

Introducing the initiative “Charter of Rome on Natural and Cultural Capital”

Key principles

- **Natural resources, biodiversity and ecosystems are our Natural Capital.** They need to be protected, valued, and restored for biodiversity's intrinsic value and for their essential contribution to human well-being and economic and social prosperity.
- **People, groups and local actors, with their diversity of knowledge, capacities and practices, and human activities shaping the land are the Cultural Capital.** Such individuals and groups, private and public, contribute to provide and enhance ecosystem services supply with positive actions and practices within their respective socio-cultural contexts.
- **Knowledge** includes traditional and scientific dimensions; **Capacities** is the way knowledge is retained, increased, elaborated and developed; **Practices and human activities** produce tangible and intangible flows of goods and services.
- **Nature and people, groups and local actors are intimately interrelated and interacting.** With good knowledge, sufficient capacities and appropriate practices, we can better protect and manage nature and benefit from a wide range of ecosystem services.
- **Better knowledge of our Natural Capital supports our Cultural Capital to protect biodiversity, secure resilience and sustainably manage natural resources.**
- **Understanding the processes and structures of Cultural Capital is crucial to enhance Natural Capital.**
- **Investing in healthy and resilient ecosystems delivers direct and indirect benefits, that are vital societal needs,** such as food, freshwater, clean air, recreation and tourism, climate mitigation and adaptation, and protection against erosion and floods.
- **Improve the synergies and connectivity between natural areas, green infrastructure, urban and rural areas.** Species, habitats, ecosystems, land units and infrastructures are part of a multifunctional interconnected system of natural and semi-natural areas.
- **Enhancing and promoting biodiversity, natural resources and their values require improved communication, mainstreaming and policy coherence in a wide societal and political context.**
- **Strengthening implementation of the EU nature legislation and the contribution of Natura 2000 network** is essential for the conservation and restoration of biodiversity, and thus the natural and cultural capital.

Background

The initiative of the Charter of Rome aims at strengthening the relevance of nature and biodiversity policy providing socio-economic and cultural inputs to the definition of ecosystem services as a way to place biodiversity in the wider debate of EU 2020 priorities and goals, and beyond.

Starting from the EU cornerstones of Natura 2000 and the EU Biodiversity Strategy, the Charter of Rome intends to promote a better conservation of the natural and cultural diversity, promoting collaborations on goods and services provided by ecosystems with their societal implications (ex. climate mitigation, clean water, clean air, protection against floods and erosion).

The initiative delivers a message on the on-going work on Target 2 of the EU Biodiversity Strategy to 2020: *“by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems”*; it takes stock of the work done by the Working Group MAES, the High-Level Conference on the MAES, held on 22 May 2014 in Brussels and its concluding remark on *“the fact that natural capital and human well-being are intrinsically intertwined needs to be better understood and communicated.”*

Following the constructive discussion at the CGBN in September 2014, the Conference “The Natural and Cultural Capital” and the Nature Directors Meeting in November 2014 aim to finalise the Charter of Rome, contributing to strengthen the synergies between Natural and Cultural Capital and to develop sectoral policies that integrate ecosystems and their services as recognised in the Council Conclusions of 28 October 2014 on “Greening the European Semester and the Europe 2020 Strategy”.

Context

The EU Biodiversity Strategy to 2020 (COM(2011)244) is directly related to the international commitments of the CBD and to a number of EU policies that include the social, economic and cultural perspectives.

