

COUNTING FOR SUSTAINABILITY: THE RISKS OF CREATING A MARKET FOR THE ENVIRONMENT

Alexandru-Ionuț Petrișor¹, Arina Alma Susa², Liliana Elza Petrișor³

Key words: Kikonda, Vale – Brazil, Malaysia, negotiable pollution permits, spatial sustainability, natural protected areas

Abstract. Global sustainability is a 30 years old dream of humanity; it still appears to remain a goal, with little progress seen towards it. Local sustainability is challenged even more; first of all, there seems to be a competition among the two. Local actors have found ways to act under the umbrella of global sustainability in a local unsustainable manner. The article discusses several examples, including the issue of protected areas, the trading mechanisms and three international examples; all together they seem to point out that sustainability remains an oxymoronic concept, with little chances of implementation; the choices between conservation and development or between economy and its socio-environmental impact are still to be made.

1. Introduction

Although in use for over 30 years, the concept of “sustainable development” is subject to criticisms related to its very essence (Georgescu-Roegen, 1991: 53; Latouche, 1994) or implementation (Bass, 2007). Most likely, its multifariousness is at the core of all issues; sustainability has many pillars and dimensions (Ungureanu *et al.*, 2011; Petrișor and Petrișor, 2014; Petrișor, 2017a, b), covering all areas and sectors where development occurs; therefore, its aim to “achieve a balance” not only depends on a correct definition of equilibrium (Petrișor *et al.*, 2016b), but also on the relationship between the goals of different hierarchical levels. Scholars have widely discussed the conceptual graduality of sustainability, either weak or strong (Dietz *et al.*, 2007). Its strength depends on policy choices (Hossu *et al.*, 2019b) made in response to the tensions surrounding whether growth or resilience objectives should be promoted in order to shift our development trajectories towards greater sustainability (Quenault, 2016) on a territorial or sectoral level. On the other hand,

¹ “Ion Mincu” University of Architecture and Urban Planning, alexandru_petrisor@yahoo.com

² Grenoble Alpes University, arina.susa@etu-iepg.fr;

³ Architect, liliana_petrisor@yahoo.fr

strong sustainability depends on the hypothesis of economic, social or ecological capital non substitutability (Beau, 2019). Finally, models of strong sustainability include the notion of natural heritage protection and transmission (MacDonald *et al.*, 1999). This transmission has to be strategically conceived through collective action in order to ensure the conservation of such a common good (Ostrom, 1990) and must under no circumstances be individualized and valued in monetary terms nor globalized and managed by the public sphere (Lefeuvre, 1990). Aside from identifying transmission of natural heritage as an indicator of strong sustainability, the present article is built on the premises that the practical implementation of sustainability involves the restoration of degraded ecosystems, assessing the impact of current activities and internalizing the social and environmental externalities, and preserving a part of the current biodiversity for the future generations (Stan, 2013; Boștenaru Dan *et al.*, 2014; Petrișor and Petrișor, 2014).

Starting from these premises, the present research aims to present several case studies, most inspired by the documentary movie “*Banking nature*” (Delestrac and Feydel, 2015), but also from the studies of the spatial or territorial dimension of sustainability (*e.g.*, Turnpenny and Russel, 2017), aiming to support the hypothesis according to which *creating a market for sustainability set the premises of distorting its goals and essence*, especially when such uncommon instruments are used by private actors to commodify nature (Susa, 2018) and the economy is seen as maximizing the profits (Latouche, 1989).

2. Conservation and sustainability

It has been said that the conflict between conservation and development is not a real one; its solution seemed to be a re-interpretation of conservation, from the strict preservation of biodiversity, as defined by the Club of Rome (Meadows *et al.*, 1972) to maintaining it within the limits of the carrying capacity of ecosystems (Petrișor, 2011). However, little was achieved with respect to it. For instance, Rio texts subordinate the protection of nature to the requirements of development (Larrère and Larrère, 2015). These conflicts echo to a larger debate that animated the United States at the beginning of the 20th century on the best way to preserve nature (Meyer, 1997), manage it or engage into wilderness (Aplin 2002). It strongly influenced the vision of nature conservation prevailed ever since, *i.e.*, a sustainable management of biodiversity, combining protection and economic exploitation (Larrère and Larrère, 2015). Therefore, many controversies on environmental justice result from such anthropocentric conservation practices (Sterba, 1994).

One of the controversial issues relates to the potential benefits of conservation, including the debate whether conservation reduces poverty (Andam *et al.*, 2010), or

induces it (de Sherbinin, 2008) and does not really aim to reduce it (Andam *et al.*, 2010). Other benefits include ecosystem services, tourism revenues, and an improved infrastructure (Andam *et al.*, 2010). The roots of conflicts are identified with the socio-economic and environmental objectives of conservation (Anthony and Szabo, 2011), or its temporal and spatial scale, including “borrowing” now from the future generations (Ohl *et al.*, 2008; Romanescu, 2013) and the trade-off between the local and broader scales (Upton *et al.*, 2008; Buhociu *et al.*, 2013). The conflicts are more pregnant in developing countries or during economic crises (Petrișor *et al.*, 2020) due to the lack of environmental awareness (Ianoș *et al.*, 2009, 2012b; Dulamă *et al.*, 2017).

The most important causes of conflicts seem to be economic (Frys and Nienaber, 2011), in particular agricultural (Andam *et al.*, 2010; Anthony and Szabo, 2011; Frys and Nienaber, 2011), and generate social ones (Iojă *et al.*, 2010), but generally conflicts appear to focus on resources (Cernea and Schmidt-Soltau, 2003; Ohl *et al.*, 2008; Andam *et al.*, 2010; Iojă *et al.*, 2010; Anthony and Szabo, 2011), especially land (Tudor *et al.*, 2014). The conservation status limits the total number of possible uses (Chomitz *et al.*, 2005); a key concept is the opportunity cost, which helps choosing the most cost-effective use (Norton-Griffiths and Southey, 1995). Such a postulate is based on the Malthusian logic that the common use of non-renewable resources inevitably leads to its destruction (Hardin, 1968).

