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The importance of green infrastructure and ecological networks in building sustainable economies

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Ecosystems provide essential services for our economy and society

- Sustainable economies depend on maintaining:
 - **Provisioning services** – e.g. food and fresh water
 - **Regulating services** – e.g. climate and water regulation
 - **Cultural services** – e.g. recreation and tourism
- Economic value and impact of these services is huge
- But many services continue to decline (UKNEA) threatening both economic prosperity and well-being
- Biodiversity loss continues – EU 2010 target not met
- Growth and jobs are important priorities at UK and EU level, financial resources are scarce
- Economic arguments are now prominent in natural environment policy development and debate

Economic benefits of ecosystems are emphasised in recent policy developments

- UK
 - Scotland – Scottish Government Economic Strategy emphasises natural environment as national asset vital to sustainable growth
 - England – Natural Environment White Paper emphasised *Growing a Green Economy* and established Natural Capital Committee, Ecosystem Markets Taskforce, natural capital accounting, Green Economy Roadmap
- EU Biodiversity Strategy
 - Valuing nature will contribute to strategic objectives for a more resource efficient climate resilient economy, leadership in research and innovation, new jobs, skills and business opportunities
 - Committed EU to establishing a Green Infrastructure Strategy
- Internationally – TEEB highlighted economic arguments – has led to numerous national initiatives

Recent studies highlight the importance of green infrastructure and ecological networks

- Benefits of the Natura 2000 network (DG Environment)
 - Network provides estimated benefits of €200-300 billion per year (2-3% of EU GDP), contributing to delivery of key ecosystem services
 - <http://www.ieep.eu/publications/2012/06/estimating-the-overall-economic-value-of-the-benefits-provided-by-the-natura-2000-network>
- Design, Implementation and Cost Elements of Green Infrastructure (DG Environment)
 - Green infrastructure projects around the EU have been shown to deliver multiple economic, environmental and social benefits. Benefits often outweigh costs (e.g. English National Forest).
 - GI may provide a more cost effective solution than grey infrastructure and deliver multiple benefits, and/ or complement development projects
 - http://ec.europa.eu/environment/enveco/biodiversity/pdf/GI_DICE_FinalReport.pdf

Recent studies highlight the importance of green infrastructure and ecological networks (cont.)

- EU Biodiversity Objectives and the Labour Market (DG Env)
 - Delivering EU biodiversity strategy could create 200,000 new jobs and will impact on many millions more. Providing the right skills across sectors will be crucial to meeting targets.
 - http://ec.europa.eu/environment/pubs/pdf/biodiversity/Biodiversity%20and%20Jobs_final%20report.pdf
- Benefits of Sites of Special Scientific Interest in England and Wales (Defra/ Welsh Assembly)
 - The public values the services of SSSIs at £956m p.a. (9x current expenditure) and would pay a further £769m p.a. to achieve favourable condition for all sites
 - Largest values are for cultural services, climate and water regulation
 - <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17005&FromSearch=Y&Publisher=1&SearchText=0768&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>

Recent studies highlight the importance of green infrastructure and ecological networks (cont.)

- Monitoring and Evaluation Framework for Nature Improvement Areas (Defra/ Natural England)
 - NIAs aim to enhance coherence of England's ecological networks; will enhance delivery of ecosystem services, engage local people and communities, and support economic activity locally.
 - M&E framework examines impact on biodiversity, ecosystem services, social impacts & well-being, economic values and impacts
 - http://www.naturalengland.org.uk/Images/monitor-evaluation-framework_tcm6-33143.pdf

Recent studies highlight the importance of green infrastructure and ecological networks (cont.)

- Opportunities for UK Business that Value Nature's Services (Defra/ EMTF)
 - Business led Task Force will report to Government next month on opportunities that natural environment provides for UK business
 - Review of UKNEA highlighted range of opportunities in product markets; offsetting; PES; environmental technologies; tourism/ cultural services; financial and legal services; ecosystem knowledge economy; corporate ecosystem initiatives
 - Subsequent work has studied opportunities under four themes – carbon and nature markets, natural capital (resource security and resilience), the food chain and the water cycle. Together these have a market potential of several billion £ p.a.
 - <http://www.defra.gov.uk/ecosystem-markets/>

Green infrastructure and ecological networks are important for building sustainable economies

- Ecological networks and green infrastructure deliver essential services that underpin economic prosperity and well-being
- Evidence of economic benefits and values is increasing but there are many gaps. Ecosystem services are often site specific and difficult to measure.
- Economic arguments are increasingly being advanced and have never been more important. BUT while the economic arguments are increasingly accepted, continuing evidence of ecosystem decline suggests there are still perceived conflicts
- More needs to be done to build the evidence base needed for a truly sustainable economy

