

'Red List' for ecosystems highlights global conservation needs

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Leading Australian environmental scientists have helped to establish the first global list of threatened ecosystems at an international conservation summit.

This momentous advance in global conservation – creation of a '[Red List](#)' for whole [ecosystems](#) rather than just threatened species –has been adopted by the 2012 IUCN World Conservation Congress currently being held at Jeju island, South Korea, (September 6-15).

The Red List of Ecosystems will provide a new way forward in global efforts to save and protect the world's dwindling wildlife and the environment that supports them, says conservation scientist Dr Emily Nicholson of the ARC Centre of Excellence for [Environmental Decisions](#) (CEED) and University of Melbourne's School of Botany.

For many years the focus of [global conservation](#) efforts has been on individual species – but as of 2011, fewer than 62,000 out of 1.7 million known species had been assessed.

"The Red List of Threatened Species has been a great success in focussing attention on the needs of individual species - but it will be long before we can cover every form of life, one by one. We're hoping that by establishing sensible global rules for assessing the status and resilience of whole ecosystems we can better protect both them and the individual species they contain," she says.

In many countries today, she says, an ecosystem has to be 'just about bugged' to qualify for protection: she hopes that having a clear, pragmatic set of global standards, people and governments will be encouraged to conserve entire ecosystems, natural communities and habitats.

Australia currently has a variety of national and regional listings of endangered ecosystems, and has been among the world leaders, with Europe, Venezuela and South Africa, in defining how to go about protecting them in a practical way.

"Our appreciation of the need to protect whole ecosystems originated in the 1980s and matured with the Regional Forest Agreements process, when it was clearly understood we had to attend to the forest as well as the trees, so to speak," Dr Nicholson says.

Since that time an international group of scientists, led by Dr Jon Paul Rodriguez of IUCN and Prof David Keith of the University of NSW, have worked to set up a global Red List of threatened Ecosystems. Earlier this year CEED hosted a workshop of leading global players to hammer out details of the criteria for assessing ecosystem threat, and a plan for the IUCN meeting.

Dr Nicholson says that an ecosystem Red List will operate in a similar manner to the species Red List, grading environments into critically endangered, endangered, vulnerable, near threatened and least concern (for ecosystems that are unambiguously safe).

The main criteria for the new official standard for assessing ecosystem risk at global, regional and national level will include:

- The percentage of the original area that has been lost (for

example, 99% of Victoria's grasslands have gone)

- Whether the ecosystem is restricted to a small geographic area, and therefore faces destruction by localised threats (e.g. like the Coorong in South Australia)
- The rate, extent and severity of degradation to the physical environment (ie. how much damage it may have sustained from impacts like salinity, decline of river flows, or bottom trawling)
- Major changes to the biological functions of ecosystems, including the species that are in it and how they interact (e.g. like the big declines in water birds along the Murray-Darling basin and fishing taking out all the large fish within marine ecosystems and changing the dynamics of the system that is left).

"Australia is already well advanced in establishing ways to protect its ecosystems. We have established a pragmatic approach that works pretty well on the ground."

Having a Global Red List and consistent set of rules will be a stimulus for us to try even harder as well as sharing our experience with other countries about how it can be done, she says.

It will also lead, in time, to the mapping and prioritisation of the world's most imperilled ecosystems – as it has for plant and animal [species](#). This would underpin land use planning in countries globally.

The 2012 IUCN World Conservation Congress is exploring ways to boost the resilience and robustness of nature in the face of increasing human pressures, to achieve both healthy natural systems and healthy people and their communities. Details at: iucnworldconservationcongress.org/

Provided by ARC CoE for Environmental Decisions (CEED)

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