born of Pollution and Environmental Destruction

The outbreak of Minamata Disease and Yokkaichi Asthma illustrated the tragic consequences of destruction and pollution of the natural environment on human life, and the bitter lessons learned led to the formation of the Environment Agency. The year of its establishment, 1971, was the same year that the Ramsar Convention was adopted, and also marked the beginning of my own involvement in tidal flat conservation.

Since that time, the Environment Agency has done much excellent work. However, from the particular point of view of tidal flat wetland conservation, our expectations have been disappointed.

The point which needs to be emphasized in this context is that the national development plans now being promulgated were established prior to the formation of the Environment Agency. There are presently no policy mechanisms to re-define areas which have been earmarked for development as eligible for designation as reserves. This applies even if the development project has been delayed many years.

The Last Tidal Flats Again Face Threats

Old landfill plans which were shelved during the oil shocks are now re-emerging in slightly different form with new justifications, such as for the creation of public lands, and the few remaining scraps of precious migratory bird stopover habitat are all being targeted for development.

The Sanbanze Shoals in Tokyo Bay, Fujimae Tidal Flats in Ise Bay, Isahaya Bay in the Ariake Sea, and Wajiro Tidal Flat in Hakata Bay are the four great tidal wetlands which the Japan Wetland Action Network feels must be saved - all are immediately threatened by landfill projects.

Threats to Bird Life are Threats to Human Life

The landfill planned at Fujimae Tidal Flat can be considered an example of the new type of landfill projects. This area is the last remaining source of food for migratory birds which have been forced off former tidal flats in Ise Bay by landfill development, and now Nagoya City plans to use it as a garbage dump.

This of course signifies mortal danger to the birds using this wetland, but not only that. It also symbolizes the crisis of our urban culture posed by our consumerist lifestyle and throw-away society in general, which must be reformed if we are to find any lasting solution to our garbage problem.

This realization led to an extensive citizen movement, which resulted in a decision by Nagoya City to reduce the area to be landfilled to half of its original size. However, this will still be fatal for 70 to 80 percent of the birds using the flats as a feeding ground, and for the entire tidal flat ecosystem.

However, Nagoya City considers this area reduction as their ultimate possible concession, and plans to initiate environmental impact assessment procedures this coming winter. Current environmental impact assessment in Japan is generally a mere formality which does not consider alternatives and is in practice performed on the assumption that the development will go ahead.

Values of Tidal Flats in an Urban Environment and their Wise Use

Can landfill with city garbage be considered 'wise use'?

As an oasis in the midst of a rapidly growing city, we feel there is greater value in a living tidal flat, where birds and the small flat-dwelling organisms they feed on function to purify the sea and regenerate life including fishery resources on which humans in turn depend.

At such a living place, there is abundant potential for real 'eco-tourism' where people's hearts can be gladdened by meeting with the migratory birds, and where the children can learn about nature through direct experience.

The designation of Fujimae Tidal Flat as a reserve for migratory birds would be a significant step towards the realization of the 'Eco-City' concept, which aims at the reform of our ecologically ignorant society, and the conservation of existing natural habitats, creating in the process a pleasant urban landscape.

If we are at all able to learn from the past, we should be able to create forms of politics and economics which will allow us to live within the environmental and resource limits, and which will move towards the restoration of lost natural environments.

What Role for Government?

I had hoped to take this precious opportunity to tell you that the resolution of the problems I have outlined above has been an admirable success.

Unfortunately, the Environment Agency has overlooked the four important areas - Sanbanze, Fujimae, Isahaya and Hakata - for which we have been requesting protection. The reasons given for this are because 'these areas are already objects of pre-existing development plans', and 'local governments do not agree to nature reserve designation'.

After 30 years of citizens campaigning for wetland protection, one tiny remnant of Tokyo Bay's once magnificent wetlands at Yatsu Tidal Flat is now being added to the Ramsar List. This cannot compensate for the thousands of hectares of other tidal flat wetlands, many of which meet the Criteria for Identifying Wetlands of International Importance adopted by this Conference at Montreux, which will be lost if present plans proceed. Three years from now when the Conference next convenes, the option of conserving Sanbanze Shoals in Tokyo Bay, Fujimae Tidal Flats, Wajiro Tidal Flat in Hakata Bay, and Isahaya Bay may have been eliminated forever.

If the national government cannot revise its priorities which place development above all without considering changed circumstances and without consultation at the local level, what is the rôle of the Environment Agency, which is supposed to be empowered and responsible for the protection of these areas?

What Paths Are Left to Us?

If present conditions persist, after this Conference is over, all of Japan's last internationally important tidal flat wetlands will be lost. We asked for advice about how to effect the needed changes at the Asian Wetland Symposium which took place in Otsu last October. We were advised to 'keep talking with your government'.

I am afraid today I can only offer my apologies. We have made no progress in the intervening eight months, and so I am forced to ask for further advice. What can be done to stop development which is being pursued by the government itself? What can this Conference of the Parties do about the grave dangers facing Japan's tidal flat wetlands?

Thank you very much.

PROCEDURES ESTABLISHED IN THE UNITED KINGDOM
FOR DRAWING UP MANAGEMENT PLANS

presented by M. Alexander, Countryside Council for Wales and Countryside Management System Partnership, Mynach Barmouth, Gwynydd, United Kingdom

In Britain all government and major non-government countryside and conservation agencies have come to realize that management planning is a fundamental prerequisite to site safeguard and the protection of the natural heritage. Over the past two decades considerable emphasis has been placed upon the development, trial, and eventually the application, of planning systems.

There have been similar, though more recent, developments in France. A standard approach to planning has been developed and is presently being implemented. The French and British systems were developed in isolation but, nevertheless, they are remarkably similar. So much so that each system has provided an endorsement of the other. Denis Bredin will, shortly, outline the progress of planning in France.

I would now like to spend a little time discussing the British approach to planning. I think that it may be helpful to begin with an outline of what we believe are the main functions of a planning system:

The management of any site, habitat or species, should be much more an intellectual, than a physical, process. There is a great deal to consider and there are many conflicts to resolve. Even on the most sensitive and important of our natural sites there will be interests that may conflict with the ideal objectives of management. We will often have to accept compromise in order to obtain the best possible management of a site while, at the same time, ensuring that the interests of others are accommodated.