Even though certain communities of users have invented robust management systems on their own on a local scale (Ostrom, 1990), the governance of natural resources on a global scale is rooted in many causes of failure. Some causes include the reduction of ownership rights (Cernea and Schmidt-Soltau, 2003) or revenues (Ohl *et al.*, 2008), ignored local cultural particularities (Singh *et al.*, 2012), low accessibility (Andam *et al.*, 2010), lack of funding (Iojă *et al.*, 2010) or of planning and design (Hossu *et al.*, 2020) and the pressure of tourism (Dolnicar, 2010; Stan *et al.*, 2013; Romanescu and Stoleriu, 2014; Romanescu, 2016) due to the behavior of tourists (Pérez-Salom, 2001), including cultural differences (Wearing and Darcy, 2011), erosion of the local traditions (Walpole and Goodwin, 2001), or an uneven return of benefits (Walpole and Goodwin, 2001). The socio-ecological impacts of global conservation projects are mainly oriented towards the accumulation of capital and the well-being of private or public owners (Kul *et al.*, 2015). Such projects transform spaces and societies at the local level (McAfee, 1999); tourism attracts jobseekers (Pérez-Salom, 2001) and even immigration (Scholte and de Groot, 2010). But it is necessary to consider the carbon footprint of tourists traveling to see this ecotouristic place (Marzouki *et al.*, 2012), and the dramatic environmental and cultural effects of this new industry (McClurg, 2002) including contamination linked to the construction and population of hotel sites (Honey, 2008), the air and soil quality affecting plant life in general and impacts on natural behavior of different species (Wood, 2002). There is a thin balance to be sought for, since the

development of infrastructure attracts tourists (Purice *et al.*, 2013), but remoteness prevents massive tourism (Andam *et al.*, 2010; Bănică and Camară, 2011).

Conflicts take multiple forms, such as the direct ‘fight’ between humans and wildlife (Anthony and Szabo, 2011), move away (de Sherbinin, 2008) inducing depopulation, ageing, and unemployment (Vaishar *et al.*, 2013), do not involve the management process (Walpole and Goodwin, 2001; Petre, 2012), oppose a top-down imposed conservation status (Anthony and Szabo, 2011), especially international (Nelson and Vertinsky, 2005) or simply ignore it through poaching and harvesting (Ioja *et al.*, 2010). The conflicts are a more prominent issue in biosphere reserves, seen as sustainability learning sites (Stan *et al.*, 2014; Petrișor, 2010, 2016a; Petrișor *et al.*, 2016a).

3. Trading the environment

These conflicts are partly due to the westernization of ecological knowledge based on the duality of nature and culture (Descola 2005) and the rejection of all other forms of ecological knowledge (Berkes, 1993, 2000) to build sustainable nature conservation. Such conflicts end similarly; while the locals are treated as invaders and illegal occupants of the protected areas, the profits generated by the tourism industry go back into the hands of private companies or public services (Ojeda, 2012); conservation becomes a pretext to allow coercive and capitalist resource accumulation in order to allow diverse trading forms of natural resources (Urteaga-Crovetto, 2016).

3.1. Territorial trading

The presentation of the debates concerning natural protected areas placed at its core the land conflicts. The territorial perspective can be discussed further when resources come into their place. Natural resource protection must be sustainable in order to provide economic growth and reduce poverty on a local and global scale, especially in the current context of climate change (Sachs, 2005). By bringing sustainable development and climate change together (Munasinghe *et al.*, 2005) through the identification of socio-ecological vulnerability patterns and trajectories based on the study and analysis of natural protected areas (Spiegelberger *et al.*, 2018) different frameworks for territorial resilience emerged (Carter *et al.* 2007) to enhance the adaptation of vulnerable local systems (Birkmann, 2013). But a territory can develop sustainably by not using its own resources; instead, the resources of another area are deployed. This is similar to the temporal perspective; the footprint measures the development of current generations “borrowing” from the next ones (Ianoș *et al.*, 2012a; Petrișor, 2016), which raises concerns for intergenerational ethics (Kemfert and Tol, 2002) and questions on the efforts made

to socio-ecological resilience in a context of climate change and which out of natural, economical or social capital is being sustained (Redclift, 2005).

There are three approaches; Pearce *et al.* (1989) introduce the concepts of “imported” and, respectively, “exported sustainability”, in order to show that development can become sustainable within a given area at the expense of external (*e.g.*, exotic products) or adjacent areas, including resources and waste. Nijkamp *et al.* (1992) propose two conditions for sustainability: the long term perspective and no conflicts with the higher hierarchical sustainability; they induce the concept of “territorial sacrifice”. The third contribution, developed by Martinez-Alier (1993, 2002) is built around the “environmental debts”; the core idea is that the environmental price of products sold by poorer countries is unfair, and can be adjusted if the rich countries pay their environmental debts. Petre (2016, 2018) resumes the theories, showing a transition from ‘inequalities’ or ‘disparities’ to transfers, similar to the economic theories developed by Perroux (1964, 1981) and Myrdal (1957), and proposes a distinction between the sustainable development *of* a territory and the sustainable development *within* a territory.

3.2. Trading biodiversity

Natural resources are complex and hard to define, value, and measure (Winter *et al.*, 2004). They are also hardly managed since they respond to different property regimes (Schlager *et al.*, 1992) and may be handled by multi-scalar actors (Hossu *et al.*, 2017, 2018, 2019a). Thus many analytical typologies and definitions describe the many natural resource management programs that exist (Emtage, 2007) to preserve biodiversity, which can be considered as a resource itself (Larrère and Larrère, 2015). If the access to the resource is characterized by both non-exclusion and rivalry in its use, the potential of resource degradation lies in its overexploitation leading to conflict (Adams, 2003); then, the resource will be referred to as Common Pool Resource (Ostrom, 1990). On the other hand, if the access to the resource is non-exclusive and non-rival, but the potential for degradation lies in a negative externality of human activity, we would speak of Global Public Goods (Vugt *et al.*, 1999). In both cases, economic orthodoxy invites us to internalize these externalities through the theory of property rights (Desmetz, 1967). However, the modalities of internalization and the nature of the degradation suffered by these common pool resources or global public goods are different - and so are the preservation strategy and tools used to preserve them.

Biobanking has emerged as a complex science bringing together multiple biological, social science, and legislative disciplines in an attempt to preserve high quality and well-annotated biospecimens (Abayomi *et al.*, 2013); its recent focus seems to be oriented to the medical field. The concept is based on the US ‘Mitigation Banking’ scheme established under the Clean Waters Act of 1970 and the Californian

‘Conservation Banking Program’ established under the Federal Endangered Species Act of 1973, and several state Acts (Smith *et al.*, 2006). However, its applications also extend to the conservation of biodiversity (Burgin, 2008), as the schemes are based on granting a money value to the provision of a habitat for biodiversity (Williams, 2012), but also in investments (Lambooy and Levashova, 2011), resulting in its commodification, sale, and trading by habitat credits or certificates (Maris, 2014; Susa, 2018). Biobanking was well received by the industry, able to demonstrate its credibility (Burgin, 2008). Its shortcomings relate to the territorial trade-off: areas to be used for biobanking versus areas where development is permitted, but also to the approach used to give a (monetary) value to biodiversity (Burgin, 2008).

