The Ramsar Convention

A review of wetlands management in New Zealand

The Ramsar Convention, **PHILIPPE GERBEAUX** informs, is a global initiative to conserve wetlands and increase people's appreciation of these special places.

The Wetland Millennium Event of 2000, held in Quebec City, attracted over 2,000 scientists from around the world. It was probably the largest wetland science and management event in history. Over the six days from 6–11 August 2000 more than 1,300 papers were presented on key issues concerning wetlands and peatlands. Topics included water quality protection, sustainable resource use, education, species at risk and wildlife habitat, the role of wetlands in the cycle of carbon and greenhouse gases, and wetland restoration. The conference was a once-in-a- lifetime experience for many participants.

Several delegates from New Zealand took part. This reflects renewed interest in wetland research and management in our country. Research associated with various restoration projects around New Zealand (under FORST funding) has been initiated by Crown Research Institutes and some Universities and some new wetland management tools have been developed under a Ministry for the Environment Sustainable Management Fund project. The aim of this article is however not to report on these recent initiatives but to consider wetland conservation issues and the influence of the Ramsar convention in New Zealand.

How did this pioneering treaty come about?

February 2, 2001 marked 30 years of work and progress by the Ramsar Convention, initiated in January 1971 when the representatives of 18 countries gathered to discuss wetland conservation issues in the small city of Ramsar on the Caspian Sea in January 1971. So, it is timely to reflect on the successes and failures in implementing it in New Zealand. The Ramsar Convention is the only global environmental treaty dealing with a particular ecosystem: *wetlands*. Its mission is: "the conservation and wise use of wetlands by national action and international co-operation as a means to achieving sustainable development throughout the world."

Dr Luc Hoffman from Switzerland was one of those attending the convention. As a landowner in the Rhone River delta, the famous Camargue (France), he became aware of problems regarding wetlands in the 1960s. With the help of a few scientists, he began monitoring some of the large populations of birds that inhabit the delta. Today, with over 80 staff, the "Station Biologique de la Tour du Valat" lodged on his land (since gazetted as a Reserve) has become the leading research organisation for the conservation of Mediterranean wetlands. I worked there for nearly three years and never miss an

Sedge/flax swamp in Westland

Lowland creeks and swamps provide key habitats for whitebait

opportunity to return when travelling in Europe. Dr Hoffman is an inspiration.

Ask him how far we should allow wetlands to be developed and he calmly answers: "The key is understanding and making sure any development to do with wetlands is sustainable." Here it is: the key word that permeates the New Zealand Resource Management Act! Dr Hoffman often reflects back on how the work of the Ramsar Convention evolved and remembers that some members were not happy with the way it has changed over the years.

Australia first to sign the convention

Australia was the first to sign the Convention when it came into force in 1975. New Zealand was not long behind signing a year later. Dr Hoffman says it was a natural progression that the Convention became more related to humanity, than strictly to ecological aspects of wetlands. Through this change, people would be better able to understand the importance of wetlands.

Wetlands preserved worldwide under the Convention

Today, 32 years after its adoption and 28 years after it came into force, the Convention has become an effective instrument, used by its 133 signatories to ensure the conservation and wise use of their wetlands. There are now 1,229 sites on the List of Wetlands of International Importance covering almost 106 million hectares of prime wetland areas (approximately 5–10% of the global wetland cover) – although it is almost impossible to provide an acceptable figure of the areal extent of wetlands on a global scale. A number of countries have national wetland policies or action plans in place. "All this is a very encouraging reality," said Delmar Blasco in his message on World Wetland Day in 2001. In the 2002/2003 edition of the important Yearbook of International Cooperation and Development, Michael Bowman notes: "the considerable progress which has been made in the realms of wetland conservation over the thirty years since the Ramsar Convention was concluded, not least in the rehabilitation of the image that wetlands feature in human consciousness."

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How is New Zealand doing with regard to the management of wetlands at the beginning of the third millennium? New Zealand became a Convention member in 1976 and showed how serious it was about implementing the Treaty by immediately designating two sites for protection under the convention, and also organising several forums on peatlands to try to slow down the rate of wetland loss.

New Zealand has its wetland pioneers too, mostly Wildlife Service people and a few academics, but also others from various agencies, including scientists from the former Department of Scientific and Industrial Research (DSIR) and Ministry of Fisheries, catchment authorities managers and National Water and Soil Conservation Authority (NWASCO) and Acclimatisation Society field officers. Resource users such as peat harvesters were invited and often took part in forums that were organised in the early years. Before computers and internet services were widely in use, communication between stakeholders appeared to flow freely in a very constructive manner.