Having identified, and carried out, what is believed to be a suitable course of action managers must then ensure that they have made the appropriate decisions. This implies that the condition of the site and key features will have to be monitored, and that the manager will be able to adjust the management in response to undesirable changes. We, therefore, recognized that management planning must be regarded as a flexible, dynamic process. Clearly, it is a process that can be complex and difficult. However, unless the correct decisions are made the site or species will suffer.

The size of a plan and, perhaps more important, the resource made available for its production must be in proportion to the size and complexity of the site, and also to the total resource available for the management of the site. Thus, for small, uncomplicated sites, short concise plans will suffice. A plan should be as large as the site or species requires and no larger.

The main function of the British planning system may be summarized as follows:

1. To provide a base-line, and eventually a definitive, description of the site.

2. To identify the objectives of site management.
3. To resolve any conflicts and prioritize the various objectives.
4. To identify and describe the management required to achieve the objectives.
5. To measure the effectiveness of management.
6. To maintain continuity of effective management.
7. To obtain resources.
8. To enable communication within and between sites and organizations.

The process has been divided into a Preamble followed by three main sections.

Preamble

The preamble is a concise policy statement that outlines the policies of the organizations responsible for the production and implementation of the management plan.

Part 1 - Description

This is, fundamentally, a collation exercise. All relevant data are located and arranged under various standard headings. This section does not call for the generation of data and need not be dependent on the completion of surveys or researches. Indeed, one of the functions of the section is to identify any shortfall in data. Collectively these data provide a definitive statement on the conditions of the site. It is a crucial statement against which the effectiveness, or otherwise, of any subsequent management is measured.

Part 2 - Evaluation and Objectives

This part of the plan begins with a statement on the recognized status of the site, and proceeds through a structured evaluation process. This is followed by the identification of the ideal objectives. Ideal, because at this stage the constraints which may prevent the achievement of objectives are not considered. The ideal is important; it may not be achievable within the short term, but will identify the long term goals. Objectives should never be prescriptive; they are a statement of purpose and not process. The ideal objectives should stand for a very long time. Next, all the constraints and trends that may influence the ability to achieve the ideal objectives are identified. These include natural trends, external factors, legal constraints and resource limitations. The constraints are applied in total to the various ideal objectives. Ideal objectives, thus modified, become operational objectives. They are now, or should be, achievable objectives. The process moves on to consider how the operational objectives may be achieved. The first stage is to identify an appropriate option for each objective. A combination of the objective and option will help to identify all the work required to

achieve the objective. At this stage the work is described under broad headings called outline prescriptions. Every objective will have several outline prescriptions and at least one must contain provision for monitoring.

Part 3 - Prescriptions Data Storage and Review

This part provides the framework within which the outline prescriptions are converted and, if required, divided into defined units of work, called projects. The projects are selected from a master list which provides a unique standard title and code for each project. Projects are used as the basis for the production of detailed work plans. After that, all work, including recording and monitoring, carried out on the site and all significant events are recorded under the appropriate project headings. It is essential to review the management plan at predetermined intervals. The effectiveness of the plan must be measured by comparing achievement against the objectives.

Thus far I have covered our approach to planning. Before I conclude I will, very briefly, outline the history of conservation management planning in Britain. In the early 1950s conservation in the UK was led by individuals familiar with forestry planning practices. They saw the relevance of well-established planning principles to the management of nature reserves. By 1960 most major sites were equipped with plans.

Unfortunately, the momentum was lost during the late '60s and early '70s. It was not until 1976 that renewed concern led the Nature Conservancy Council to commission University College London to produce an improved format for management plans. After a number of trials *A Handbook for the Preparation of Management Plans* was produced in 1978.

The NCC, however, felt that the section dealing with work programming and work plans (Part 3 Prescription) was not developed enough for their use. Development work continued and *A Handbook for the Preparation of Management Plans for National Nature Reserves in Wales* was published in 1981. A working group then considered planning on a UK basis. Their work was completed in 1983 with the production of a Management Planning Handbook. Although unpublished, this document became widely available and used throughout Britain. It became known as the NCC planning format.

Thereafter NCC continued its development of the management planning system, notably the computerization of work planning and programming. This eventually led to the CMS computer system.

CMS is a computer system which is used to support project-based nature conservation planning and recording. The system has been adopted for use by most of the major government and non-government conservation organizations in Britain. There is also a version of the system in use in France. In addition, there has been considerable interest overseas, mainly within Europe, but also including Central and North America. In order to ensure that the system is maintained, supported and available for conservation management, a partnership will be established on 1 July 1993. The partnership will comprise the British government conservation agencies along with the major non-government conservation organizations.

I included the preceding section on the history of planning because I believe that it is very important that I do not give the impression that management planning is a new concept or pursuit. Conservationists and land managers have long recognized its importance and each successive generation has built upon the conceptual foundations laid by their predecessors. Planning systems will continue to evolve and hopefully improve.

We recognize that planning is an essential component of virtually every human endeavour; conservation or countryside management can be no exception. A logical and structured planning process is the only means of ensuring and demonstrating that management is both effective and efficient.

PRIMERA REUNION TECNICA DE ADMINISTRADORES
DE SITIOS RAMSAR DE LA REGION NEOTROPICAL

por M. Baudoin y C. Silva, Secretaria Nacional
del Medio Ambiente, La Paz, Bolivia

Resumen: Durante poco más de tres días, Bolivia tuvo el placer de reunir a orillas del Lago Titicaca en La Paz, a los Administradores de los Sitios Ramsar de la Región Neotropical, con el fin de iniciar un diagnóstico de las necesidades administrativas y de manejo de los humedales de la región.

Asimismo, con base en este diagnóstico preliminar, se definieron las acciones prioritarias a desarrollar durante la gestión 1994-1996, para la consolidación de los Sitios Ramsar inscritos en la Convención de Ramsar así como para promover la Convención en el resto de los países de la Región Neotropical.