3.3. Trading the degradation of the environment

Different (particularly American) authors have advocated for trading the green house gases emissions internationally, entitling private entities from different countries to trade them directly across the national borders (Woerdman, 2000). Similar instruments, including marketable licenses and permits or subsidies, targets or quotas, taxes, expenditures or subsidies, were created for pollution, as incentives to polluters to choose their own means of pollution control, without replacing the existing regulations (Holzinger *et al.*, 2006), in an attempt to internalize the externalities (Piciu, 2011). The process is complicated by the different operation of the permit allocation (*e.g.*, by the governments, privately etc.) (Woerdman, 2000).

Trading and market-based instruments are frequently used nowadays in the framework of environmental regulation and protection (Gayer *et al.*, 2006), but are both ecologically and philosophically limited (Susa, 2018). The process of transforming a good or service into a commodity follows three stages: reduction, appropriation and substitution of the object of exchange (Boisvert *et al.*, 2013). But ecosystems are too complex and interdependent to be reduced to a single function (Maris, 2014) and thus can’t be reduced, appropriated nor substituted without damaging them directly or indirectly (Boisvert *et al.*, 2013). Assigning a market value only to specific goods in a growing process of environmental deterioration and destruction ultimately leads to a hierarchical and market oriented approach of conservation (Dunlap, 2014).

4. International examples

Under the guise of meeting objectives such as biodiversity conservation, carbon sequestration, protection of ecosystem services, ecotourism, or compensation (Fairhead *et al* 2012), private and public organizations can be held responsible for green land grabbing leading to commodification of nature (Hall, 2013). The environmental protection mechanisms - currently deployed in the name of

sustainable development - create socio-environmental and ethical problems; it is usual that the appropriation of land and resources for environmental purposes is eventually used for commercial purposes (Cousins, 2009). Thus certain infrastructures or instruments for natural conservation can expose biodiversity and local populations to new risks (Ojeda, 2012). For instance, top-down forest resource management has put a lot of socio-ecosystemic pressure on local economies based on forestal activities (Kopnina, 2017). The three following case studies we present testify of the multifaceted risks of mass commodification of forests through exploitation; reforestation and top-down compensation.

4.1. The race for palm oil production

The increasing demand for palm oil from the food industry and energy sector (Lam *et al.*, 2009) resulted into expanding the palm oil cultures in Sabah, Borneo, Malaysia over spaces covered by the tropical forest (Turner, 2008), endangering the tropical forests and species such as the orangutan (Koh and Wilcove, 2007), affecting other species (Turner and Foster, 2009) and reducing the overall biodiversity (Turner, 2008), fragmenting the ecosystems and determining the isolation of biological populations, edge effects, loss of biodiversity and the weakening of natural ecosystems (Koh and Wilcove, 2008; Wicke *et al.*, 2011). The extent of the conversion is pointed out by the following figures: from 55,000 ha in 1960 to 3.5 million hectares by 2001, covering 60% of the agricultural land in the country (Teoh, 2002), turning Malaysia into the largest palm oil producer worldwide (Basiron, 2007).

4.2. Loosing the Amazonian forest for Eucalyptus

The Brazil based multinational company Vale was involved in massive cuts of the Amazon forests; the social conditions for its workers were sacrificed at the expense of developing huge mining projects (Kröger, 2012a, b). In compensation, the deforested areas were planted by dispossession with monocultures of Eucalyptus (Kröger, 2012a, b; Fernandes *et al.*, 2016), original from Australia, which affect the water saturation of soil (Fernandes *et al.*, 2016), inhibit the growth of other species (Zhang and Fu, 2009), but also dry out the rivers and affect the living conditions of local people (Gerber *et al.*, 2009).

4.3. Compensating for the lost forests at the expense of social sustainability

The company Global Woods, in order to sell carbon credits, planted pine trees in a humid savanna area of Kikonda, Uganda, leased by the government after turning it into a protected area, but used for large-scale farming by the indigenous people (Okeyo-Owuor *et al.*, 2011) who claim its customary ownership (Nel, 2017), compromising smallholder food security and making farmers feel “tricked” and

“wronged” (Lee *et al.*, 2016). The project was developed under the REDD+ – Reducing the Effects of Deforestation and Degradation, conservation and enhancement of forest carbon stocks, and sustainable management of forests – initiative of the United Nations Environmental Program, described as “*a cutting edge forestry initiative that aims at tipping the economic balance in favor of sustainable management of forests [...] while also contributing to important reductions in greenhouse gas emissions*” (Nel, 2017).

5. Conclusions

It is precisely the current industrial development model, based on commodification of nature (Liverman, 2004) and extractivism (Acosta, 2013) that has brought us into a brand new geological era called the Anthropocene (Crutzen 2006). Due to the “Great Acceleration” of human activities, ecosystems and the biosphere have been permanently damaged (Steffen *et al.*, 2011) consequently leading to both a climate and resource crisis. The concept of sustainability appeared at the peak of a crisis between economic development and its social and environmental consequences, aiming to reconcile them. However, the success was very little, and all the conflicting sides (development and conservation, development and its impacts) hold their positions. All these point out to the fact that sustainability is an oxymoronic concept, and the economic instruments used for its implementation distorted its focus, since they come from a single position instead of integrating all of them. This new paradigm for human and non human evolution calls for an eco-modern shift in conservation practices to respond to climate change (Colloff *et al.*, 2016) but also a shift in framing alternatives to sustainability (Olsson *et al.*, 2017) in order to build new socio-ecological robust and resilient models and question the very essence of development itself.

