COUNCIL OF EUROPE CONSEIL DE L'EUROPE

Strasbourg, 27 June 2012 **T-PVS/PA (2012) 12**
[pa12e_2012.doc]

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

Group of Experts on Protected Areas and Ecological Networks

4th meeting
18-19 September 2012
Council of Europe, Strasbourg, France

Draft Action Plan on the future strategic development of the Pan-European Ecological Network (PEEN) for the period 2012-2020

Document established
by Mr Lawrence Jones-Walters & Kristijan Civic
ECNC-European Centre for Nature Conservation

Introduction

The extent of landscape fragmentation in many parts of Europe is already considerable. Proliferating urban development and transport infrastructure will cause a significant increase in the problems. This increase is likely to be significant, not least because many of the ecological effects of the current levels of fragmentation have yet to manifest fully. In short, as stated in a recent European Environment Report (EEA, 2011): "…the current trend of steadily increasing landscape fragmentation contradicts the principle of sustainability"; the same report goes on to say that: "There is a clear and urgent need for action".

The PEEN project was successful in reaching its goal to promote the idea of a pan-European vision of biodiversity conservation through a European ecological network (Jongman *et al*. 2011). It is a genuine framework for strategic cooperation and a useful tool for international cooperation, providing all European countries with a single and flexible monitoring and coordination mechanism (CoE, 2011).

Not only this, the translation of the PEEN principles into the development of national ecological networks has also made some progress. However, it is also clear that in the present economic situation countries are pursuing national priorities that are driven by social and economic factors, and that this is at the expense of the environment and international and cross boundary cooperation. European ecological corridors are not being developed and there is a clear issue around what institution or coordination mechanism should presently be responsible for driving this issue forwards.

Developing ecological connectivity is one of the recommendations of the CBD Conference of the Parties in Nagoya (Japan) in October 2010; and green infrastructure has emerged as a priority within the Communication from the European Commission (2011): Our life insurance, our natural capital: an EU biodiversity strategy to 2020. Perhaps a solution lies within the implementation of these instruments; however this means that the relationship between ecological networks and green infrastructure needs to be articulated; including in relation to implementation, socio-economic aspects and stakeholder participation. Linked to this, there is also a need to realise in practice the existing and recognized potential for spatial planning to act as a mechanism for cross-sectoral integration, communication and delivery of ecological networks.

The contribution of ecological networks to the provision of ecosystem services and mitigation and adaptation in relation to the effects of climate change are important areas for research and subsequent articulation into policy. Codifying the economic benefits of ecological networks and making them explicit through interdisciplinary research and integrated long-term research on the social, economic and ecological mechanisms and maintain biodiversity and the ecological services it provides is also a clear necessity.

Further work can be carried out in relation to the full translation of the protected area networks into functional ecological networks, both at the level of policy and practice; in addition information about how to create actual ecological networks, particularly where this has involved stakeholder and public participation needs to be researched and made widely available. Knowledge transfer is needed as well as new knowledge especially in relation to the impact of changing environmental and land use conditions on species and habitats in the wider countryside.

Leadership has already been mentioned in the context of who has responsibility for ecological networks at European, regional, national and local levels. Linked to this is the issue of communication; specifically to politicians and decision makers within key sectors (such as spatial planning, transport, industry, etc) but more widely to researchers, conservation practitioners and the interested public. Beyond this lies a requirement for active engagement with emerging policy agendas (which again requires a level of leadership and strategic direction).

The way forward

Ecological networks from pan-European, other regional, national and local levels, therefore make a major contribution to the overall effort to protect, maintain and enhance biodiversity; the concept has gained significant political support over the last couple of decades. A platform now exists for: increased integration of ecological networks into the cross-sectoral policy agenda; research into their contribution to ecosystem services and mitigation and adaption for climate change; and an increase in the availability of information about practical delivery.

The Council of Europe, based on their leading role and mandate in relation to the Pan-European Ecological Network (PEEN) has an opportunity to continue to drive forwards the agenda. There is a high potential for linking the work to the developing European Commission Green Infrastructure Strategy but to extend the outreach beyond the EU. The overall vision might therefore be to seek to achieve a truly functional ecological network across the European Continent (building on the Natura 2000 and Emerald networks) interconnected into a well-developed continental green infrastructure.