Most NZ wetlands already drained or modified

However, by then the vast majority of New Zealand's wetlands had already been drained or modified – especially the lowland wetlands. In an analysis commissioned for the State of the Environment's report,[1] Landcare Research scientists using soil maps estimated that the original area of freshwater wetlands (defined as areas of shallow water containing specially adapted plant and animal communities (eg rushes, sedges, reeds, flax, water birds, fish like eels, mudfish, aquatic invertebrates etc), was approximately 672,000 ha. By the mid-1970s freshwater wetlands were estimated to be around 100,000 ha, suggesting that they had declined to about 15% of their original extent since European settlement (excluding the Chatham Islands).

There is however great regional variation in the rate of depletion depending on both the extent of the original wetland cover and the degree of agricultural and urban development. Regions like Southland and Westland for instance, have retained more wetlands in a better quality state than those in North Canterbury or the Bay of Plenty. The types of wetlands vary too: for example, kahikatea swamp forest or ephemeral dune wetlands have been affected more than mountain bogs and tarns.

In a report to the Environmental Council published in 1983,[2] a working party convened by a New Zealand wetland pioneer, Gordon Stephenson, had raised early concerns, using different figures but of the same order of magnitude. This report was one of numerous publications on wetlands produced around this time. The 1978 New Zealand Survey of Peat Resources,[3] the 1982 Peatland Policy Study[4] and a Wetlands Guideline[5] all published by NWASCO are important publications. Some of these reports followed a symposium on New Zealand peatlands in Hamilton, in 1978.[6] At that symposium another New Zealand wetland pioneer, Keith Thompson of the University of Waikato, said: "Taking New Zealand's peat resource as a whole, the 'most suitable' use can be described as a 'controlled mixed economy,' in which everyone gets a fair slice of the cake. This cannot be achieved unless the whole resource is considered when individual developments are appraised. Conservation (reservation) too, is an entirely respect-

able form of land use, and scientific and recreational needs must therefore be incorporated into the inevitable compromise which will be New Zealand's National Peatland Plan (whether this be an official entity or merely national)."

NZ establishes a national wetlands policy

In 1986, the New Zealand Government announced the establishment of a national policy on wetlands. It was a remarkable achievement, nationally and internationally and was possibly at the time the first such wetland policy adopted in the world. In the late 1980s, the Biological Resource Centre developed a computer database known as WERI (Wetlands of Ecological and Representative Importance), effectively an inventory of about 3,000 wetlands, probably also a worldfirst. It was mainly based on information collected during Wildlife Service surveys carried out during the 1970s and 1980s. In 1986, Gordon Stephenson published a book aimed at the general public called, *Wetlands: discovering New Zealand's shy places*.

In 1989, *Wetland Plants in New Zealand* by botanist Dr Peter* and artist Pat Brooke, enabled field workers to more readily identify wetland plants. It was favourably reviewed in international journals.

In 1990, 2.6 million hectares of south-west New Zealand was declared a World Heritage Area in recognition of its spectacular natural values, including many 'pristine' wetlands. Such efforts over 15 years gave New Zealand a high profile on the wetland international scene. In the late 1980s and early 1990s two new pieces of legislation – the Conservation Act 1987 and the Resource Management Act 1991 were enacted. The influence of both Acts on the progress made in wetland conservation is worth considering.

Department of Conservation shifted focus

When the Department of Conservation (DOC) was established in 1987, the surveys aimed at assessing the areal extent of wetlands (previously carried out by the Wildlife Service) were interrupted. DOC's Science and Research Division took over the management of WERI and the inventory's focus shifted to ecologically and regionally significant wetlands rather than general trends in wetland use, loss or restoration. However, it was not systematically updated or generally accessible. The recent Directory of Wetlands in New Zealand[7] preferred to use the Land Resource Inventory to assess the 'present' wetland resource. The Coastal Resource Inventory and another DOC database (sites of Special Wildlife Interest) also contain wetlands information.

Effect of Resource Management Act ?

The Resource Management Act's (RMA) contribution to New Zealand wetland management is more obscure. The State of the Environment Report 1997 certainly notes some shortcomings in the way the New Zealand Wetland Policy has been implemented. This may be because people believed that the Act superseded the policy. The Act's governing principle is sustainability (the magic word used by pioneer Luc Hoffman!) and identifies the consideration of wetlands as a matter of national importance which must be considered when powers are being exercised and decisions made.(see also Cromarty and Scott 1996).

In the initial absence of Regional and District Plans required to be drawn up by Councils under the Act, wetland conservation and management was probably implemented piecemeal. In the meantime, vast areas of wetlands were being drained.

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Wetlands, including lakes and rivers, occupy a very small part (less than 2%) of the total New Zealand land area. Between 1954 and 1976, the then Wildlife Service surveys found that 263,999 hectares were lost (a rate of nearly 12,000 hectares per year!). Later surveys of sample areas in Northland indicated that between 1978 and 1983 approximately 15% (3,175 ha) of the remaining wetlands were drained (State of the Environment report).