References:

1. Abayomi A., Christoffels A., Grewal R., Karam Locunda A., Rossouw Catherine, Staunton Ciara, Swanepoel Carmen, van Rooyen Beverley (2013), *Challenges of Biobanking in South Africa to Facilitate Indigenous Research in an Environment Burdened with Human Immunodeficiency Virus, Tuberculosis, and Emerging Noncommunicable Diseases*, *Biopreservation and Biobanking* 11(6): 347-354. <https://doi.org/10.1089/bio.2013.0049>
2. Acosta A. (2013), *Extractivism and neoextractivism: two sides of the same curse*, *Beyond Development* 61: 61-86.
3. Adams W. M., Brockington D., Dyson J., Vira B. (2003), *Managing tragedies: understanding conflict over common pool resources*, *Science* 302(5652): 1915-1916. DOI: 10.1126/science.1087771

4. Andam K. S., Ferraro P. J., Sims Katharine R. E., Healy A., Holland Margaret B. (2010), *Protected areas reduced poverty in Costa Rica and Thailand*, Proceedings of the National Academy of Sciences 107(22): 9996-10001. <https://doi.org/10.1073/pnas.0914177107>
5. Anthony B. P., Szabo Alina (2011), *Protected Areas: Conservation Cornerstones or Paradoxes? Insights from Human Wildlife Conflicts in Africa and Southeastern Europe*, in: Lopez-Pujol J. (Ed.), *The Importance of Biological Interactions in the Study of Biodiversity*, InTech Open Access Publishing, Rijeka, Croatia, pp. 255-282.
6. Aplin G. (2002), *Heritage: Identification, conservation and management*, Oxford University Press, Oxford, UK.
7. Bănică A., Camară G. (2011), *Accessibility and tourist function development of the Romanian small towns*, GeoJournal of Tourism and Geosites 4(7): 122-133.
8. Basiron Y. (2007), *Palm oil production through sustainable plantations*, European Journal of Lipid Science and Technology 109: 289-295. <https://doi.org/10.1002/ejlt.200600223>
9. Bass S. (2007), *A New Era in Sustainable Development. An IIED Briefing*, International Institute for Environment and Development, London, UK.
10. Beau, R. (2019), *Une perspective philosophique sur la durabilité forte. Pour un écocentrisme relationnel*, Développement durable et territoires. Économie, géographie, politique, droit, sociologie 10(1): 13613. <https://doi.org/10.4000/developpementdurable.13613>
11. Berkes F. (1993), *Traditional ecological knowledge in perspective*, in: Inglis J. T. (Ed.), *Traditional Ecological Knowledge: Concept and Cases*, International Program on Traditional Ecological Knowledge and International Development Research Centre, Ottawa, Canada, pp 1-9.
12. Berkes F., Colding J., Folke C. (2000), *Rediscovery of traditional ecological knowledge as adaptive management*, Ecological Applications 10: 1251-1262. [https://doi.org/10.1890/1051-0761\(2000\)010\[1251:ROTEKA\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2)
13. Birkmann J. (2013), *Chapter 1. Measuring vulnerability to promote disaster-resilient societies and to enhance adaptation: conceptual frameworks, definitions*, in: Birkmann J. (Ed.), *Measuring vulnerability to natural hazards. Towards disaster resilient societies. 2nd Edition*, UN Press, New York, NY, USA.
14. Boisvert V., Méral P., Froger, G. (2013), *Market-based instruments for ecosystem services: institutional innovation or renovation?*. Society & Natural Resources 26(10): 1122-1136. <https://doi.org/10.1080/08941920.2013.820815>
15. Boştenaru Dan Maria, Armaş Iuliana, Goretti A. (2014), *Earthquake Hazard Impact and Urban Planning - An Introduction*, in: Boştenaru Dan Maria, Armaş Iuliana, Goretti A. (Eds.), *Earthquake Hazard Impact and Urban Planning*, Springer Earth Sciences & Geography - Natural Hazards Series 13: 1-12.
16. Buhociu D. H., Rahoveanu A. T., Florescu T. C., Crăciun Cerasella, Popa Andreea (2013), *Rural waterfronts, green areas and natural landscape at the Danube*, Journal of Food, Agriculture & Environment 11(3-4): 1692-1696.

17. Burgin S. (2008), *BioBanking: an environmental scientist's view of the role of biodiversity banking offsets in conservation*, Biodiversity Conservation 17: 807-816. DOI 10.1007/s10531-008-9319-2
18. Carter T. R., Jones R. N., Lu X., Bhadwal S., Conde C., Mearns L. O., O'Neill B. C., Rounsevell M. D.A., Zurek M. B. (2007), *New assessment methods and the characterisation of future conditions*, in: Parry M. L., Canziani O. F., Palutikof J. P., van der Linden P. J., Hanson C. E. (Eds.), *Climate change 2007: impacts, adaptation and vulnerability. Contribution of working group II to the fourth assessment report of the intergovernmental panel on climate change*, Cambridge University Press, Cambridge, UK, pp 133-171.
19. Cernea M. M., Schmidt-Soltan K. (2003), *Biodiversity Conservation versus Population Resettlement: Risks to Nature and Risks to People*, in: *Proceedings of an International Conference on "Rural Livelihoods, Forests and Biodiversity"*, May 19-23, 2003, Bonn, Germany, pp. 1-33.
20. Chomitz K. M., Alger K., Thomas T. S., Orlando Heloisa, Vila Nova P. (2005), *Opportunity costs of conservation in a biodiversity hotspot: the case of southern Bahia*, Environment and Development Economics 10: 293-312. <https://www.jstor.org/stable/44379143>
21. Colloff M. J., Doherty M. D., Lavorel S., Dunlop M., Wise R. M., Prober S. M. (2016), *Adaptation services and pathways for the management of temperate montane forests under transformational climate change*, Climatic Change, 138(1-2): 267-282. <https://doi.org/10.1007/s10584-016-1724-z>
22. Cousins J. A., Evans J., Sadler J. (2009), *Selling conservation? Scientific legitimacy and the commodification of conservation tourism*, Ecology and Society 14(1): 32.
23. Crutzen P. J. (2006), *The "anthropocene"*, in: Ehlers E., Krafft T. (Eds.), *Earth system science in the anthropocene*, Springer, Berlin, Germany, pp. 13-18.
24. de Sherbinin A. (2008), *Is poverty more acute near parks? An assessment of infant mortality rates around protected areas in developing countries*, Oryx 42(1): 26-35. DOI:<https://doi.org/10.1017/S0030605308000781>
25. Delestrac D., Feydel Sandrine (2015), *Banking nature*, Via Découvertes, Paris, France.
26. Demsetz H. (1983), *The structure of ownership and the theory of the firm*, The Journal of Law and Economics 26(2): 375-390.
27. Descola P. (2005), *Par-delà nature et culture*, Gallimard, Paris, France.
28. Dietz S., Neumayer E. (2007), *Weak and strong sustainability in the SEEA: Concepts and measurement*, Ecological Economics 61(4): 617-626. <https://doi.org/10.1016/j.ecolecon.2006.09.007>
29. Dolnicar Sara (2010), *Identifying tourists with smaller environmental footprints*, Journal of Sustainable Tourism 18(6): 717-734. <https://doi.org/10.1080/09669581003668516>
30. Dulamă Maria Eliza, Ilovan Oana-Ramona, Magdaș Ioana (2017), *The forests of Romania in scientific literature and in geography. Teachers' perceptions and actions*, Environmental Engineering & Management Journal 16(1): 169-186. DOI: 10.30638/eemj.2017.019