Esta Primera Reunión Técnica fue el primer paso de un proceso de desarrollo de espacios de comunicación en el marco de la Convención de Ramsar que permitirán el intercambio directo de experiencias entre los administradores de los Sitios Ramsar y la ejecución de proyectos conjuntos sobre los temas de interés mutuo.

HOW TO APPROACH THE MANAGEMENT PLANNING PROCESS
FOR RAMSAR AND OTHER WETLAND SITES

presented by G.A. Carowan, Jr., Blackwater National Wildlife Refuge,
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Management planning is the formulation of an integrated programme of action that the Contracting Parties will utilize to achieve, or move towards the achievement of, specific objectives necessary to promote the conservation of Ramsar and other wetland sites. Management planning will be used to maintain and, where possible, enhance through the principles of 'wise use' each wetland's associated human and wildlife values without degrading or altering the wetland's unique ecological characteristics.

Before leaping into the technical specifics of management planning, however, there are certain important principles and approaches that must be considered, for the worst possible conclusion will inevitably result if several basic concepts are disregarded or inadequately considered.

The basic approach to integrated management planning for Ramsar and other wetland sites must focus on the importance of maintaining relationships between the various parts of the process. Management planning must take a holistic approach that first and foremost recognizes the significant premise that planning is a dynamic process and its many components cannot be considered in isolation. Most important, but certainly not all inclusive with the process, are the relationships between the purpose(s) for which each wetland was originally established; the goals and obligations of the Ramsar Convention; the establishment criteria which identifies each site's unique and special values and/or particularly important human and ecological characteristics; national and international wildlife cultural characteristics; man's involvement with and degree of dependence on the wetland or its flora and fauna; compatible use issues, environmental threats and human conflicts; legislated directives or policies; interrelationship with other sites or protected areas of ecological significance; site-specific management objectives that are necessary to maintain and/or enhance the site's human and ecological importance; and finally the management prescription themselves.

The first step in approaching the management planning process is to identify and thoroughly understand the *Purpose(s)* for which the wetland reserve was established. This purpose establishes the initial basis for later evaluation and planning by defining the wetland's essential character that the Convention and Contracting Party requires to be maintained. It also provides the common thread that will be woven throughout the plan to ensure that all other parts relate to the purpose. All parts of the plan will focus on their relationship to the purpose(s) and the Ramsar goals for protecting the site's ecological and human significance. This step will also immediately indicate to the planner the need for a management plan to promote the conservation of the site with the aim to prevent specific ecological changes.

Once purposes and goals are identified, planners need to determine long-range guidance for the management of each wetland reserve. This activity requires careful consideration of a number of important interrelated parts of the planning process including, but not limited to: The wetland reserve's establishment criteria; the Convention's goals; the Contracting Party's goals; the specific threats and conflicts that impact (good or bad) on these purposes and resources; other important resource problems; compatible and incompatible uses of the resource; the cultural wildlife heritage of the people; legislative history and politics; socio-economic considerations; and the interrelationships among wetland reserves and other sites of ecological significance. This activity is usually the most critical part of the planning process, because the evaluation of these factors and their collective relationships will guide the development of decisions needed to formulate the wetland reserve's *Management Objectives*.

Management Objectives relate specifically to achieving the purpose(s) for which each wetland reserve is established. They are statements of intent that benefit the establishing criteria, promote and perpetuate purpose, and serve to guide daily management decisions and activities. The objectives-setting process forms the foundation for management planning and all future decisions that impact the wetland reserve. Objectives define which end products or benefits will be achieved through future management activities and wise use; assist in establishing measurable criteria to determine the compatibility of uses that will not degrade the ecological character of the reserve; and also lead to identifying what general management strategies will be followed.

For example, one management objective may be to 'provide resting and feeding areas for migratory birds, primarily wintering waterfowl.' In the management planning process, this broad objective could later be more specifically defined to focus on Canada geese or some other waterfowl species to produce a more quantifiable objective that might be 'to provide sufficient habitat to maintain a peak population of 50,000 Canada geese in good health.'

It is useful to reiterate here that one of the most important considerations in developing objectives is to approach this part of the planning process with a thorough understanding of not only the wetland's ecological history but also of its human history, i.e. the 'wildlife culture' of the people who use the area. Transplanting one nation's wildlife culture into another society often is unproductive and nearly always irrelevant. Management objectives must blend sound resource management principles and practices with the cultures of local people, for if foreign principles are forcibly applied, they will most likely be rejected. Biopolitics is an ever growing consideration in management planning that must not be ignored. Again, all the parts of the management planning process must be considered together as an integrated whole.

The next part of the planning process is what is often referred to as the *Planning Needs Assessment*. Once you have established purposes, important goals, and long term management objectives, and their relationships are understood, it is important to determine the degree of planning that is necessary. Not all Ramsar sites or other wetlands require the same level or degree of planning. One must consider size, complexity, ownership, external

threats, etc. Some sites will require intensive management, while others will require little more than a plan of protection to achieve the *Management Objective(s)*. Where the results of this assessment indicate that the ecological character of the wetland is stable and that the reserve has a set of sound management objectives, an extensive evaluation of the resources and alternative management options is not really necessary.

However, where the wetland resources are not stable, where there are a large number of environmental and human threats and conflicts that are adversely affecting the wetland's ecological character and purpose(s) for establishment, and where the principles of wise use are not being applied, there will be the need for more extensive evaluation and more planning effort. In these cases, the results of the planning needs assessment will often require the development of several general management alternatives and strategies, one of which will ultimately be chosen as the preferred alternative that will achieve the desired management objectives.

The management planning process needs to begin narrowly focusing on the specific type of management activities and strategies needed to achieve the desired management objectives. The preliminary planning activities have been completed, and it is time to develop the *Management Programme*. (It should be clearly noted that not all management objectives have to deal directly with the management and protection of the resource. One objective for all wetland sites could and should be to educate the wetland users and others about the human, economic, and ecological benefits of these wetlands).