Concerning the synergies between Natural and Cultural Capital the main CBD decisions to take into account, among others, are the following:

1. X/20, 2010 on Cooperation with other Conventions and international organizations and initiatives, where the Conference of Parties (COP) *“welcomes the joint programme of work between UNESCO and the Secretariat of the Convention on Biological Diversity, as useful coordination mechanism to advance the implementation of the Convention and deepen global awareness of the inter-linkages between cultural and biological diversity”*;
2. X/32, 2010 on Sustainable use of biodiversity, where the COP invites parties to *“recognize and support the contribution of landscape-level initiatives such as the UNESCO Man and Biosphere Programme, ... and other similar initiatives as potentially useful tools to better understand and support human-influenced natural environments for the benefit of biodiversity and human well-being”*;
3. XI/6, 2012. Cooperation with other conventions, international organizations, and initiatives, where the COP *“Welcomes further steps to explore, document and raise awareness of the value added by incorporating links between biological and cultural diversity into the implementation of the Convention on Biological Diversity”*.

The two Conventions on Biological Diversity and on Cultural Heritage clarify some points:

- Convention on Biological Diversity, 1992. *“Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”*.
- Convention for the Safeguarding of Intangible Cultural Heritage, 2003. *“The intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. The “intangible cultural heritage”, is manifested inter alia in ... (d) knowledge and practices concerning nature”*.

Concerning the EU biodiversity-related policies, the context of the message of the Charter of Rome builds on and refers to, among others, the following measures and major initiatives:

1. EU Strategy 2020 on smart, sustainable and inclusive growth is a key step towards the establishment of a renewed European governance, centred on the needs of society and of the whole planet, as well as to the close links between economic, social and environmental policies, including jobs (COM/2010/2020).
2. EU Biodiversity Strategy to 2020 (COM(2011)244) with references to the maintenance and enhancement of ecosystems and their services highlights its contribution, among other, to the EU's sustainable growth objectives and to mitigating and adapting to climate change, while promoting economic, territorial and social cohesion and safeguarding the EU's cultural heritage.
3. Birds Directive (2009/147/EC): its principal aim (Article 2) is to ensure that *“Member States shall take the requisite measures to maintain the population of the species ... at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level”*.
4. Habitat Directive (92/43/EEC) with its preamble *“Whereas, the main aim of this Directive being to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements, this Directive makes a contribution to the general objective of sustainable development; whereas the maintenance of such biodiversity may in certain cases require the maintenance, or indeed the encouragement, of human activities”*.
5. Green Infrastructure Strategy (COM 2013/249) targeting the main policy areas: regional, cohesion, climate change and environmental policies, disaster risk management, health and consumer policies and the CAP. The GI Strategy will take steps to increase awareness among key stakeholder groups and to promote good practice.
6. European Regional Development Fund and specific provisions concerning the investment for growth and jobs goal (EU 1301/2013) states: 11. *“In order to maximise their contribution to the objective of supporting employment-friendly growth, activities supporting sustainable tourism, culture and natural heritage should be part of a territorial strategy for specific areas, including the conversion of declining industrial regions. ...”*; Article 5 Investment priorities, 6) preserving and protecting the environment and promoting resource efficiency by: *“... (c) conserving, protecting, promoting and developing natural and cultural heritage; (d) protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and green infrastructure. ...”*

7. Green Employment Initiative: Tapping into the job creation potential of the green economy (COM/2014/446) with reference to skills, education and training, green public procurement, promotion of entrepreneurship, increasing in data quality (including statistical definition of employment in the environmental sector) and promotion of social dialogue.
8. German-EU initiative on Economics of Ecosystems and Biodiversity TEEB, in its latest release of 2014, clearly points out that its model is not merely economic, but recognises that the values of Nature are “*a product of different views and perceptions on the relationship of humans and nature, and treats them as legitimate and valid in their respective socio-cultural contexts*”.
9. EU Business and Biodiversity Platform, set up by the Commission to bring together businesses, including SMEs, from six different sectors (agriculture, extractive industries, finance, food supply, forestry and tourism) to share their experiences and best practices.

Growth and Green Jobs have been the key issues of the informal meeting of Environment and Employment Ministers, promoted by the Italian EU Presidency in Milan, Italy, last 16 and 17 July.

Within this context, the Italian Presidency sets among its main environmental priorities: a) policies for green jobs and b) efficient use of resources.

Natural and Cultural Capital: for what and for whom?