31. Dunlap A., Fairhead J. (2014), *The militarisation and marketisation of nature: An alternative lens to 'climate-conflict'*, *Geopolitics* 19(4): 937-961. <https://doi.org/10.1080/14650045.2014.964864>
32. Emtage N., Herbohn J., Harrison, S. (2007), *Landholder profiling and typologies for natural resource-management policy and program support: potential and constraints*, *Environmental Management* 40(3): 481-492. DOI 10.1007/s00267-005-0359-z
33. Fernandes G. W., Coelho M. S., Machado R. B., Ferreira M. E., de Souza Aguiar Ludmilla Moura, Dirzo R., Scariot A., Lopes C. S. (2016), *Afforestation of savannas: an impending ecological disaster*, *Natureza & Conservação. Brazilian Journal of Nature Conservation* 14: 146-151.
34. Frys Wioletta, Nienaber B. (2011), *Protected areas and regional development: conflicts and opportunities – presented on the example of the UNESCO biosphere reserve Bliesgau*, *European Countryside* 4: 208-226. DOI: <https://doi.org/10.2478/v10091-012-0005-8>
35. Gardner R., Ostrom E., Walker J. M. (1990), *The nature of common-pool resource problems*, *Rationality and Society* 2(3): 335-358. The Nature of Common-Pool Resource Problems. <https://doi.org/10.1177/1043463190002003005>
36. Gayer T., Horowitz J. K. (2006), *Market-based approaches to environmental regulation*, *Foundations and Trends in Microeconomics* 1(4): 201-326.
37. Georgescu-Roegen N. (1991), *Correspondence with J. Berry*, in: Bonaïuti M, (Ed.) *La teoria bioeconomica. La "nuova economia" di Nicholas Georgescu Roegen*, Carocci, Rome, Italy.
38. Gerber J.-F., Veuthey Sandra, Martínez-Alier Joan (2009), *Linking political ecology with ecological economics in tree plantation conflicts in Cameroon and Ecuador*, *Ecological Economics* 68: 2885-2889. <https://doi.org/10.1016/j.ecolecon.2009.06.029>
39. Hall, R. (2013), *REDD+ and the underlying causes of deforestation and forest degradation*, Global Forest Coalition, Asunción, Paraguay.
40. Hardin G. (1968), *The Tragedy of the Commons*, *Science* 162(3859): 1243-1248.
41. Holzinger Katharina, Knill C., Schäfer Ansgar (2006), *Rhetoric or Reality? 'New Governance' in EU Environmental Policy*, *European Law Journal* 12(3): 403-420.
42. Honey M. (2008), *Ecotourism and sustainable development: Who owns paradise?*, Island Press, Washington, DC, USA.
43. Hossu Constantina Alina, Ioja I. C., Mitincu Cristina G., Artmann Marina, Hersperger Anna M. (2020), *An evaluation of environmental plans quality: addressing the rational and communicative perspectives*, *Journal of Environmental Management* 256: 109984. <https://doi.org/10.1016/j.jenvman.2019.109984>
44. Hossu Constantina Alina, Ioja I. C., Niță M. R., Hartel T., Badiu Denisa L., Hersperger Anna M. (2017), *Need for a cross-sector approach in protected area management*, *Land Use Policy* 69: 586-597. <https://doi.org/10.1016/j.landusepol.2017.10.012>
45. Hossu Constantina Alina, Ioja I. C., Niță M. R., Popa A. M., Talabă O., Inostroza L. (2019), *Ecosystem services appreciation of urban lakes in Romania. Synergies and trade-offs between multiple users*, *Ecosystem Services* 37: 100937. <https://doi.org/10.1016/j.ecoser.2019.100937>

46. Hossu Constantina Alina, Ioja I. C., Patroescu Maria, Dușa A., Hersperger Anna M. (2019b), *Dispute resolution and collaborative decision making. What accounts for their effectiveness? The case of Romania*. Sustainability 11: 7072. <https://doi.org/10.3390/su11247072>
47. Hossu Constantina Alina, Ioja I. C., Susskind L. E., Badiu Denisa L., Hersperger Anna M. (2018), *Factors driving collaboration in natural resource conflict management: Evidence from Romania*, Ambio 47(7): 816-830. <https://doi.org/10.1007/s13280-018-1016-0>
48. Ianoș I., Peptenatu D., Pintilii R.-D., Drăghici C. C. (2012a), *About sustainable development of the territorial emergent structures from the metropolitan area of Bucharest*, Environmental Engineering & Management Journal 11(9): 1535-1545. DOI:10.30638/eemj.2012.192
49. Ianoș I., Peptenatu D., Zamfir Daniela (2009), *Respect for environment and sustainable development*, Carpathian Journal of Earth and Environmental Sciences 4(1): 81-93.
50. Ianoș I., Sîrodoev I., Pascariu G. (2012b), *Land-use conflicts and environmental policies in two post-socialist urban agglomerations: Bucharest and Chișinău*, Carpathian Journal of Earth and Environmental Sciences 7(4): 125-136.
51. Ioja C. I., Pătroescu Maria, Rozyłowicz L., Popescu V. D., Vergeheț M., Zotta M. I., Felciuc Mihaela (2010), *The efficacy of Romania's protected areas network in conserving biodiversity*, Biological Conservation 143(11): 2468-2476. <https://doi.org/10.1016/j.biocon.2010.06.013>
52. Kemfert C., Tol, R. S. (2002), *Equity, international trade and climate policy*, International Environmental Agreements 2(1): 23-48. <https://doi.org/10.1023/A:1015034429715>
53. Koh L. P., Wilcove D. S. (2007), *Cashing in palm oil for conservation*, Nature 408(7157): 993-994. <https://doi.org/10.1038/448993a>
54. Koh L. P., Wilcove D. S. (2008), *Is oil palm agriculture really destroying tropical biodiversity?*, Conservation Letters 1: 60-64. <https://doi.org/10.1111/j.1755-263X.2008.00011.x>
55. Kopnina H. (2017), *Commodification of natural resources and forest ecosystem services: examining implications for forest protection*, Environmental Conservation 44(1): 24-33. doi:10.1017/S0376892916000436
56. Kröger M. (2012), *Neo-mercantilist Capitalism and Post-2008 Cleavages in Economic Decision-making Power in Brazil*, Third World Quarterly 33(5): 887-901. <https://doi.org/10.1080/01436597.2012.674703>
57. Kröger M. (2012b), *The Expansion of Industrial Tree Plantations and Dispossession in Brazil*, Development and Change 43(4): 947-973. <https://doi.org/10.1111/j.1467-7660.2012.01787.x>
58. Kull C., de Sartre X. A., Castro Monica (2015), *The political ecology of ecosystem services*, Geoforum 61: 122-134. <https://doi.org/10.1016/j.geoforum.2015.03.004>
59. Lam M. K., Tan K. T., Lee K. T., Mohamed A. R. (2009), *Malaysian palm oil: Surviving the food versus fuel dispute for a sustainable future*, 13(6-7): 1456-1464. <https://doi.org/10.1016/j.rser.2008.09.009>