The development of the *Management Programme*, like all other parts of the planning process, must consider the relationships among all of the previously described planning components and among the various management activities that are being planned. In practice, few aspects of management occur or exist in isolation. Management activities tend to be interrelated, and often rely on a limited resource base to accomplish the desired management objectives and promote the wetland reserve's purpose. For example, grazing, mowing, and prescribed burning are all forms of grassland management activities, but they may be equally applied to other habitat and wildlife management activities as well.

Up to now, the management planning process has been dominated by preplanning and early planning sessions. These activities have provided the framework for the *Management Programme*. Background information has been gathered that supported the development of specific management objectives, and major threats and conflicts affecting the wetland resources have been identified. Additionally, management strategies have been recommended to accomplish these objectives and guide the formulation of specific management activities.

It is therefore time to prepare the *Management Programme*, the substance of the management planning effort. This activity will set forth the management programme in terms of management subjects that represent major aspects of the total programme, and describe in detail the specific management activities and allocation of resources involved. Pertinent management subjects will be identified on the basis of the objectives and the previously determined management strategies.

The management programme may be approached in various ways depending on the number and type of management subjects addressed and the level of detail considered appropriate. The major concern, however, is that the management programme communicate the total programme of work to be undertaken and accurately reflect the prescription (who, what, when, and where, including funding, staffing, and equipment resources needed to accomplish the work activity). It is often helpful to address management subjects, such as grazing and grassland management, cropland management, prescribed burning and fire management, impoundment management, water management, habitat management, public use management, etc. separately as individual chapters of the management programme, but there may be times when certain subjects can be integrated. It should be emphasized that whether considered separately or together, the planner should never forget that all the components are interrelated, all must focus on achieving the objectives, and all must support the purpose(s) for which the site was designated for international recognition.

In conclusion, this approach to management planning addresses the actions that the Contracting Parties are to undertake pursuant to listing. If implemented, this approach will help prevent change to the ecological character of listed and other important sites. It can be used to increase waterfowl populations on appropriate wetlands, or to promote training and education, all of which are Ramsar obligations and goals. Equally important, this approach recognizes the difficulties and challenges in conserving wetlands, particularly where there is considerable human pressure to use natural resources. It also considers the all-important relationships between the purposes of establishment, Convention's goals, site-specific objectives, and the critical role of local peoples' wildlife cultures. In one sentence, this approach affirms the principles of 'wise use'.

If Ramsar wetlands are to survive, they must meet man's needs, and if wetlands management planning is to be successful, it too must accommodate the optimum sustainable utilization of renewable natural resources wherever possible without jeopardizing the basic ecological characteristics and those criteria these sites were designated to protect.

WETLAND RESERVES AND PUBLIC AWARENESS

presented by J. Claricoates¹, M. Gaskin², and D. Hulyer

Abstract: The conservation potential of wetland reserves is not restricted to the protection and maintenance of biodiversity, or to their value as research tools. Wetland reserves offer valuable possibilities for significant public awareness- and education-related activities, now widely accepted as an essential element of the global wetland conservation effort. Many reserves around the world are already open to the public and are, to varying degrees, used for public awareness work. There is scope to increase this approach massively, without detriment to the ecological integrity of the the reserve system. Examples are given, and ways forward proposed.

Introduction

The recognition that education and public awareness (EPA) are vital elements in the wetland conservation effort has come much more recently than that of the need for good scientific ecological information on which to base wetland management decisions. The fact that the Ramsar Convention is an inter-governmental agreement itself apparently reflects an underlying assumption of the time: that wetland conservation is a "top-down" affair. Nonetheless, of course, the notion of the integral role of people in the long-term future of wetlands was formally recognised in the Convention in the concept of "wise use". But still for some time the emphasis of the approach to wetland conservation has been "top-down". Whilst this is entirely valid, it should not be the sole operator.

This paper will look at EPA for wetlands as "bottom-up", motivational, approaches to wetland conservation, focusing in particular on the role which wetland reserves can play, including both Ramsar and non-Ramsar sites.

Background

Although relatively late in coming, recognition of the importance of education and public awareness is now broadly established, and increasingly this recognition is being translated into wetland conservation strategies and plans. Those of the Ramsar community are no exception.

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At the Fourth Meeting of the Conference of the Contracting Parties to the Ramsar Convention, held in Montreux, Switzerland, in 1990, Recommendation C.4.4 was adopted which recognized "the particular value of reserves in promoting conservation education and public awareness of the importance of wetland conservation and the goals of the Convention" and recommended that "Contracting Parties develop conservation education programmes linked to the establishment of such [reserve] networks". The same Conference adopted Recommendation C.4.5 on Education and Training which, amongst other things, "Recommends that Contracting Parties place a high priority on the development and implementation of comprehensive pro-active cross-disciplinary educational strategies which target both the formal school-university systems and non-formal education of youth and adults across the broadest spectrum of the community; Recommends that Contracting Parties place a high priority on providing educational programmes at key reserves which are accessible to a wide spectrum of the population; Encourages Contracting Parties to establish special reserves where education is the main objective".

The Ramsar Bureau's Communications Plan touches on the role of the individual Contracting Parties in this respect, and its own role in collating and disseminating information on wetlands and the Convention, and includes mention of the public as one target area for such information. This Workshop is the appropriate place to consider how wetland reserves can be used to improve and extend public awareness about wetlands and the conservation issues relating to them, and to put forward some constructive proposals on how the Ramsar machinery, its Contracting Parties and Bureau can be used to progress this aspect of its work.

The Advantages of Reserves for Public Awareness and Education

Reserves take on so many guises around the world - in terms of the habitats represented, their size, their ownership and management arrangements, and their purpose, for example - that it is impossible to be absolutely accurate in making statements about the advantages reserves have compared with the 'wider countryside' for undertaking EPA programmes. However, on balance, there are advantages which apply to reserves which less often apply to wetlands outside, though all of us will be able to think of many exceptions to these.