Farmers encouraged to drain wetlands until mid-1980s

Until the mid-1980s farmers were encouraged to drain wetlands by (now gone) government subsidies. Today the lure may come from mega-merging dairy companies that have an obvious interest in helping dairy farmers develop the last small remnants of productive land. As Keith Thompson said in 1978, "man has now reclaimed virtually all the 'good' agricultural land, only 'stress' environments are left to develop. Stress land costs more to make productive and very much more to maintain in productive condition.../...some wetlands, under wise management, will make good agricultural soils, but under poor management they make bad headaches."

Who will now speak the truth to farmers? Will the Resource Management Act and the new plans being developed be sufficient to contain the latest round of wetlands attacks? While most people think that a majority of the remaining wetlands are administered by DOC, the State of the Environment report reveals that many, including parts of the Ramsar ones, are privately owned or grazed by livestock from adjacent farmlands.

New threats to wetlands

Councils which administer the Act will be the key players in trying to safeguard remaining wetlands outside DOC's control. (Note from the editor: *recently (6.09/2002) and since this article was submitted, District Court Judge C.J. Thompson has convicted and fined a landowner $32,500 and an earthwork contractor $40,000 for illegal drainage works on a wetland area at Kaipara Flats near Warkworth, in the Rodney District; in many other*

*Erratum: Dr Peter Johnson

districts including the West Coast region, illegal cases of drainage activities in wetlands had to be stopped by the Regional Council. Nelson/Malborough Fish and Game Council has also recently publicised the environmental nightmare faced by the Buller River system which, although under a Water Conservation Order, is under a large-scale attack of corporate dairy farming development. Finally an interesting report on valuing wetlands in Tasman was published in March 2002 by the Office of the Parliamentary Commissioner for the Environment).

In 1996, the Taranaki Regional Council identified 717 surviving wetlands, five times more than the 139 recorded in the WERI Inventory, many on private land. The Fish and Game Council, the second most important owner of wetlands after DOC, has also recently undertaken inventories in the Manawatu[8] and Tasman[9] districts. In both cases, the results showed that 90% of the remaining wetlands were less than 10ha in area and about 75% were less than 1ha in area. In the Tasman District Council, only 14% of wetlands under 100m altitude are protected. To achieve higher levels of protection one has to seriously consider which regulatory mechanisms or voluntary incentives will work best nationwide to guarantee sustainability. It may depend on the circumstances of each situation. In some instances a combination of both might be the preferred solution.[10]

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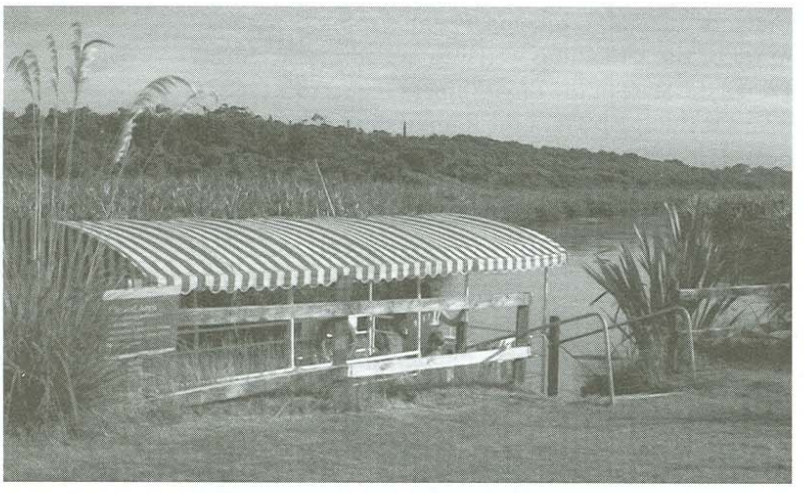
In 1996, February 2 was designated World Wetlands Day (WWD) – an annual celebration of the anniversary of the 1971 signing of the Ramsar Convention on Wetlands. The Day gave a first opportunity for governments, organisations and citizens to undertake activities to raise public awareness on the value and benefits of wetlands. In February 1997, many other countries became involved. In 1998, New Zealand recognised World Wetlands Day for the first time when DOC's West Coast Conservancy displayed a mapping exercise on wetland distribution and showed slides on wetland values and functions. Other conservancies in Canterbury, Southland, Wellington joined in. This year, almost every region co-ordinated by the Fish and Game Council, has organised activities around a wetlands theme.