60. Lambooy T., Levashova Yulia (2011), *Opportunities and challenges for private sector entrepreneurship and investment in biodiversity, ecosystem services and nature conservation*, International Journal of Biodiversity Science, Ecosystem Services & Management 7(4): 301-318. <https://doi.org/10.1080/21513732.2011.629632>
61. Larrère C., Larrère R. (2015), *Du bien commun au monde commun : la biodiversité*, in: Larrère C., Larrère R. (Eds.), *Penser et agir avec la nature: Une enquête philosophique*, La Découverte, Paris, France, pp. 263-278.
62. Latouche S. (1989), *L'occidentalisation du monde. Essai sur la signification, la portée et les limites de l'uniformisation planétaire*, La Découverte, Paris, France.
63. Latouche S. (1994), *Développement durable: un concept alibi. Main invisible et main mise sur la nature*, Tiers Monde 137: 80.
64. Lee J., Ingalls M., Erickson J. D., Wollenberg Eva (2016), *Bridging organizations in agricultural carbon markets and poverty alleviation: An analysis of pro-Poor carbon market projects in East Africa*, Global Environmental Change 39: 98-107. <https://doi.org/10.1016/j.gloenvcha.2016.04.015>
65. Lefevre J. C. (1990), *De la protection de la nature à la gestion du patrimoine naturel*, in: Jeudi H. P. (Ed.), *Patrimoines en folie*, Éditions de la Maison des sciences de l'homme, Paris, France, pp. 29-75.
66. Liverman D. (2004), *Who governs, at what scale and at what price? Geography, environmental governance, and the commodification of nature*, Annals of the Association of American geographers 94(4): 734-738.
67. MacDonald D. V., Hanley N., Moffatt I. (1999), *Applying the concept of natural capital criticality to regional resource management*, Ecological Economics 29(1): 73-87. [https://doi.org/10.1016/S0921-8009\(98\)00051-2](https://doi.org/10.1016/S0921-8009(98)00051-2)
68. Maris V. (2014), *Nature à vendre: Les limites des services écosystémiques*, Éditions Quae, Versailles Cedex, France.
69. Maris Virginia (2014), *Nature à vendre : Les limites des services écosystémiques*, Edition Quae, Paris, France.
70. Martinez-Alier J. (1993), *Distributional Obstacles to International Environmental Policy: the Failures at Rio and Prospects after Rio*, Environmental Values 2: 97-124. <https://doi.org/10.3197/096327193776679936>
71. Martinez-Alier J. (1995), *Distributional Issues in Ecological Economics*, Review of Social Economy 53(4): 511-528. <https://doi.org/10.1080/00346769500000016>
72. Martinez-Alier J. (2002), *The Environmentalism of the Poor*, Edward Elgar, Cheltenham, UK.
73. Marzouki M., Froger G., Ballet J. (2012), *Ecotourism versus mass tourism. A comparison of environmental impacts based on ecological footprint analysis*, Sustainability 4(1): 123-140. <https://doi.org/10.3390/su4010123>
74. McAfee K. (1999), *Selling nature to save it? Biodiversity and the rise of green developmentalism*, Environment and Planning D: Society and Space 17(2): 133-154.
75. McClurg C. G. (2002), *The international year of ecotourism: the celebration of a new form of colonialism*, McGeorge Law Review 34(1): 97-133.

76. Meadows Donella H., Meadows D. L., Randers J., Behrens W. W. III (1972), *The limits to growth: A report for the club of Rome's project on the predicament of mankind*, Potomac Associates Books, Earth Island, London, UK.
77. Meyer J. M. (1997), *Gifford Pinchot, John Muir, and the boundaries of politics in American thought*, *Polity* 30(2): 267-284. <https://doi.org/10.2307/3235219>
78. Munasinghe M., Swart R. (2005), *Primer on climate change and sustainable development: facts, policy analysis, and applications. Vol. 3*, Cambridge University Press, Cambridge, UK.
79. Myrdal G. (1957), *Economic Theory and Underdeveloped Regions*, Duckworth, London, UK.
80. Nel A. (2017), *A critical reflection on social equity in Ugandan carbon forestry*, in: Paladino Stephanie, Fiske Shirley J. *The carbon fix: forest carbon, social justice, and environmental governance*, Routledge, New York, NY, USA.
81. Nelson H., Vertinsky I. (2005), *The International Trade and Environmental Regime and the Sustainable Management of Canadian Forests*, in: Kant S., Berry R. A. (Eds.), *Institutions, Sustainability, and Natural Resources Institutions for Sustainable Forest Management*, Springer, Amsterdam, The Netherlands, pp. 257-296.
82. Nijkamp P., Lasschuit P., Soeteman F. (1992), *Sustainable Development in a Regional System*, in: Breheny M. J. (Ed.), *Sustainable Development and Urban Form*, Pion London, London, UK, pp. 39-66.
83. Norton-Griffiths M., Southey C. (1995), *The opportunity costs of biodiversity conservation in Kenya*, *Ecological Economics* 12: 125-139. [https://doi.org/10.1016/0921-8009\(94\)00041-S](https://doi.org/10.1016/0921-8009(94)00041-S)
84. Ohl Cornelia, Stickler Therese, Lexer W., Rîșnoveanu Geta, Geamăna Nicoleta, Beckenkamp M., Fiorini S., Fischer A., Dumortier M., Casaer J. (2008), *Governing Biodiversity: Procedural and Distributional Fairness in Complex Social Dilemmas*, 12th biennial IASC conference, Gloucestershire, UK, pp. 1-30.
85. Ojeda D. (2012), *Green pretexts: Ecotourism, neoliberal conservation and land grabbing in Tayrona National Natural Park, Colombia*, *Journal of Peasant Studies* 39(2): 357-375. <https://doi.org/10.1080/03066150.2012.658777>
86. Okeyo-Owuor J. B., Masese F. O., Mogaka H., Okwuosa E., Kairu G., Nantongo P., Agasha A., Biryahwaho B. (2011), *Status, Challenges and New Approaches for Management of the Trans-Boundary Mt. Elgon Ecosystem: A Review*, in: *Towards Implementation of Payment for Environmental Services (PES): a collection of findings linked to the ASARECA funded research activities*, VDM Verlag, Saarbrücken, Germany, pp. 60-82.
87. Olsson P., Moore M. L., Westley F. R., McCarthy D. D. (2017), *The concept of the Anthropocene as a game-changer: a new context for social innovation and transformations to sustainability*, *Ecology and Society* 22(2): 31. <https://doi.org/10.5751/ES-09310-220231>
88. Ostrom E., (1990), *Governing the Commons: The Evolution of Institutions for Collective Action (Political Economy of Institutions and Decisions)*, Cambridge University Press, Cambridge, UK..