- i) The ownership of reserves is often simpler than that of 'the wider countryside', with fewer parties involved.
- ii) Reserves are set up with one or more specific aims in mind.
- iii) Reserves are set up within some sort of legislative or regulatory system.
- iv) Reserves tend to be more stable in terms of land use practices than areas outside.
- v) More, and detailed, information is often available for reserves compared with outside areas.

- vi) Reserves are often wardened, with the advantage that changes are more likely to be noticed, providing opportunities for more constructive education and public awareness work, for example by moving on from purely descriptive work to cause-and-effect analysis and a better understanding of issues.
- vii) Reserves offer the opportunity for local involvement in conservation and the building of a sense of shared responsibility for wetlands, which is less easy to achieve over areas owned and managed by many different individuals.

The result of these tendencies is that education and public awareness work can often be more closely controlled, and messages rather more effectively tailored to the situation and the need.

Current Approaches and Achievements of EPA on Wetland Reserves

The aims of any education and public awareness programme will vary according to the situation, and with time. The present paper will concentrate on EPA activities which aim at building a broad and informed supportive constituency for wetland conservation and converting awareness into action. In these respects, EPA work should be seen as separate from training, which is more concerned with the acquisition of skills and knowledge for particular management purposes.

Education and public awareness programmes can focus at any level and be effective; the important thing is that they should be targetted as to purpose and audience. If we are genuine in our wish to build public understanding of the issues and support for and involvement in conservation actions, we have to ask what the *specific* goals of a programme are, what are the most effective methodologies for delivery and how will these be monitored and evaluated. There are many examples of effective programmes for EPA - and effectiveness need not solely be measured by the amounts of money thrown at the problem.

For example, the placing of a manned telescope on the street outside a popular hotel or bar adjacent to a reserve may achieve more in terms of raising the awareness of visitors and locals about the wildlife which cohabits their home area than will a much more detailed and highly resourced programme, perhaps in a visitor centre classroom, which describes the habitats and the ecology of that same wildlife. The simple technique of the manned telescope is used by the staff of La Réserve Ornithologique de La Gabrière, France. The Pointe-à-Pierre Wild Fowl Trust in Trinidad has a similar approach, technique and facilities, using instead its surrounding oil company's staff club and a 'Nature Photographic Exhibit' as one of its public attractions. Both Reserves have a visitor centre, from which a small staff take conducted tours around the wetland habitats and undertake a number of other EPA activities, but the 'telescope in the street' technique is used to involve another audience of people who may not otherwise give a thought to the wildlife sharing their space. The reserves provide a reliable focus for wildlife viewing.

The greatest challenge facing EPA professionals and amateurs alike is that of making connections between the wildlife seen on the reserve, the ecological systems that support it and the lives of people.

EPA on wetland reserves around the world has pursued this goal in a number of ways, and the techniques used have changed over time. An early aim seems to have been to enable visitors to put a name to everything, either through literature, labels or a live guide. Quite rightly, this approach has been seen to be relatively ineffective in addressing the grand challenge. Despite this, the approach remains a tenacious piece of baggage which the vast majority of interpreted reserves seem nervous to shake off. There is no serious problem with labelling per se, of course, but the ability to put a name to elements of a wetland system should be viewed as a *tool*, as something to be used, and not as an end in itself.

So what's in a name? Not very much, it seems. And yet terminology *is* very important to us involved in EPA for wetlands. For example, a large proportion of the world's population does not know what a 'wetland' is. Native English speakers cannot even get help in this matter from a dictionary: the word is not there. If people do have an appreciation of the term, the images and feelings they have toward these vital systems are often negative - particularly in western culture. How often have we used the cliché 'wetlands are not wastelands'? To rise to the grand challenge involves the building of a support base from a position not only of very little awareness, but often from a position of deeply entrenched misunderstandings.

The problems before us are therefore massive, but not unsurpassable - one only has to think of how perceptions of rainforests have been changed from a baseline of 'jungles' over the past decade or so.

Clearly, we have to use the most effective techniques available to build support for our wetland conservation mission and increasingly these techniques are being used on wetland reserves.

Over the last two decades there has been a growth in programmes which require trained staff to work with visiting groups. These have usually been developed with formal education groups in mind, and deal most often with ecological topics. An increasing number now address issues. The didactic approach, although still prevalent in most programmes, is gradually being replaced by the experiential. Similar changes are occurring in the field of interpretation - the classic information board is now being supplemented by more interactive, and hence more effective, displays. This is not an automatic solution to all the problems, however: there is a danger in this approach that the medium becomes the message.

EPA wetland professionals are importing ideas and techniques from the wider worlds of field study, museums, zoological and botanical gardens and, in turn, feeding ideas back. But the exchange is spasmodic and slow and, often, the vital activity of evaluation is forgotten.

These more recent approaches tend to require a higher level of resourcing. For example, construction of a boardwalk may be necessary to enable people to experience ordinarily inaccessible wetland habitats such as peat bogs or mangrove swamps. In the well-established reserve of Mai Po in Hong Kong there has been constructed a long, floating boardwalk which allows people easy access to the mangrove and has the added advantage that they can experience the changing face of the mangroves as the tidal cycle progresses: another relatively simple technique which builds awareness in the surest way possible - through experience of the reality, which is something reserves have a lot of! But to make the reality acceptably accessible usually requires funding and expertise. The more tightly designed educational programmes, which are an increasingly common feature of reserves with educational staff, require props (supporting materials), though there is a huge range of investment in this regard. Well-trained staff can overcome the need for expensive, specialist materials to some extent, but depending on the part of the world where the reserve is located it may be easier to provide props than highly trained staff.

A fundamental point which must be borne in mind is that it is arguable whether many of these highly resourced programmes are much further forward in terms of their real EPA achievements than was the labelling approach. They tend to address ecological principles, and perhaps functions, which is a step forward, but it can still be a huge mental leap for the uninitiated from the indoor or outdoor classroom to the real world of our increasingly urbanized and growth-driven public. It is all too easy to design programmes which the instructor understands as being in a context and applicable, but the *link* to the needs of the outside world must be conveyed and understood, or the lesson does not achieve its real goal. Reserves offer the potential to make this link relatively easily and clearly. We wonder whether any achieve it.