The proposed target and objectives:

Target	To stop the fragmentation of the environment in Europe (species and natural habitats)
Objectives	To prevent from new fragmentation (planning) To reduce the existing fragmentation (restoration)

Elaboration of Potential Actions

Thematic Programme	**Activities**	**Specific Action**	**Resources**	**Timeframe**
Governance (international and national)	The basic underlying framework for the establishment of ecological networks at international and national level has been delivered (e.g. through CBD, PEBLDS and the development of the Pan-European Ecological Network - PEEN). However,this framework clearly needs to be refreshed in the context of the CBD, European Union and PEBLDS biodiversity strategies, all of which have been revised in order to meet the challenges of the new decade up to 2020. To strengthen the	A concise review with recommendations for whether and how this overarching framework should be refreshed is therefore recommended. To adopt clear measurable political objectives and take appropriate decisions for stopping the fragmentation spiral, at all levels (international, national and local) To set up a Pan-European science-policy platform on landscape and biodiversity that would assist and advise the	xx	

	cooperation between all relevant international organizations and reduce the fragmentation of the international institutional landscape To work further on reducing fragmentation in international environmental law	governments in determining priorities for action, favouring the long term conservation of environment in the region		
National, regional (e.g. subnational) and local level establishment of functional ecological networks.	Much has been written about the implementation of national and local level ecological networks. There are now several examples of good or best practice (e.g. FYR Macedonia, which has already been the subject of presentation and discussion at the Emerald and PEEN expert group meetings in the past). The key issue here is in relation to raising the awareness of key decision makers at national level (and subsequently at local level - but this may be achieved through offering training courses; see below). Encouragement should be provided for the development of national level ecological networks, ensuring that they have continuity across national boundaries, together with examples of how this can be done, where practical experience of delivery can be found and the location of potential sources of funding (although it should be stressed that	Thus, a leaflet should be prepared, similar to that proposed for the stakeholders below (e.g. six pages, gatefold A4) for wide distribution. Targeted at government decision-makers within key ministries at national level (but also accessible to politicians and planners at subnational level). The leaflet should set out the benefits of (re-) creating and maintaining ecological networks with protected areas (e.g. Emerald and Natura 2000) at their core, making the link to green infrastructure and emphasised the social and economic benefits of contributing to the delivery of multifunctional landscapes for now and in the future.		

	this is the national level responsibility that shouldn't necessarily require funding for its implementation - although it is clear that this will help).			
Integration of ecological networks approach with principles of green infrastructure at the delivery level (e.g. subnational and local).	The concept of green infrastructure represents strong emerging policy (e.g. with direct reference in, for example, the European Commission 2020 Biodiversity Strategy) that provides a potential for taking forwards the development of ecological networks. Practical experience shows that green infrastructure can be integrated within the idea of ecological networks through the planning process that takes place at local level in relation to the delivery, by stakeholders, of multifunctional landscapes that contain an appropriate level of ecological connectivity.	This approach is very new but guidelines for its application already exist (but in relatively simple format). They can be linked directly to the proposal for the training of key actors that is outlined below. The key principles could be included within the leaflet proposed for national and local level decision makers (above). Alternatively a separate guidance note could be prepared that deals specifically with the subject area.		
Training of key actors (e.g. regional and local authority officials and NGOs)	Training material has already been prepared for (for example) the involvement of stakeholders in the delivery of ecological networks in particular at local level and the integration of green infrastructure into ecological networks and their subsequent delivery. Consolidation of such material into a course or courses that			

	might be run by improved organisations should be a relatively straightforward process. In order to achieve significant uptake of the training it could be endorsed/sponsored by the Council of Europe (and potentially also the European Commission). As well as advertising it on websites, etc it is proposed that a bursary be offered for the attendance of selected individuals.			
Cross sectoral awareness raising	Preparation of a leaflet similar to that proposed for the national level decision makers above (e.g. six pages, gatefold A4) for wide distribution. Targeted at decision-makers in key sectors at national and subnational level. In particular: spatial planning, agriculture, transport, energy, housing and water management; but should be prepared in a format that is accessible to other stakeholders such as hunting, fishing, etc. The leaflet should set out the benefits of integrating the maintenance and (re-) establishment of ecological networks in relation to their activities; in particular it should make the link to green infrastructure and emphasised the social and economic benefits of contributing to the delivery of multifunctional	Preparation of a leaflet similar to that proposed for the national level decision makers above (e.g. six pages, gatefold A4) for wide distribution.		

	landscapes for now and in the future.			
Knowledge/research	A relatively detailed paper was prepared for the Montpelier conference "Biodiversity & Agricultures: Today's Challenges, Tomorrow's Research for More Sustainable Farming" on ecological connectivity held under the auspices of the French presidency of the European Union in November 2008. This paper was prepared using stakeholder involvement and expert input and therefore represented a considered and robust opinion on the priorities for future research on ecological networks at the European level (including reference to what is now known as green infrastructure) (Jones-Walters and Jongman, 2008). The full list of the key research priorities is available in Annex to this document.	The experts who prepared this paper should be invited to review it in the context of recent developments and to prepare a new set of recommendations for the targeting and funding of key research priorities. Favourite could then be circulated to key potential funders and displayed on relevant websites (e.g. Council of Europe, etc).		