Wetlands are of economic importance to tourism (paddleboat near Hokitika, Westland)

New research focus on wetlands

Further advances have come as multi-research agency projects on wetlands are being adopted. Following the major restructuring of science in New Zealand in the early 1990s, the focus for our new Crown Research Institutes (CRIs) has recently returned to wetland research. With funding from the Foundation for Research, Science and Technology, two CRIs, NIWA and Landcare Research, have teamed up to increase our knowledge of these special ecosystems. Another multi-agency project funded by Ministry for the Environment under the Sustainable Management Fund has been initiated. In Phase One, a revised eco-classification, to facilitate nationally consistent approaches to creating a new inventory and monitoring has been developed. This has been trialled and agreed for estuaries and palustrine wetlands..

Phase Two is near completion and has developed science-based indicators of the condition of wetlands and trends; a generic set of maatauranga Maori-based indicators of wetland condition; an inventory and monitoring handbook for managers of wetlands; and an illustrated guide to the classification and mapping of wetlands either documents already or soon available from the National Wetland Trust website).

Wetland awards

Finally, DOC has adopted the concept of wetland awards promoted by the Ramsar Bureau, to recognise and honour the contribution of individuals, organisations and agencies of local and central government active in the conservation and wise use of wetlands.

The recipients in 2000 were the Waipa District Council for the restoration of Lake Ngaroto; Keith Thompson of Hamilton for a lifetime's contribution to wetland research, education and management; Environment Waikato for promoting wetland conservation; Taranaki Regional Council for the restoration and management of Taranaki's wetlands; and Ray Bushell of Tauranga for the restoration programme at the Kaituna Wildlife Management Reserve. Last year's recipients were the Whakakaki Lake Trustees for the restoration of the Whakakaki lagoon and its coastal wetland; the Pauatahanui Reserve Management Committee of the Forest and Bird Society for the restoration of an important saltmarsh system; and Norske-Skog Tasman for their substantial commitment to mitigate and offset industrial impacts on the aquatic systems of the lower Tarawera Catchment.

Five more conservation awards were given this year to: the Lake Pokorua Adjoining Landowners Group (for

their lake restoration efforts) , the Hawke's Bay Regional Council (for the development of management plans to enhance and protect significant wetland areas), the Wanganui District Council (for the restoration of Titoki wetland), the Taranaki Regional Council (for their ongoing work with the local communities) and the Bexley Wetland Trust (for the restoration of habitat and preservation of the cultural heritage of a key Christchurch wetland).

A millenium initiative, the National Wetland Centre and Trust, was also launched in the Waikato under the guidance of still very active pioneer Gordon Stephenson. The Trust's membership is growing fast! Hence we can remain optimistic for our wetlands. The Ramsar and "wise use of wetlands" concept is something that can be adopted by New Zealanders too!

Five sites identified in New Zealand

The Ramsar Convention requires governments to identify at least one representative wetland. To date, New Zealand has designated five sites under the administrative authority of DOC, (Waituna Lagoon in Southland Conservancy, Farewell Spit in Nelson/Malborough Conservancy, Whangamarino, Kopuatai Peat Dome and the Firth of Thames, all in Waikato Conservancy), covering almost 40,000 ha. The first two were designated in 1976 and the last three in 1989. It is probably time for further nominations and designations and several are currently being proposed for both the North and the South Islands.

Recognising qualities

In recent years the Ramsar Bureau has done much to emphasise the importance of wetlands for biodiversity and also for the well-being of people. As a result many people are changing their negative perception of wetlands. Functions and values such as flood control, groundwater replenishment, shoreline stabilisation and storm protection, sediment and nutrient retention, climate change mitigation, water purification, wetland products (peat, sphagnum, flax), recreation and tourism and not the least, beauty and cultural values, need to be truly recognised.

A recent study on the value of the world's ecosystem services and natural capital estimated the dollar value of natural ecosystems around the world at US $33 trillion, 45% of this coming from wetland ecosystems alone.[11] So perhaps we should listen again to the wise words of some wetland pioneers: "*Wetlands are ecosystems of the highest productivity, of floristic, faunistic and great limnological importance and often areas of great scenic beauty. But to damage or pollute wetlands is indefensible in ecological and economic terms.*"

Come and join us on February 2 next year and celebrate World Wetlands Day!

Postcript:

- This article was written and submitted prior to the release of a report by the Controller and Auditor-General on how well New Zealand is meeting its environmental obligations. The conclusions that relate to the Ramsar Convention confirm Dr Gerbeaux's analysis, (above) on wetlands in New Zealand. For instance it states: "*The policies and legislative measures adopted to implement the Ramsar Convention do not appear to have been successful in meeting the desired outcomes of the Convention.*" Another conclusion of the report is: "*There is also evidence that wetland degradation in New Zealand has been worse than it ought to have been...*" We recommend that readers interested in wetland conservation read the full report. It can be ordered from the Audit Office (Private Box 3928, Wellington) or downloaded from the Audit Office website (www.oag.govt.nz). Other useful websites are: www.ramsar.org and www.wetlandtrust.org.nz. PE

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