Depending on the aims of the EPA programme, it may be that a visitor centre and associated public facilities for outdoor activities are necessary. This is not because EPA activities undertaken from a visitor centre are inherently better than those where no visitor centre exists - we have examples above to illustrate that this is clearly not so - but because a visitor centre and outdoor facilities extend considerably the range of possible activities and the range of target audiences. A reserve equipped with a visitor centre and outdoor facilities is like a good tool kit for conservation. In it, a range of tools are available which can be used for a wide variety of tasks; as the tasks to be undertaken change, so the basic tool kit can be applied in a different way. Some tools in the kit will be for specialized tasks only. The visitor centres in the sanctuary network in Japan are an example, and include the visitor centre at the Lake Utonai Ramsar site.

The potential of a public wetland centre has been recognized many times over, and there now exist a considerable number in all parts of the world. They differ widely in their size and aspirations, and in the resources available to them, but most are engaged in trying to raise public awareness about wetlands and motivate the public to support wetland conservation. Many also incorporate research and land management activities, thus making the most of their associated reserve.

The Wildfowl & Wetlands Trust (WWT) is a UK-based non-governmental organization which exists to save wetlands and conserve their wildlife. It was founded in 1946 by the late Sir Peter Scott, who believed that people were a part of the wetland conservation equation and that if wetland conservation was to succeed in the long term the activities of people must be included. He therefore developed the idea of public educative wetland conservation centres, located within wetland habitats that could be managed to attract and support waterfowl. His original idea is encapsulated in the phrase 'to bring people and birds together for the benefit of both'.

The WWT now operates eight such centres in the UK, all of which are attached to reserves, and five of which are on Ramsar sites (Burry Inlet, Martin Mere, Ouse Washes, Upper Severn Estuary and Upper Solway). Approximately three-quarters of a million visitors pass through the centres each year, and about 10-15% of these are on organized school visits. A few examples of how these centres are used will serve to illustrate the potential of such an arrangement, and a range of EPA activities.

The sites are zoned. Visitors enter through the visitor centre itself, which houses exhibition space, a shop, a simple restaurant, classroom space and perhaps a lecture hall. All but two of the sites have a contrived wetland park zone with a collection of tame waterfowl. Outside of the building visitors can walk amongst the birds, feed them, picnic, learn through the interpretation programmes, walk through marshy areas on a boardwalk, and so on. People come into direct contact with threatened species - a vital and valuable opportunity to pass on the conservation message. This area is used extensively along with lecture halls, classrooms, discovery centres and exhibitions for formal educational visits. The outermost zone is the wild reserve. Visitors can enjoy close-up views of the wild birds from a series of hides overlooking different habitats, without fear of disturbance: the approach and hides have been designed to screen visitors from the birds whilst at the same time giving them access to the heart of the reserve. Visitors do not have free access to the reserve, but the design means that most are not aware of any control.

Many visitors, especially those in summer, visit to spend a relaxing time in pleasant surroundings. They are not especially interested in knowing anything about the wetlands. However, many of them are drawn out to look at the reserve after seeing the exhibitions in the visitor centre, and walking amongst the birds in the collection. These same visitors are most unlikely to have visited a straightforward reserve because it would mean nothing to them, but they leave such a centre understanding a little more about what wetlands look like, and perhaps having discovered for themselves that wetlands are not wastelands after all. Some considerable design and preparation is necessary to enable this awareness: the wetland areas must be made accessible, and arrangements have to be made to avoid disturbance to the wildlife.

The reserve areas are within the control of WWT, and the land is managed primarily to increase the carrying capacity for wildfowl. In the winter most of the reserves enjoy the spectacle of very large numbers of migrant swans, ducks and geese, and these bring not only the non-specialist, but also the committed birdwatchers. Thus the centres cater for a wide range of public

whilst not compromising the wildlife value of the reserve. Indeed, the Martin Mere site was designated under the Ramsar Convention after just 13 years of management by WWT. Before WWT acquired the site it was agricultural land which had been reclaimed from a large inland wetland in historic times. This is an important conservation achievement which results from the ownership and management of a wetland reserve, and can now be used in EPA messages. The centre is at the same time a major regional tourist attraction.

In addition to catering for school groups and 'the general public', the centres welcome special interest parties such as photographers and artists; wetland craftsmen; students of environmental science, market research, biology and tourism to use the range of facilities available. Centres may be used for evening talks or concerts. In this way the centre reaches out to many sectors of the community who would not otherwise visit. Other groups may use a centre for their own displays, and WWT centres have played a unique role in the current UK campaign against peat extraction. Each centre held a weekend event focusing on the campaign, to which various environmental organizations contributed and peat-free gardening products were available. In this way ordinary visitors were exposed to a wetland issue which they may not otherwise have come across, and the campaign organizers were able to reach a bigger audience.

The Centres are also used as a base for the Trust's outreach and campaigns programmes. A highly effective campaign entitled Pondwatch was launched in 1989 with the aim of increasing awareness of the plight of these disappearing habitats and to encourage local conservation action. Over 7,000 schools and a further 20-25,000 individuals and community groups became involved in the programme - and this support is being used to lend weight to the calls for increased protective legislation. A further UK-wide campaign, Waterlands, is to be launched in July of this year, building upon the local wetland successes of Pondwatch. Such soft campaigning helps make the link between the reserves the Trust manages and the wider environment where people (and wildlife) live.

The centres are also used for industrial and conservation meetings. For example, a forum for estuary conservation groups from around the UK was organized by WWT and held in one of its centres. All sectors involved in estuary land use planning were represented, and in this way scientists, local authority representatives, journalists and others were made aware of the broader concerns of WWT. Centres offer agreeable settings and facilities for long business meetings, with the possibility to take breaks in pleasant surroundings, and be well catered for.

Finally, since centres are also an ideal base for research programmes, and necessarily house a range of management expertise, they can be viewed as potential 'wetland centres of excellence', as a focus for information and advice on wetland matters, where no such other facility exists. And thus they can be used as a resource by many other sectors.