Both Natural and Cultural capital contribute to our well-being and socio-economic prosperity, and both require our care.

This is exemplified by the EU Natura 2000 network, which represents a substantial Natural and Cultural capital to the EU. According to a recent study by the EU the “*benefits that flow from Natura 2000 are of the order of €200 and 300 billion/year*” (1).

All over Europe human influences on ecosystems have been constant and widespread throughout History. Consequently we can consider the Cultural Capital as the capacity of human populations to deal with their Natural Capital.

The distinction of Natural and Cultural Capital follows the other forms of capital identified in economics as stocks resources producing flows of goods and services. The stock is a set of resources identified at one specific time. The flow is an outcome, variable over an interval of time. Both Natural and Cultural Capital are means to achieve tangible and intangible outcomes.

The economist Robert Costanza takes into account the links between Natural and Cultural Capital since the early 90s (2). He identifies the Natural Capital with the stock of renewable and non-renewable resources provided by nature. The links are set within the “*human preferences, understanding, technology and cultural organization that all co-evolve to reflect broad ecological opportunities and constraints. Humans have a special place in the system because they are responsible for understanding their own role in the larger system and managing it for Sustainability*”.

As we use them in the Charter of Rome, the links refer first to the adaptive capacity of human populations to deal with and modify the natural environment (3). Other authors within environmental and cultural economics research (4) contributed to identify Cultural Capital as a related set of three main features of individual people and groups in each given and specific geographical and socio-economic context, as highlighted by TEEB (5):

1. Knowledge, including traditional and scientific dimensions;
2. Capacities as the way knowledge is retained, increased, elaborated and developed;
3. Practices and human activities producing tangible and intangible flows of goods and services.

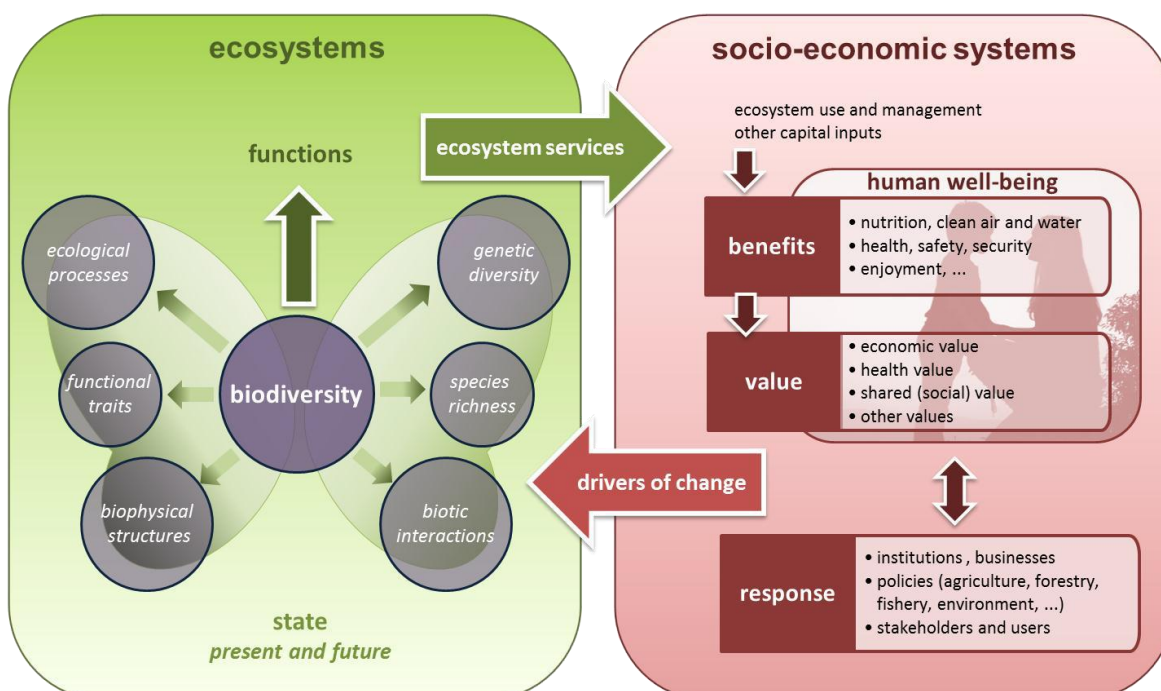
Culture is considered, on one side, as one of the services provided by ecosystems and, on the other side, as the main driver in influencing ecosystems and biodiversity and in shaping landscapes. There are many examples across the European regions that have been scientifically identified and defined in a nature-culture relation and in a long-term perspective (6), such as the following:

