Information for managing the coastal zone in the 1990s: the example of United Kingdom coastal and estuarine directories and inventories

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Information in a form easy to for managers and decision-takers to use is a key pre-requisite for effective coastal zone management, as it is for sustainable management of wetlands and the species such as waders that depend on them. The coastal zone forms an important part of the overall wetland resource, a resource for which there is global and European conservation priority through EC Directives and international conventions, notably the Ramsar Convention and the more recent Convention on Biological Diversity. Coastal information provision tends to ignore this broader wetland context, for which there is also much inventory activity (see Frazier 1997 for a review) better synergy between these activities is needed to ensure that integrated coastal management delivers the requirements of the maintenance of biological diversity, both for habitats and species.

This note summarises the range of comprehensive national inventories and directories that have been compiled to assist people in the United Kingdom involved in sustainable coastal management. Frazier (1997) has distinguished three type of wetland inventory worldwide. Most reported here are 'type 1' - comprehensive national inventories. Information relevant to UK coastal zones also exists in inventories falling into Frazier's (1997) other categories: type 2 international inventories of specific wetland types, here for example European-scale inventories of individual coastal habitats (Dijkema 1984; Doody 1992); and type 3 inventories of wetlands of special importance for conservation, notably the Ramsar Directory of Wetlands of

International Importance (Jones 1993; Frazier 1996). Only national-scale sources are summarised here: there are many other detailed compilations at more local and/or site scales, many of them using electronic map-based Geographical Information Systems at various levels of sophistication and success.

The range of national inventories and directories and their coverage is summarised in Table 1. Most of the inventories and directories listed in Table 1 have been developed by UK statutory environmental agencies and non-governmental bodies, but increasingly the inventories have become developed jointly between statutory environmental and conservation agencies and those needing to use the information, *e.g.* industry, local government planners and coastal managers.

Some inventories and directories have involved extensive baseline research and survey, and/or comprehensive repackaging of such baseline information. Others, such as *An inventory of UK estuaries* (Buck 1993-1997) have, however, been compiled as summaries from simple available information sources (Figure 1), offering a useful model for application in many places, including where information is scarce. This style of compilation is also useful for focusing attention on gaps in baseline knowledge.

Taken together, these inventories and directories provide much of the summarised and contextual information needed as a basis for developing

 Table 1. A summary of compiled national information sources available for managing the UK's coastal zone.

Title	Geographical coverage ¹	Topic coverage	Published sources		
The saltmarsh survey of Great Britain: an of British inventory saltmarshes	Great Britain	saltmarsh vegetation (grouped communities) (sites >0.5 ha)	Burd 1989		
Sand dune survey of Great Britain	Scotland (sample survey only - survey of other sites in prep.), England, Wales	vegetation (National Vegetation Classification communities) on wind-blown sand	Dargie 1993, 1994		
Vegetated shingle structures of Great Britain	England, Scotland, Wales	vegetation classification (National Vegetation Classification communities), vegetation distribution (part survey only on some large sites)	Sneddon & Randall 1993, 1994		
Coastal Resources Database	Great Britain (by county)	shoreline length, intertidal area, coastal habitats	Coastal Conservation Branch 1993		
Marine Nature Conservation Review (MNCR)	GB intertidal and subtidal inshore waters	benthic community classification, national and site-by-site community distribution	Hiscock 1996; Hill et al. 1996		
Atlas of the seas around the British Isles	UK territorial waters	marine geology & geomorphology; oceanography; fish & fisheries; marine biology, birds & mammals	Lee & Ramster 1981		
UKDMAP Second edition	UK territorial waters	marine geology & geomorphology; marine protected areas; oceanography; birds & mammals fish & fisheries; marine biology,	BODC 1992		
British coasts and seas: coastal and marine UKDMAP datasets	Great Britain	estuaries, coastal habitats, marine survey sites, coastal Sites of Special Scientific Interest	Barne <i>et al</i> . 1994		
Nature Conservation and estuaries in Great Britain	Great Britain estuaries	location, classification & size, habitats, species (invertebrates, marine communities, fish, amphibians & reptiles, birds, mammals), conservation status, human activities, land-claim, sea-level chang	Davidson <i>et al.</i> 1991		
An inventory of UK estuaries	UK estuaries (site-by-site)	as Davidson et al. (1991)	Buck 1993-1997; Davidson & Buck 1997		
RSPB estuaries inventory	57 major UK estuaries	mapped locations of human activities, waterbird distributions	Peck 1993		
Directory of the North Sea Coastal Margin	North Sea coasts of Scotland & England (E. of 50°W)	marine & coastal habitats, geology & geomorphology, fisheries, rare & protected species, other sources of information, site protection, human activities	Doody et al. 1993		
Coasts and seas of the United Kingdom (Coastal Directories)	United Kingdom (in 17 coastal regions)	geology & physical environment, terrestrial coastal habitats, marine & estuarine habitats, important species (15 categories), history & archaeology, coastal protected sites land use, infrastructure and coastal defence, human activities, coastal management. (Each topic includes information sources and quality, and contact names and addresses.)	(16 volumes)		
Coasts and seas of the United Kingdom. Electronic version (Coastal Directories)	United Kingdom (in 17 coastal regions)	as above	Barne et al. 1996-1998		
UK Coastal Management Directory	UK	Contact points: local authorities, national government, agencies and NGOs	Bridge & Gee 1997		