Clearly it will not be available to everyone to develop such facilities, neither would it be desirable that all reserves should. But clearly centres offer a valuable opportunity for far-reaching and flexible wetland EPA work,

and they can serve as 'shop windows' for those looking for ideas for their own EPA, displaying as they do a wide range of 'EPA packages'. It is not necessary to buy the whole display. Centres associated with Ramsar sites offer the possibility to give people physical and insightful access to the best wetlands we have; what better way to fire their enthusiasm for wetland wise use and conservation?

Wetland Link International

Relatively few of the existing programmes for EPA on reserves are genuinely successful in the ultimate goal of raising a lasting awareness and building an active constituency. Most of the techniques being used have been poached from general 'environmental' EPA work; very few have been developed specifically for wetlands. The application of boardwalks to wetland EPA may be an exception. Yet there must be considerable gains to be made from development work in this area, since wetlands occupy a unique position, being part aquatic and part terrestrial. How can we best foster this development?

The approach of the Wetland Link International (WLI) programme of The Wildfowl & Wetlands Trust is one solution. The programme was established in 1990, with founding sponsorship from The British Petroleum Company p.l.c., to improve wetland EPA, largely by encouraging increased contact between public wetland centres. In this way, good practices can be better identified and shared. There are many individuals and organizations now involved in wetland EPA. In itself, of course, this is not a bad thing. But there is considerable duplication of effort and consequent waste of precious wetland conservation resources. The Wetland Link International programme aims to reduce this reinvention of wheels, and to improve effectiveness, by facilitating the sharing of materials, ideas and expertise between those involved.

The Pointe-à-Pierre Wild Fowl Trust, a founder participant in Wetland Link International, is situated in Trinidad, the southernmost island in the Caribbean. Pointe-à-Pierre was founded in 1966 and is a non-profit, volunteer, national, non-governmental organization located uniquely in a petrochemical complex, 'Petrotrin', encompassing two lakes and 25 hectares of land.

The Trust is actively involved in the research and breeding of locally endangered species of waterfowl and other birds (including the national bird, the Scarlet Ibis (*Eudocimus ruber*) for re-introduction into the wild, and in environmental education. Over 1,000 wild ducks have been released into existing natural wetlands in Trinidad & Tobago. This has resulted in increased wild stock populations. The Trust also provides in- and out-of-classroom environmental education programmes and action projects: for example, Pointe-à-Pierre designed the first environmental education segment for inclusion in the school curriculum, presented to the government in 1981.

Out of a population of 1.2 million people, approximately 16,500 visit Pointe-à-Pierre annually, 13,500 of whom are schoolchildren. The Trust also provides adult environmental education for teachers, community groups and members of the general public. The site is a peaceful haven where members and visitors may enjoy guided tours, birdwatching, photography, and interpretative trails.

The Trust is also active in other forms of conservation, for example in assisting the Wildlife & Forestry Division of the Trinidadian Government by initiating, in 1985, regular turtle patrols involving children. Pointe-à-Pierre is also very active in lobbying campaigns: the Nariva Swamp, Trinidad's sole Ramsar site is, at the time of writing, under severe threat from unplanned, intensive, rice cultivation. The Trust has been using EPA techniques to arouse community, public and Government interest and participation, resulting in a High Court case, now proceeding.

Based on materials produced by The Wildfowl & Wetlands Trust, the Pointe-à-Pierre Wild Fowl Trust has published three environmental education books and a poster, designed to assist teachers and students from primary to university level with the issue of the wise use of our natural resources, with emphasis on wetlands. In 1991, with major funding from the Inter-American Development Bank and through the Trust's long relationship with The Wildfowl & Wetlands Trust, a waterfowl specialist from their National Centre at Slimbridge spent three months at the Pointe-à-Pierre Wild Fowl Trust, working with its resident biologists. The secondment was very successful. As a follow-up, in 1992, the Pointe-à-Pierre Biologist and Education Officer spent 10 and 6 weeks, respectively, at The Wildfowl & Wetlands Trust's Centres in the UK. Again, the arrangement was effective, and both staff returned to Trinidad with much valuable information and some new techniques to add to their own, many of which have already been implemented, with measureable success.

Examples of Wetland Link International's work are not confined to Trinidad. The programme is involved in developing plans for a public wetland centre in China; it has been instrumental in sharing interpretation techniques among centres spread all around the world; it has commissioned a series of wetland wall charts and these are now being displayed in many centres around the world; it has shared models of successful educational packs between centres for them to use as a basis for their own such work; and it has helped centre managers and EPA staff increase their contact with relevant colleagues around the world.

Increased contact between those involved in this work is vital. WLI is currently putting together a directory of wetland centres which will hold not only location and contact information, but will give a profile of each centre in terms of the (Ramsar) wetland habitats in its reserve, the structures and facilities available, the sectors and age groups it caters for, the programmes it runs, and so on. In this way appropriate centres can be contacted for the sharing of materials and experience. Future directories planned from WLI are a register of the skills and needs which each centre has, and a bibliography of resources. The register of skills and needs will enable centre managers to find suitable places for staff training and advice, and will enable training agencies to identify priority needs and to address them. The bibliography of resources will contain not only the bibliographical information itself, but will include an evaluation by an experienced user of the material.

A major part of the future programme involves the provision of a series of publications giving models and guidelines for centre-related operations, including programme development, curriculum-linked materials, interpretation techniques and other EPA activities.

Thus WLI is concerned to provide self-help materials and to improve contact and sharing between those involved in the centre-based approach to wetland EPA. Much of the material will be of value to others. As indicated above, wetland centres can reach a large and varied mix of the population.

The Wildfowl & Wetlands Trust believes, in establishing Wetland Link International, that by improving the effectiveness of such centres a big step can be taken towards the "bottom-up" approach to wetland conservation.