- Netherlands' polders;
- Spanish dehesas;
- Terraces of the Maltese islands;
- Východné Karpaty mountain systems in Slovakia;
- Saint-Nectare cheese region in France;
- Vineyards with intensive manual cultivation in the Italian Piedmont region;
- *Fingerplanen* of Copenhagen.

These and many other examples show the way nature and people, private and public entities and groups are intimately interrelated and interacting in direct or indirect ways almost everywhere. This human driving role in diversity, basically positive, is particularly true in Europe where cultural features have shaped entire land use with agriculture, forestry, communities and other urban, peri-urban or rural infrastructure. Of course the degree of interaction varies significantly from one use to the other and from one area to the other.

The growing and widespread implementation of the payments for ecosystem services is based on the positive paradigm of “Provider Gets” in opposition to the negative one of the “Polluter Pays” (7). Most often the positive interrelations and interactions in terms of biodiversity conservation are far less communicated and explained than the negative pressures. Another positive paradigm is the ecological “handprint” (getting positive things done) as an analogy to ecological “footprint” (focusing on human’s negative, passive role).

MAES highlighted these interrelations in its conceptual framework for EU wide ecosystem assessment, as reported in the figure below.



As reported by MAES (8), *“the argument is that healthy ecosystems (in good status) possess the full potential of ecosystem functions. Ecosystem management and other capital inputs refer to the labour, capital or energy investments needed to obtain certain benefits (e.g. to harvest a crop, or to construct and maintain hiking trails for recreation). These measures influence ecosystems in a way to improve the delivery of a certain service (e.g. food production function and landscape beauty) often at the cost of other services which ecosystems are or could be delivering (e.g. regulating services), or at the cost of the state of ecosystems (e.g. lowering biodiversity level)”*.

Facts, figures, scientific research and reporting can help in better focusing and understanding the interrelations and interactions between Natural and Cultural Capital.

In 2014, the Italian Minister of Environment, in collaboration with the national Union of Chambers of Commerce, has recently published the first socio-economic assessment and monitoring report on the national system of protected areas, ranging from parks to Natura 2000 sites (9). The assessment provides quantified facts, statistical figures, and stories of nature-based entrepreneurship. The overall analysis shows to what amount biodiversity conservation, provision of ecosystem services and economic values are interrelated with a cultural capital made of local people, groups with their sustainable practices.

Europe has a strong network of socio-ecological long-term research platforms as the core of the LTER-Europe (10). The platforms carry out place based sustainability research on the integration of natural sciences and ecosystem research approaches, including the human dimension in various parts of Europe. The European approaches and developments have been well documented (11).

The UK National Ecosystem Assessment, updated in 2014 (12), recognises the way in which culture and nature interact to produce value and support the development of an integrated approach considering natural and cultural dimensions. It also points out that the notion of “cultural capital” is not yet clearly developed into a management approach. Better understanding natural capital and ecosystem services can help identify nature based solutions to existing problems and can help with the development of multiple benefits and outcomes from investments in nature, i.e. scope for increased efficiency in policy development and delivery.

The interconnectedness of Natural and Cultural Capital is raised by several EU-funded research projects, including the OpenNESS, which focus on the operationalization of ecosystem services and natural capital (13). The project focuses on four European challenges with tangent with cultural capital: human well-being, sustainable ecosystem management, governance and competitiveness.

