

Abstracts

Economic Ideology about the Environment. From Adam Smith to Bjørn Lomborg

Hans Aage

For more than a century, economic theory has largely neglected resources and the environment. This, along with faith in market incentives and rational price calculation, as well as extrapolation of recent historical experience, accounts for environmental optimism among economists. In his 2001 book, Bjørn Lomborg reiterates economic ideology in its extreme form and adds further arguments about long-term cost-benefit analysis, unlimited growth, and the motives of environmentalists. The author of the present article, however, recognizes all of seven techniques of ideological distortion (i.e. mixing knowledge with beliefs and preferences) in his argumentation. These include the *suppression* of relevant information, the *repetition* and *conciliation* of false statements and concepts, the application of non-relevant theory, and ungrounded *suspicion* as regards the motives of opponents. Today, economic ideology is at last gradually disappearing, and economics can hence give a substantial, if marginal, contribution to environmental science, notably as regards the study of markets and prices, incentives, and the effects of various policy instruments. In particular, the author points out similarities between certain problems of monetary and environmental policy.

Energy Transition and CO₂ Emissions in Southern Europe: Italy and Spain (1861-2000)

Silvana Bartoletto and M.d.Mar Rubio

This article examines energy consumption, the transition from organic to fossil energy carriers, and the consequent emissions of CO₂ over a period of almost 150 years (1861-2000) in Italy and Spain. The authors' reconstruction and analysis of CO₂ emissions are based on new series of energy consumption

including both traditional and modern energy carriers. The article shows that traditional energy carriers should also be taken into account in long run series of pollution intensity of energy use, pollution intensity of the economy, decarbonisation, and other indicators in order to achieve a clearer interpretation of the processes involved. In this work the authors first present time series of primary energy consumption, final energy consumption, and energy intensities of Italy and Spain for the period 1861-2000. Then several CO₂ indicators for both countries are introduced: total emissions, emissions per capita, pollution intensity of energy (decarbonisation), and pollution intensity. The aim is to investigate whether a decoupling of CO₂ emissions, economic growth, and per capita energy consumption can be observed historically; if so, what the factors underlying this development are. Last but not least, these findings could be used to draw some conclusions on further potential development paths, and notably as to whether it is possible to consume more energy per capita and produce more output per capita at lower levels of emissions.

Finally, the authors employ a Divisia index perfect decomposition analysis to scrutinize differences in total emissions between the two countries. Decomposition analysis, particularly Divisia index based decomposition, has found application in a wide array of fields: aggregate energy intensity for industry, national energy consumption, aggregate energy indexes, total energy-related carbon dioxide, carbon dioxide per unit of GDP. To reach an in/depth understanding of the forces underlying different trends in CO₂ emissions, however, decomposition analysis will have to be applied at the per capita level.

The Impact of River Engineering Works on the Dyje River Floodplain in the Czech Republic *Hana Skokanova*

The article deals with changes to the lower part of the Dyje River floodplain, Czech Republic, caused by river engineering works. It investigates channel changes as well as changes in the number of cut-off meanders (cut-offs), oxbow lakes (oxbows), and pools, focusing on the impact of river engineering works on land use and specific natural conditions of the floodplain. The author begins with a history of river engineering works in the study area and their impact from the perspective of natural conditions and human activities. She then divides the study area into five sections, according to the period when the works were carried out, and examines each one using graphical methods and old maps to determine their morphometric characteristics at different periods. Her research shows a significant shortening of the Dyje, a decrease in its sinuosity, and fluctuations in its surface area and in the number of cut-offs, oxbows, and pools. As regards the natural environment, the engineering works determined a lowering of the water table and some changes in plant species. From the perspective of human activities, in the

form of land use changes, the study indicates that there was a significant reduction of meadow and pastureland, an increase in recreational areas, and a decrease in forestland during the period under investigation. Some of these changes – notably the increase of the overall water surface and the decrease of forestland – are a direct result of river engineering works, while others – the ploughing of the floodplain and the spread of recreational areas around reservoirs – are an indirect consequence thereof.

**The Loss of Landscape Efficiency:
An Ecological Analysis of Land-Use Changes
in Western Mediterranean Agriculture
(Vallès County, Catalonia, 1853-2004)**
Joan Marull, Joan Pino, Enric Tello

This study introduces a new concept, that of ‘landscape efficiency’, understood as the state in which the economic flows of social metabolism in a land matrix are improved while maintaining the patterns and processes of landscape ecology as healthy as possible. This concept is used to explore the hypothesis that a serious reduction in this efficiency, typified by significant landscape degradation, underlies the increase observed in external inputs and the corresponding loss of energy efficiency that the agrarian system has undergone over the last 150 years. In the present article, a structural and functional analysis of the landscape changes experienced by an area in the Vallès county (Barcelona Metropolitan Area in Catalonia, Spain) is conducted, employing an innovative methodology that combines two indicators taken over from landscape ecology (land cover diversity and ecological fragmentation) with two new socio-ecological indices recently developed by two of the authors of this study (landscape metrics and ecological connectivity). Our results point to an increase in land cover heterogeneity, ecological fragmentation and anthropogenic barriers, as well as to a growth in landscape diversity. All these changes are associated with a substantial reduction in the ecologically functioning areas and the county’s ecological connectivity, and have resulted in a severe loss of landscape functionality and efficiency in the study area. The changes have gone hand-in-hand with a sharp reduction in agrarian energy returns on energy inputs, suggesting the need for a more in-depth cross-disciplinary dialogue between the natural and social sciences to develop, from a common historical background, new criteria and methods to ensure more sustainable types of energy and land-use planning.