89. Pearce D., Markandya A., Barbier E. B. (1989), *Blueprint for a Green Economy*, Earthscan, London, UK.
90. Pérez-Salom J.-R. (2001), *Sustainable Tourism: Emerging Global and Regional Regulation*, Georgetown International Environmental Law Review 13: 801-836.
91. Perroux F. (1964), *L'économie du XX-ième siècle*, PUF, Paris, France.
92. Perroux F. (1981), *Pour une philosophie du nouveau développement*, Les Preses de L'UNESCO, Paris, France.
93. Petre Raluca (2012), *Public consultation in spatial and urban plans. Case study: Galați built protected areas*, Urbanism Architecture Constructions 3(2): 53-62.
94. Petre Raluca (2016), *Sustainable development versus sustainable territorial development*, Revista Școlii Doctorale de Urbanism 1: 5-14.
95. Petre Raluca (2018), *Monitoring sustainable territorial development for a better governance*, doctoral thesis, Ion Mincu University of Architecture and Urban Planning, Bucharest, Romania.
96. Petrișor A.-I. (2010), *GIS analysis of wetland cover by NATURA 2000 sites*, Environmental Engineering and Management Journal 9(2): 269-273. DOI: 10.30638/eemj.2010.037
97. Petrișor A.-I. (2011), *Principii spațiale ale conservării biodiversității prin arii naturale protejate (Spatial principles of conserving biodiversity through natural protected areas)*, Analele Arhitecturii 6(1): 37-39.
98. Petrișor A.-I. (2016a), *Assessment of the long-term effects of global changes within the Romanian natural protected areas*, International Journal of Conservation Science 7(3): 759-770.
99. Petrișor A.-I. (2016b), *Brief critical analysis of concepts used for assessing the market value to ecosystem goods and services in urban and spatial plans*, Journal of Urban and Landscape Planning 1-2: 98-108.
100. Petrișor A.-I. (2017a), *A diversity-based approach to the spatial development of socio-ecological systems*, Urbanism Architecture Constructions 8(2): 143-162.
101. Petrișor A.-I. (2017b), *Joint ecological, geographical and planning vision of the components of urban socio-ecological complexes*, Lucrările seminarului geografic Dimitrie Cantemir 45: 179-190.
102. Petrișor A.-I., Meiță V., Petre R. (2016a), *Difficulties in achieving social sustainability in a biosphere reserve*, International Journal of Conservation Science 7(1): 123-136.
103. Petrișor A.-I., Meiță V., Petre R. (2016b), *Resilience: ecological and socio-spatial models evolve while understanding the equilibrium*, Urbanism Architecture Constructions 7(4):341-348.
104. Petrișor A.-I., Petrișor Liliana Elza (2014), *25 years of sustainability. A critical analysis*, Present Environment and Sustainable Development 8(1): 175-190.
105. Petrișor A.-I., Sîrdoev I., Ianoș I. (2020), *Trends in the national and regional transitional dynamics of land cover and use changes in Romania*, Remote Sensing 12(2): 230.
106. Piciu Gabriela Cornelia (2011), *Trading emissions: Principles and practices [in Romanian]*, Financial Studies 15(3): 19-30. <https://doi.org/10.3390/rs12020230>

107. Purice C., Romanescu G., Romanescu Gabriela (2013), *The protection of the geomorphosites within the Măcin Mountains National Park (Romania) and their touristic importance*, International Journal of Conservation Science 4(3):373-383.
108. Quenault Béatrice (2016), *La rhétorique de la résilience, une lueur d'espoir à l'ère de l'anthropocène?*, in: Rudolf Florence, *Les villes à la croisée des stratégies globales et locales des enjeux climatiques*, Presses universitaires de Laval, Canada, pp. 49-95.
109. Redclift M. (2005), *Sustainable development (1987–2005): an oxymoron comes of age*, Sustainable Development 13(4): 212-227. <https://doi.org/10.1002/sd.281>
110. Romanescu G. (2013), *Geoarchaeology of the ancient and medieval Danube Delta: Modeling environmental and historical changes. A review*, Quaternary International 293: 231-244. <https://doi.org/10.1016/j.quaint.2012.07.008>
111. Romanescu G. (2016), *Tourist exploitation of archaeological sites in the Danube Delta Biosphere Reserve area (Romania)*, International Journal of Conservation Science 7(3): 683-690.
112. Romanescu G., Stoleriu C. C. (2014), *Anthropogenic interventions and hydrological-risk phenomena in the fluvial-maritime delta of the Danube (Romania)*, Ocean & Coastal Management 102A: 123-130. <https://doi.org/10.1016/j.ocecoaman.2014.09.007>
113. Sachs J. (2005), *The End of Poverty: Economic Possibilities for our Time*, Penguin Press, New York, NY, USA.
114. Schlager E., Ostrom E. (1992), *Property-rights regimes and natural resources: a conceptual analysis*, Land Economics 68(3): 249-262.
115. Scholte P., de Groot W. T. (2010), *From Debate to Insight: Three Models of Immigration to Protected Areas*, Conservation Biology 24(2): 630-632.
116. Singh H., Husain T., Agnihotri P., Pande P. C., Iqbal M. (2012), *Biodiversity conservation through traditional beliefs system: a case study from Kumaon Himalayas, India*, International Journal of Conservation Science 3(1): 33-40.
117. Smith G., Phillips Elizabeth, Doret G. (2006), *The Contribution of Biodiversity Conservation on Private Land to Australian Cityscapes*, in: *Case studies of the 42nd ISoCaRP Congress*, pp. 1-8, http://www.isocarp.net/Data/case_studies/828.pdf
118. Spiegelberger T., Bergeret A., Crouzat É., Tschanz L., Piazza-Morel D., Brun J. J., Baud D., Lavorel S. (2018), *Interdisciplinary Construction of a Socio-ecological Vulnerability Trajectory Based on the Quatre Montagnes (Isère, France) Area from 1950 to 2016*, Journal of Alpine Research/Revue de géographie alpine 106(3): 5046.
119. Stan Mari-Isabella (2013), *European and International Legal Regulation of Environmental Impact Assessment in the coastal area of Romania*, Curentul Juridic 53(2): 111-118.
120. Stan Mari-Isabella, Țenea Diana Doina, Vintilă D. (2013), *Urban regeneration in Protected Areas – Solution for Sustainable Development of Cities in Romania*, Analele Universității Ovidius, Seria Construcții 15: 189-194.
121. Stan Mari-Isabella, Țenea Diana Doina, Vintilă D. (2014), *Developing a strategy for sustainable tourism. Case Study: Constanta Metropolitan Area*, Urbanism Architecture Constructions 5(3): 5-16.