The nature-based solutions, strongly emphasised by the European Commission, is another framing of the linkage between Natural and Cultural Capital. ALTER-Net, A Long-Term Biodiversity, Ecosystem and Awareness Research Network of Europe is organising jointly with the European commission a conference on the roles of natural capital for the link from nature based solutions for human well being in the urban context in May 2015 (14).

One of aim of the Charter of Rome is to collect examples, good practices, programme and projects in view of proving the overall advantages of nature-based solutions for society.

Main references

- 1) European Union, 2013. The Economic Benefits of the Natura 2000 Network. Luxembourg http://ec.europa.eu/environment/nature/natura2000/financing/docs/ENV-12-018_LR_Final1.pdf.
- 2) Costanza R. et al. 1991. Goals, Agenda, and Policy Recommendations for Ecological Economics, Columbia University Press.
- 3) Berkes F., Folke C. 1992. A Systems Perspective on the Interrelations Between Natural, Human-Made and Cultural Capital. *Ecological Economics* 5: 1–8.
- 4) Throsby D. 1999. Cultural Capital. *Journal of Cultural Economics* 23: 3–12.
- 5) Sukhdev P., Wittmer H., Miller D. 2014. The Economics of Ecosystems and Biodiversity - TEEB: Challenges and Responses', in D. Helm and C. Hepburn (Eds.), *Nature in the Balance: The Economics of Biodiversity*. Oxford University Press, Oxford.
- 6) Pedrolì B., Van Doorn A., De Blust G., Paracchini M.L., Wascher D., Bunce F. 2007. Europe's Living Landscapes. Essays exploring our identity in the countryside. Wageningen. KNNV Publishing, Zeist, The Netherlands.
- 7) Mauerhofer V., Hubacek K., Coleby A. 2013. From Polluter Pays to Provider Gets: Distribution of Rights and Costs under Payments for Ecosystem Services. *Ecology and Society* 18(4): 41.
- 8) Maes J., Teller A., Erhard M. et al. 2013. Mapping and Assessment of Ecosystems and their Services. An Analytical Framework for Ecosystem Assessments under Action 5 of the EU Biodiversity Strategy to 2020. European Union, Luxembourg.
- 9) Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Unioncamere, 2014. L'Economia reale nei Parchi Nazionali e nelle Aree Protette. Fatti, cifre e storie della Green Economy. Rapporto 2014. Roma. <http://www.areeprotette-economia.minambiente.it/en/>
- 10) Long-Term Ecosystem Research (LTER) www.lter-europe.net
- 11) Singh S.J., Haberl H., Chertow M., Mirtl M., Schmid, M. (Eds.). 2013. Long Term Socio-Ecological Research. *Studies in Society: Nature Interactions Across Spatial and Temporal Scales*. Human-Environment Interactions, Vol. 2., Springer, Dordrecht.
- 12) UK National Ecosystem Assessment Follow-on, 2014. The UK National Ecosystem Assessment Follow-on: Synthesis of the Key Findings. UNEP-WCMC, LWEC, UK. <http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx>
- 13) Operationalisation of natural capital and ecosystem services www.openness-project.eu
- 14) ALTER-Net - Europe's ecosystem research network www.alter-net.info

