

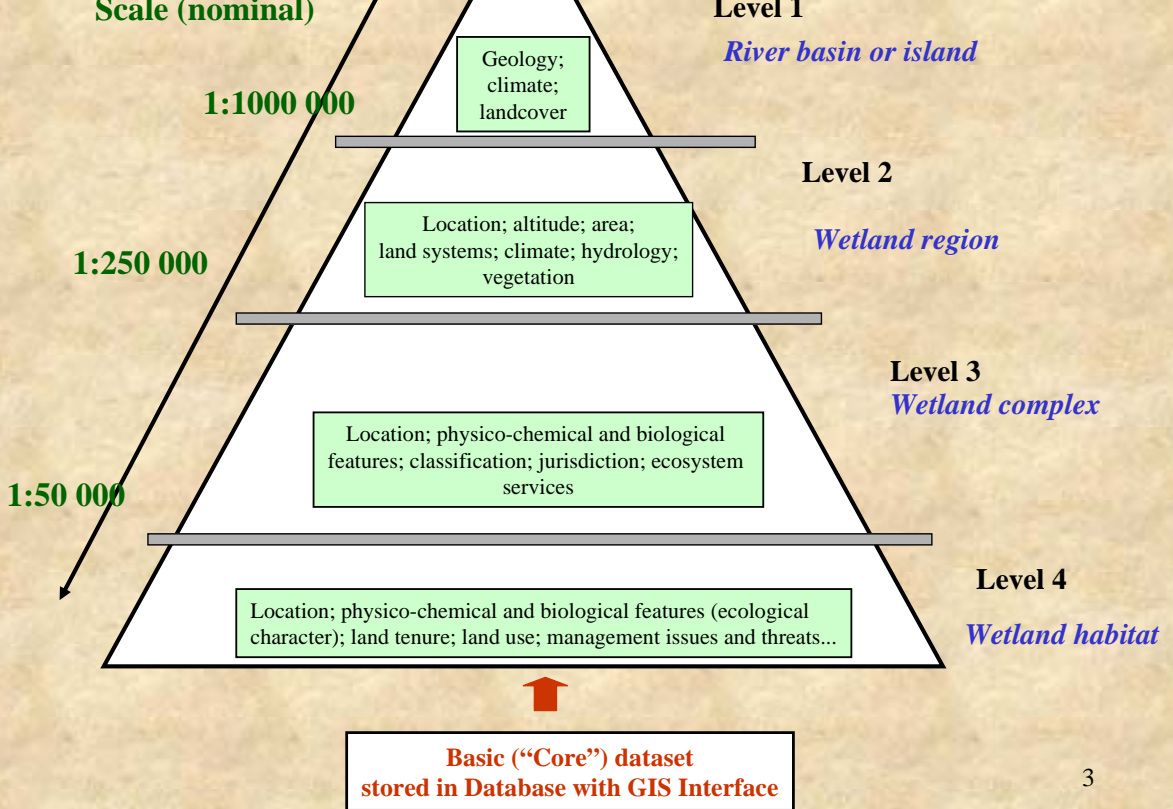
Kyoto and Carbon Initiative - the Ramsar / Wetlands International perspective

*(the thoughts of Max Finlayson, as interpreted by
John Lowry)*



Broad Requirements ...

- Guideline(s) for delineating wetlands
 - (specifically, information on extent of hydrological variation in wetland area + biophysical features in and around wetlands eg vegetation, landforms/terrain etc)
 - Means of detecting change in wetlands at different scales, for different purposes



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Ramsar / Wetlands International (WI) requirements

- Monitoring of human-induced and natural disturbances in global wetlands
- Mapping of the spatial and temporal characteristics of seasonal inundation
- Support to a global wetlands inventory, including information on the status and health of wetlands.

International (WI) requirements...

- to determine / assess ecological character of wetlands.
- assess the utility of remote sensing sensors and platforms for developing guidelines.

Recognition that remote sensing provides the means

- *for delineating and mapping wetlands*
- *to monitor wetlands / detect change*
- *To map / delineate the services they provide eg timber, fisheries*

Requirements for Ramsar / WI ...

- Identify the most appropriate platform and sensor to address these requirements
 - Associated issues include cost, availability, temporal range.
- Products and terminology from selected platform/ sensor must be user-friendly → able to be understood and applied by wetland managers

Who needs this information ?

- Ramsar STRP : Max Finlayson (chair)
Max.Finlayson@ea.gov.au and Doug Taylor
Douglas.Taylor@wetlands.org

When do they need this information ?

- Input sought within the next 12 months

The challenge ...

- To develop practical demonstrations of remote sensing for Ramsar to characterise wetlands using current and archival materials
- Counter perception that remotely sensed imagery is (too) expensive, inaccessible, and suffers from limitations such as poor resolution
- Case studies need to recognise different capabilities / capacities of on ground teams

Climate change

- Requirement to work through political /bureaucratic processes → demonstrate the importance of wetlands to climate change studies
 - Role wetlands play – methane emission; carbon sinks/exchange
 - Significance in terms of loss of biodiversity
 - Impact of climate change on economic activities associated with wetlands

Note that Ramsar regards wetlands as extending from the reef, to arid zone lakes, to tundra, to high-altitude bogs and lakes.

Key issue(s)

- Need to be able to demonstrate status and health of wetlands → feeds back into goals of Ramsar and WI.
- WI and Ramsar keen to promote national wetland inventories- appropriate to the scale and needs of countries → remote sensing could support in multiple ways

- Wetlands International able to identify suitable study sites.
 - eg collaborative project on West Alligator River in Kakadu NP by eriss, R Lucas and T Milne (mangrove monitoring and detection using aerial photographs → Potential to apply other sensors /platforms)
 - Project possible through good ground support and remote sensing knowledge

Free plug for *eriss*...

- *eriss* is keen to be involved → through direct involvement in WI, can help identify / find study sites → strengthen collaboration
- WI has specialist group on wetland inventory and monitoring – headed by Peter Bayliss from *eriss*.

International:

- Map(s) of wetlands of world covering wetland habitats of interest → produced at appropriate scale, aggregated from multiple compatible sources. *Some useful data exists - but does not cover all wetland features – eg linear features such as rivers, coastal margins often excluded or poorly mapped.*
- Need information on what remote sensing platforms and sensors can provide → helps determine what is actually required.

Products on ‘WI / Ramsar ‘wishlist’

- Temporal maps of fires affecting wetlands
- Temporal data on extent of weed invasion
- “ “ on agricultural activities / landuse eg rice
- “ “ on feral animal damage
- “ “ on changes to tree density
- Inventory of peatlands (particularly tropical peatlands) → climate change studies
- Status /health of mangroves
- Monitoring of minesites and rehabilitation activities