¹ A particular feature of information in the UK is that, owing to national administrative boundaries and the geographical responsibilities of government environment agencies, most information sources cover Great Britain (England, Scotland and Wales), the United Kingdom (Great Britain and Northern Ireland), or Ireland (the Republic of Ireland and Northern Ireland) rather than the whole British Isles.

Conservation status

															= designated			= proposed	
	NCR	GCR	SSSI (B)	SSSI (G)	SSSI (M)	NNR	LNR	Ramsar	SPA	AONB	CWT	RSPB	ESA	NP	WWT	NT	NSA	HC	Other
	•	•			•	•		•											•
No.	1	1			2	1		1	1										1

Much of the estuary lies within the Sands of Forvie and Ythan Estuary Site of Special Scientific Interest (976 ha). which was designated because of its biological and geomorphological interest. Much of the estuary is a National Nature Reserve and is a Nature Conservation Review site, and contains the Forvie Geological Conservation Review site. Foveran Links SSSI (203 ha) lies to the south-west of the estuary.

The estuary also lies within the Ythan Estuary, Sands of Forvie and Meikle Loch proposed Ramsar site and Special Protection Area. The Sands of Forvie is a European Biogenetic Reserve because of its lowland heath interest.

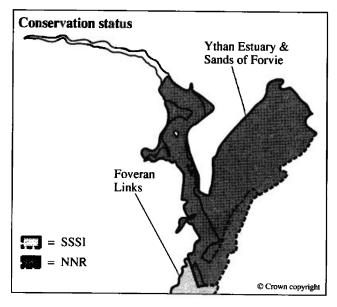
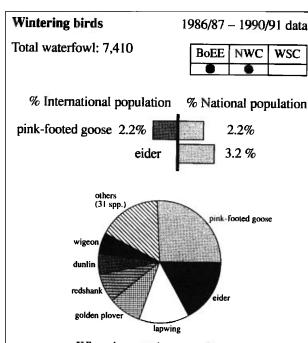


Figure 1. Two examples, from the Ythan Estuary in northeast Scotland, of the presentation of information in An inventory of UK estuaries (from Buck 1993-1997). Reproduced by kind permission of the JNCC.

sustainable coastal management in the UK, and importantly also direct users to further sources of advice and information. Information is also increasingly becoming collected and presented in electronic formats rather than books that can rapidly become out of date. This has great potential for improved handling of large quantities of data and information, for widespread rapid dissemination and for ease of updating, but there remain major limitations to the presentation of electronic summaries, notably their accessibility for all who need to use them. Additionally it is often difficult to find the necessary resources to undertake such updating.



Wintering species assemblage (Spp. forming >5% assemblage shown separately)

Breeding birds: there are a number of seabird colonies within the estuary and the Sands of Forvie, including large colonies of sandwich tern and herring gull, moderate-sized colonies of black-headed gull, common tern, little tern, fulmar and kittiwake and small numbers of arctic tern, lesser black-backed gull, shag, great black-backed gull and razorbill. The estuary also supports the largest breeding concentration of eider in Britain, together with shelduck and small numbers of breeding ringed plover.

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