Conclusions

In conclusion it may be said that the need for more effective, and extended, EPA for wetlands is now widely recognized, including by the Contracting Parties to the Ramsar Convention. Many approaches to this are possible, and many have been actively developed. Wetland reserves offer unique and valuable opportunities in this respect. The existing expertise has largely been poached from non-wetland EPA work and there is much room for wetland-specific techniques to be developed. The expertise that does exist is widely scattered, and difficult to locate. There is a need for more organization in this respect, to enable the identification of good practices, and to facilitate sharing and exchange, to improve standards and effectiveness, and to reduce duplication of effort. Wetland Link International is one initiative striving to address this need. Wetland EPA needs to be strengthened and supported; for this it needs a higher level of organization and resourcing.

There is no doubt that EPA work has been the poor relation of the wetland conservation scene in terms of resources. It is time that we paid attention to this fundamental problem - paying lip service is not enough.

Proposals for Discussion

The following proposals are intended to prompt discussion on possible ways forward for wetland EPA at reserves, and to help identify the role of Ramsar, with a view to making constructive recommendations to the Conference. They concur with and expand upon the draft recommendation 3, as circulated with the workshop papers.

1. The role of the Convention Bureau in education, public awareness, and training activities, and in information collation and dissemination, as referred to in the current Communications Plan of the Bureau, should be clarified in discussions with other involved parties.
2. Ramsar should consider how it can actively support initiatives to plan and execute wetland EPA at the national and international level.

3. An appropriate share of the Ramsar Conservation Fund should be allocated to the development of long-term wetland EPA initiatives.
4. National reports should include full sections on the status of EPA in the Countries of the Contracting Parties, rather than being included, as at present, as a sub-section of sub-section 4.5 on 'Action taken by Contracting Parties as a result of recommendations adopted by the Montreux Conference'.

WETLAND CONSERVATION AND PUBLIC AWARENESS IN JAPAN

presented by H. Kita, Nature Conservation Bureau,
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`Toyoashihara-no chiaki-no nagai-ho aki-no mizuho-no kuni'. This is written in `Kojiki' - the oldest history book in Japan. This literally means `A country with reedy marshes, the eternal rich harvest of the excellent rice crop'. This passage was recited by `Amaterasu-Oomikami', the sun goddess in Japanese myth, blessing her son `Ameno-oshi homimino-mikoto', when his father told him to rule over Japan, in the myth called `Ashihara-no nakatsukuni'. And this means that Japan is the best place for a rice crop in the terrestrial world.

Japan has developed its rice crop culture taking advantage of its Asian monsoon climate. Since the dawn of history, it has been cultivating wetlands and changing them into paddy fields. The Japanese Peninsula is mountainous with only little arable land. We have been utilizing the small land very profitably as paddy fields to grow our principal food which supports and feeds a large population. Thus in Japan we have a very long history related to wetlands, not only in their utilization as paddy fields but also as a nursery of laver and for shell gathering. And in some wetlands you can observe unique ways of fishery as well.

As mentioned above, we have been so far sustaining a particular relationship with wetlands and I believe that it should be the same way in any other country. Especially in the Asian region, it seems that the wetlands tend to be used as a place for living itself as well as for making a living.

Going back into history, reclamation started in full scale a century ago in the north-eastern part of Japan, especially in Hokkaido, compared to reclamation carried out in the south-western part of Japan in ancient times.

Since the Edo period the wetlands in the Kushiro-shitsugen (marsh) were expected to be used as paddy fields and as other agricultural lands. However, owing to its climate, its geographical features and severe natural conditions around the wetland, the agricultural or other utilization of the wetland itself never happened. Thus the centre part of Kushiro-shitsugen has been left untouched as the land appeared to be of no value for the human being, called `Yachi' in this area. On the other hand, it was an advantage for the various living things that the wetland was considered of no value, since this resulted in the nature being left untouched thus retaining its natural diversity, which is called `wilderness' in English.

In 1924, during the Meiji era, the Japanese crane (*Grus japonensis*) was rediscovered here in the Kushiro-shitsugen which, I suppose, has close relevance to the marsh being left untouched. The Japanese crane was designated a natural monument in 1935 when enthusiastic conservation activities for the Japanese crane were started by the local people of Kushiro. These activities were temporarily interrupted during the 2nd World War; however, they continued

thereafter and much energy was devoted towards the completion of the project and the establishment of the Japanese Crane Reserve. There were only 30 Japanese cranes in 1950, but today the population has recovered up to 600 according to the results of recent surveys. I would say that this recovery is due to the enthusiastic efforts of the people living close to the Kushiro marsh.

The Kushiro-shitsugen National Wildlife Protection Area was established in 1979; and in the following year, as is well-known, Kushiro-shitsugen was designated as the first Ramsar site in Japan.

Surveys on wetlands had been carried out in Japan since before joining the Convention, forming a link with nation-wide surveys on the natural environment. From the point of view of the international conservation of migratory birds, however, the measures were not sufficient. Taking into consideration the role of Japan in the environmental field, aware of the importance of conservation of wetlands of international importance as waterfowl (migratory birds) habitat, which is the newly recognized value of the wetlands, Japan joined the Ramsar Convention in 1980 for the conservation of migratory birds.

It would not be too much to say that the public awareness of the ecological importance of the wetland itself, and the understanding to conserve wetlands and their migratory birds, are largely due to the designation of Kushiro-shitsugen for the Ramsar List. And I would also like to say that the people involved in the conservation of Kushiro-shitsugen and its wildlife have been playing a very important role.

After all, the nature of Kushiro-shitsugen has become highly valued and it was designated as the latest National Park of Japan in 1987. The special character of Kushiro-shitsugen National Park resides in the importance placed in the conservation of its ecosystem, compared to other national parks which mainly aim at conserving the natural scenic beauty in the park areas.

As mentioned earlier, the central part of Kushiro-shitsugen has been left untouched as the land was considered of no use for humans. Thus the remaining nature played a key role in the reconsideration of wildlife conservation from the international point of view. It resulted in the invitation of the Asian Wetland Symposium held last year, and indeed the Ramsar Kushiro Conference, to promote the understanding for wetland conservation in Japan. The participation of representatives from countries in the Asian region is expected to result in a better understanding for wetland conservation issues in the Asian region as well.

We would like to develop further the results of this Conference and pursue our efforts in wetland conservation.