Conclusion

The Group of Experts is invited to consider the above list of proposed activities and related actions in the context of recent developments in national and international biodiversity policy. Priority actions should be identified (which can then be costed and timeframes added).

Annex 1: Ecological Networks - Key Research Priorities

Potential research priorities related to ecological networks should include the following:

Empirical knowledge & experimental tests:

- Develop a set of ecological indicators (species, communities) reflecting different states of landscapes (varying in acceptability for nature conservation) and suggest related monitoring schemes/methods that can be used across Europe
- Which landscape configurations allow effective dispersal, by which organisms? Using long term, landscape scale research and monitoring such as in LTER sites, in association with field experimental designs comparing new situations (connected) and existing landscapes (cf. Mader); Use these long term experiments to evaluate effectiveness of connectivity and their consequences for ecological networks.
- Develop a research line on assessing the economic and social values of ecosystem goods and services in agricultural landscapes
- What social processes determine character and the levels of stakeholder involvement, the impact of cultural backgrounds, the role of NGOs, of political organisation? Comparative studies between different social and cultural environments can make us understand the success and failure of top-down planning, bottom-up processes and the acceptance of networks.
- What are the methods that make it possible to monitor and assess changes in land use matrix, land cover as well as in the intervening natural structures on their impact for biodiversity?
- How do landscape configuration and land use and management techniques interfere? The suite of techniques used to grow crops influence biodiversity and many species live in fields. Therefore, protecting “green veins” out of the productive space is not sufficient.
- Which species of conservation interest would benefit from ecological network measures?
- What are the relative costs and benefits arising from ecological network implementation?
- How might we select protected areas in the future to accommodate environmental change?

Application of scientific knowledge:

- How to use communication science in the awareness, development and implementation process
- How to integrate bottom-up and top-down approaches
- How can scientific knowledge be embedded in decision making processes
- How can trans-disciplinary methods be used to produce more robust outcomes
- How does this measure benefit biodiversity…..magic bullet or poison chalice?

Facilities:

- Development of Communities of Practice
- Need for education and recruitment of ecological researchers
- Use of LTER sites for research on population dynamics as related to land use and policy changes. Too often the diverse disciplines study a subject in different areas and connections are difficult to build between results. Among the numerous research networks LTER networks are the only ones that are site based.
- Building of bridges between science and practice (policy making and landscape management)
- Explicit identification of the elements of the conservation toolkit
- Application of ecological triage – leave it, manage it, move it….

- Adoption of adaptive management paradigm – see North America
- Pressure, state, response models…

Policy knowledge:

- Policy science research on the organization of biodiversity conservation of public institutions and stakeholder interaction
- Cross-sectoral and multi-scale analysis of mechanisms and messages, e.g. what are the key messages for different sectors and what works best at different scales in different countries.
- Apply SWOT analysis to DG Environment policies in order to realize what for ecological networks?

What works where – best practice from different countries.

References

CoE (2011). *3rd meeting Report*. T-PVS/PA (2011) 13. Convention on the conservation of European wildlife and natural habitats, Group of Experts on Protected Areas and Ecological Networks.

EEA (2011). Landscape fragmentation in Europe. EEA Report No 2/2011, Joint EEA-FOEN report. Available at: http://www.eea.europa.eu/publications/landscape-fragmentation-in-europe/at_download/file

Jones-Walters, L. and Jongman, R.H.G. (2008). *Recommendations from the International Conference: Ecological Networks: From Spatial Strategy to Implementation*. Oisterwijk (the Netherlands), 1 and 2 October 2008. Available at: http://www.ecnc.org/download/normal/ProjectManagement/87/Recommendations%20from%20the%20Oisterwijk%20Workshop%20on%20Ecological%20Networks.pdf

Jongman R.H.G.; Bouwma I.M.; Griffioen A.; Jones-Walters L. and Van Doorn A.M. (2011). *The Pan European Ecological Network: PEEN*. Landscape Ecology 26: 311-326.