122. Steffen W., Grinevald J., Crutzen P., McNeill, J. (2011), *The Anthropocene: conceptual and historical perspectives*, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 369(1938): 842-867.
<https://doi.org/10.1098/rsta.2010.0327>
123. Sterba J. P. (1994), *Reconciling anthropocentric and nonanthropocentric environmental ethics*, Environmental Values 3(3): 229-244.
124. Susa Arina Alma (2018), *Privatisation et marchandisation des biens communs dans un monde occidentalisé soumis au changement climatique*, Bachelor thesis, Université Grenoble Alpes, Grenoble, France.
125. Teoh C. H. (2002), *The Palm Oil Industry in Malaysia: From Seed to Frying Pan*, WWF Malaysia, Petaling Jaya, Selangor, Malaysia.
126. Tudor Constantina Alina, Iojă I. C., Pătru-Stupariu Ileana, Niță M. R., Hersperger Anna (2014), *How successful is the resolution of land-use conflicts? A comparison of cases from Switzerland and Romania*, Applied Geography 47: 125-136.
<https://doi.org/10.1016/j.apgeog.2013.12.008>
127. Turner E. C., Foster W. A. (2009), *The impact of forest conversion to oil palm on arthropod abundance and biomass in Sabah, Malaysia*, Journal of Tropical Ecology 25: 23-30.
128. Turner E. C., Snaddon J. L., Fayle T. M., Foster W. A. (2008), *Oil Palm Research in Context: Identifying the Need for Biodiversity Assessment*, PLoS ONE 3(2): e1572.
<https://doi.org/10.1371/journal.pone.0001572>
129. Turnpenny J. R., Russel D. J (2017), *The idea(s) of 'valuing nature': insights from the UK's ecosystem services framework*, Environmental Politics 26(6): 973-993.
<https://doi.org/10.1080/09644016.2017.1369487>
130. Ungureanu Irina, Bănică A., Tudora D., Ursu A., Sfică L. (2011), *The urban environment and the sustainable development. Conceptual and applicative preliminaries*, Present Environment and Sustainable Development 5(2): 111-122.
131. Upton Caroline, Ladle R., Hulme D., Jiang T., Brockington D., Adams W. M. (2008), *Are poverty and protected area establishment linked at a national scale?*, Oryx 42(1): 19-25. DOI: <https://doi.org/10.1017/S0030605307001044>
132. Urteaga-Crovetto P. (2016), *Between water abundance and scarcity: discourses, biofuels, and power in Piura, Peru*, Antipode 48(4): 1059-1079.
<https://doi.org/10.1111/anti.12234>
133. Vaishar A., Šfastná Milada, Trnka P., Dvořák P., Zapletalová Jana (2013), *South-Moravian rural borderland*, European Countryside 2: 115-132.
<https://doi.org/10.2478/euco-2013-0008>
134. Van Vugt M., Samuelson C. D. (1999), *The impact of personal metering in the management of a natural resource crisis: A social dilemma analysis*, Personality and Social Psychology Bulletin 25(6): 735-750.
135. Walpole M. J., Goodwin H. J. (2001), *Local attitudes towards conservation and tourism around Komodo National Park, Indonesia*, Environmental Conservation 28(2): 160-166.
136. Wearing S., Darcy S. (2011), *Inclusion of the "Othered" in Tourism*, Cosmopolitan Civil Societies Journal 3(2): 18-34.

137. Wicke Birka, Sikkema R., Dornburg Veronika, Faaij A. (2011), *Exploring land use changes and the role of palm oil production in Indonesia and Malaysia*, Land Use Policy 28: 193-206. <https://doi.org/10.1016/j.landusepol.2010.06.001>
138. Williams P. (2012a), *Managing urbanisation and environmental protection in Australian cities – approaches for integrating biodiversity and urban growth in Sydney*, International Journal of Law in the Built Environment 4(3): 217-232. <https://doi.org/10.1108/17561451211273365>
139. Winter C., Lockwood M. (2004), *The natural area value scale: a new instrument for measuring natural area values*, Australasian Journal of Environmental Management 11(1): 11-20. <https://doi.org/10.1080/14486563.2004.10648594>
140. Woerdman E. (2000), *Competitive distortions in an international emissions trading market*, Mitigation and Adaptation Strategies for Global Change 5: 337-360. <https://doi.org/10.1023/A:1026510207324>
141. Wood Megan (2002), *Ecotourism: Principles, practices and policies for sustainability*, UNEP, Nairobi, Kenya.
142. Zhang C., Fu S. (2009), *Allelopathic effects of eucalyptus and the establishment of mixed stands of eucalyptus and native species*, Forest Ecology and Management 258(7): 1391-1396. <https://doi.org/10.1016/j.foreco.2009.06.045>



© 2020 by the authors. Licensee UAIC, Iasi, Romania. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY-NC-ND) license (<https://creativecommons.org/licenses/by-nc-nd/4.0>).