Further readings

- Anathea Brooks L., Aricò S., 2013. Tracking Key Trends in Biodiversity Science and Policy. Based on the proceedings of a UNESCO International Conference on Biodiversity Science and Policy, Unesco, Paris.
- van Berkel D.B., Verburg P.H., 2014. Spatial quantification and valuation of cultural ecosystem services in an agricultural landscape. *Ecological Indicators* 37 (2014) 163–174.
- Chan K., Satterfield T., Goldstein J., 2012. Rethinking ecosystem services to better address and navigate cultural values. *Ecological Economics* 74 (2012), 8.
- Dagenais D. 2013. Taking social and cultural values into account in the process of managing biodiversity at the landscape scale: A few useful considerations. In "Tracking Key Trends in Biodiversity Science and Policy". UNESCO International Conference on Biodiversity Science and Policy, edited by L. A. Brooks and S. Aricò. United Nations Educational, Scientific and Cultural Organisation; pp. 87-88.
- EU Regulation 691/2011 on environmental economic accounting in Europe.
- European Commission, FAO, International Monetary Fund, OECD, UN, World Bank, 2012. System of Environmental-Economic Accounting. Central Framework. Vedi <http://unstats.un.org/unsd/envaccounting/seea.asp>

- FAO Globally Important Agricultural Heritage Systems <http://www.fao.org/giahs/giahs-initiative/en/>
- Gee K., Burkhard B. 2010. Cultural ecosystem services in the context of off shore wind farming: a case study from the west coast of Schleswig-Holstein. *Ecological Complexity*. doi: 10.1016/j.ecocom. 2010.02.008 (in press).
- Ghermandi A., Nunez P., Portela R., Rao N., S.Teelucksingh., 2009. Recreational, Cultural and Aesthetic Services from Estuarine and Coastal Ecosystems. *Fondazione Eni Enrico Mattei. Nota di Lavoro* 121.
- ICES. 2013. Report of the Joint HZG/LOICZ/ICES Workshop: Mapping Cultural Dimensions of Marine Ecosystem Services (WKCES), 17-21 June 2013, Geesthacht, Germany.
- Milcu A.I., Hanspach J., Abson D., Fischer J., 2013. Cultural Ecosystem Services: A Literature Review and Prospects for Future Research. *Ecology and Society* 18(3):44.
- Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-Being. Synthesis*. Island Press, Washington, DC.
- Nakashima, D. and Nilsson, A. 2006. Linking Biological and Cultural Diversity: Local and Indigenous Knowledge Systems (LINKS) project. In: Petitjean, P., Zharov, V., Glaser, G., Richardson, J., de Padirac, B. and Archibald, G. (eds.). *60 years of Science at UNESCO 1945-2005*, UNESCO, Paris. http://portal.unesco.org/science/en/ev.php-URL_ID=2031&URL_DO=DO_TOPIC&URL_SECTION=201.html
- Plieninger T., Dijks S., Oteros-Rozas E., Bieling C., 2013. Assessing, mapping, and quantifying cultural ecosystem services at community level. *Land Use Policy* 33 (2013) 118-129.
- Posey D.A. et al. (Eds.), 1999. *Cultural and Spiritual Values of Biodiversity*. Oxford Centre for the Environment, Ethics and Society, Oxford. UNEP, Nairobi.
- Rob D. Fish, 'Environmental decision making and an ecosystems approach: Some challenges from the perspective of social science', *Progress in Physical Geography* 35:5 (2001), 674-75.
- Tengberg A., Fredholm S., Eliasson I., Knez I., Saltzman K., Wetterberg O., 2012. Cultural ecosystem services provided by landscapes: Assessment of heritage values and identity. *Ecosystem Services* 2 (2012) 14-26.
- Tobias T., 2000. A guidebook to land use and occupancy mapping, research design and data collection. A joint publication of the Union of BC Indian Chiefs and Ecotrust Canada. Vancouver.
- Unesco-MaB: <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/man-and-biosphere-programme/>
- United Nations Department of Economic and Social Affairs, 2012. A guidebook to the Green Economy. Issue 1: Green Economy, Green Growth, and Low-Carbon Development – history, definitions and a guide to recent publications.
- United Nations University Institute for the Advanced Study of Sustainability, 2014. The International partnership for the Satoyama Initiative (IPSI). Working towards Societies in Harmony with Nature. Tokyo, Japan. <http://satoyama-initiative.org>
- Wealth Accounting and the Valuation of Ecosystem Services (WAVES) www.wavespartnership.org