The Effect of the Israeli-Palestinian Conflict on Water Resources in the Jordan River Basin

Eugenia Ferragina

The article analyses the interaction between security and environment in the Mediterranean, focusing on the paradigmatic example of the Israeli-Palestinian conflict over water resources in the Jordan River basin. Control of water can hardly be considered the main cause of conflict between Israel and Palestine, but it certainly has increased the potential for conflict and had a long-term negative effect on the environment. The article starts with an historical reconstruction of the main attempts to reach a cooperative solution to water management in the Jordan River basin. These attempts failed as a consequence of the emergence of a zero-sum game between the co-riparian countries of the basin. The lack of cooperation has had a heavy impact on water quantity and quality. Two third of the deep wells in the centre of Israel are polluted, partly due to the infiltration of untreated wastewater from West Bank sites. The level of the coastal aquifer has fallen and sea water has penetrated it. As a consequence, much of the population of the Gaza Strip now has access only to brackish water that does not meet the WHO standard for drinking water.

The 1995 Oslo Interim Agreement recognised the water rights of Palestinians and the need to share water resources. Its aftermath witnessed new cooperative efforts involving officials, experts and people of both sides. The so-called “Second Intifada”, however, blocked cooperation in many sectors and provoked large-scale damage to the water infrastructure. The violent outbreaks of October 2000 had a serious impact on the wells, the water infrastructure and the wastewater disposal system. Reportedly, the Israeli deliberately filled up wells in Gaza as retaliation against the Palestinian attack on Israeli settlements, did not allow the Palestinians to buy spare parts for pumps, and kept water tankers from reaching the Palestinian villages. The Israeli authorities did not directly plan these acts of vandalism – they are mainly the consequences of an escalation of violence among the settlers – but were responsible for not taking action to prevent them and forbidding the use water as a weapon against Palestinians. The separation barrier Israeli has been building since 2002 does not follow the Green Line, but creates a de facto annexation of 16% of the West Bank. The wall keeps people on either side of the Wall separated from their land, water resources and social ties.

**The Introduction of Historical and Cultural Values
in the Sustainable Management of European Forests**
*Mauro Agnoletti, Steven Anderson, Elisabeth Johann,
Mart Kulvik, Andrey Kushlin, Peter Mayer, Cristina Montiel
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European forests have been shaped by millennia of human influence that have affected all their features. They represent a fundamental part of the cultural heritage of the continent, but their origins and present features cannot be fully understood without an historical perspective. Socioeconomic development, the abandonment of marginal lands, re-naturalization and inappropriate policies are rapidly erasing cultural values and contributing to the globalisation of cultural forest landscapes, often simplified into areas either managed for commercial exploitation or left to natural evolution. Although a number of EU directives regulate timber production and protect ecological functions and natural values, cultural values are not preserved by specific European initiatives at management level, nor included in certification standards. After many decades of research in the field of forest and environmental history, science is finally recognizing the importance not only of cultural values, but also of historians in the definition and application of the concept of sustainability. The Ministerial Conference on the Protection of Forests in Europe (MCPFE), the body in charge of developing forest policies for the European continent, has developed an agreement with the IUFRO research group, Forest and woodland History, in order to produce guidelines for the conservation of cultural, historical and landscape values in Sustainable Forest Management. The guidelines take into consideration the goals of the European Landscape Convention and the Unesco World Heritage List, in order to integrate the conservation of cultural values into rural development and the management of protected areas, developing strategies and actions at planning level and management that can be included in the forest policies of member states. The guidelines also include a list of indicators that can be added to the existing list of indicators for SFM produced by MCPFE. This paper is a summary of the document submitted to MCPFE and describes the main approaches presented in the guidelines. Several experts from various countries have contributed to the preparation of the document, as well as international institutions such as Unesco, the Council of Europe, the World Bank, the United Nation Forum on Forest, and the European Environmental History Society.

What is Global Environmental History?

Conversation with

**Piero Bevilacqua, Guillermo Castro, Ranjan Chakrabarti,
Kobus du Pisani, John R. McNeill, Donald Worster**

Edited by Gabriella Corona

The telematic debate has provided historians from different historiographic traditions and distant countries – Piero Bevilacqua, Guillermo Castro, Ranjan Chakrabarti, Gabriella Corona, Kobus du Pisani, John McNeill, Donald Worster – with an opportunity to compare views on the different interpretive paradigms. A wide range of subjects was covered: the definition of the discipline's field of research, themes, and chronological scope; the relationship between global and local; the role of the West in history and historiography; the perspective of the dominated; the discipline's role in policy making; and its relationship with the natural sciences. The discussion has yielded a rich harvest of reflections on global environmental history as a paradigm for the interpretation of the past and a cultural and political instrument for action in the present. Important indications have emerged as regards the research paths a global environmental historian can follow to contribute to this field of studies.