



## **Agroecosystem, Peasants, and Conflicts: Environmental History in Spain at the Beginning of the Twenty-First Century**

**Antonio Ortega Santos**



Over the past few years, the study of environmental history in Spain has seen an increase in projects and workgroups, mainly as a result of concern about the environmental impact of capitalist civilization. The present essay deals with the energy balance of agrarian systems, inequality of access to goods and environmental revenues, and competition over the natural resources of

human communities since the middle of the nineteenth century.

In Spain, environmental history has evolved from 1980s agrarian history. One of its principal aims is to create a framework for the interpretation of the metabolism between agro-ecosystems and rural communities.

Another important field of interest that has been gaining increasing importance is the study of the impact of privatization on the access to common environmental goods, and social resistance to this privatization, a result of the *mercantilization* of rural economies and the assigning of monetary value to resources previously subject to customary ways of management. Spanish environmental history shares this social-environmental bent with other emergent historiographies worldwide. It has also developed an important connection with the environmental historiography of the “South”, which has forged an interdisciplinary link with Political Ecology and Ecological Economy.

This article proposes to examine the origin, development and future of environmental history in Spanish historiography. It will focus on the increasing number of workgroups that have broken the mode of conventional methodology and opened themselves up to the influences of historiographies of other, non-European realities.

## **The origins of environmentalism in Spain**

Interest in how human societies have managed natural resources has sprung up only recently in Spanish historiography, in the wake of a growth of interest in the forestry and fishing industries among geographers, historians, and economists over the last two decades. Luis Urteaga has authored an original study in this field.<sup>1</sup> His innovative and original work is marked by an ability to integrate the environmental issue in a new paradigm incorporating contemporary “culture of the environment”. The scientific paradigm prevailing from the late seventeenth century onward advocated the removal of obstacles in the way of an increasing *anthrophization* of nature.

<sup>1</sup> L. Urteaga, *La tierra esquilmada. Las ideas sobre la conservación de la naturaleza en la cultura española del siglo XVII*, CSIC-Ediciones del Serbal, Barcelona 1987.

*Anthrophized* Nature was seen as a source of goods and inputs for the productive system (a key element in the proposed transformation of agricultural systems in the paradigm of the *Enlightenment*). This paradigm, rooted in classical thinking propounding an anthropocentric world view, aimed at a “triumph” over nature, while it completely ignored the negative environmental consequences of human activity. Voices were also raised, however, against the disruption of the order and harmony of natural creation. Urteaga rescues from oblivion authors such as Sarmiento, Cornide, Sáñez of Reguart, Larruga, Cavanilles, and others, who, starting in the eighteenth century, criticized modern fishing practices and forest management, pointing out that they resulted in economic losses (reduction of labor, low productivity increase). These writers, however, still lacked an adequate understanding of the limited character of available resources and, hence, of the fact that the new forestry and fishing practices were depleting Spanish forests and marine ecosystems.

Urteaga focuses especially on the forest policy of enlightened despotism in Spain in the late eighteenth and early nineteenth century, which sought to establish “scientific” management of forests to put a stop to the plundering of historic Spanish forests. There was certainly a shortage in the availability of firewood in the eighteenth century, although our knowledge is fragmentary, being based on a multiplicity of scattered testimonies regarding the difficulties experienced by many communities in procuring a firewood supply.

Urteaga also looks at forest history in the 1990s, dealing with topics such as the impact of forest legislation on traditional management systems; incompatibility between forest management and livestock raising; policies on restocking and planting; and conflicts over forestland ownership. The impact of the extension of scientific forestry often collided with projects of agricultural expansion into mountain terrain requiring intense anthropic modification of the environment in the form of pruning or crop rotation.

An especially interesting aspect that Urteaga brings into focus is the concern for the environment found in the writings of many pre-ecological authors of the late eighteenth and early nineteenth century. These authors gave rise to a school of thought which, with

the growing mercantilization of the environmental goods, inherited the Enlightenment project. This school eventually disappeared with the advent of modern industrial agriculture.

Other disciplines have contributed to the emerging of environmental history in Spain in the 1990s; notably landscape geography, which has contributed both micro-analytical studies and studies that have extended geography as a scientific paradigm. Forests have drawn special interest, both as regards their extension and their economic potential.<sup>2</sup> Some forest scientists have given exceptional contributions to the rationalization of forestland management policies,<sup>3</sup> devoting special attention to jurisdictional changes imposed by the liberal revolution on ownership of forest resources in Spain as a strategy to maximize their extraction.<sup>4</sup> Geographic, scientific, and forestry studies of the impact of policy actions on the structure of forest uses – stressing the role of the forest engineer corps as agent of state forest policies<sup>5</sup> – have played

<sup>2</sup> C.M. Valdés, *Tierras y montes públicos en la Sierra de Madrid. Sectores Central y Meridional*, Serie Estudios Ministerio Agricultura, Madrid 1996. C.M. Valdés, E. Sáez Pombo, “Los Planes de Aprovechamiento Forestales en los montes de la provincia de Madrid, 1873-1914”, in *La Sociedad Madrileña durante la Restauración, 1876-1931*, L.E. Otero Carvajal, A. Bahamonde Magro (eds), Comunidad de Madrid, Madrid 1989, vol. I, pp. 289-313. C. M. Valdés, R. Mata Olmo, E. Sáez Pombo, I.F. Gonzàles, “La propiedad pública forestal en el cambio de siglo: la relación de montes no catalogados de 1897”, in *Actas del VI Coloquio de Geografía Rural*, Asociación de Geógrafos Españoles, Universidad Autónoma de Madrid, Madrid 1991, pp. 117-134.

<sup>3</sup> J. Gómez Mendoza, *Ciencia y política de los montes españoles (1848-1936)*, ICONA, Madrid 1992. J. Gómez Mendoza, E. Sáez Pombo, C.M. Valdés, “La gestión territorial y ambiental de un parque metropolitano: el Parque Natural de la Cuenca Alta del Manzanares (Madrid)”, in *Actas del VII Coloquio de Geografía Rural*, Asociación de Geógrafos Españoles, Universidad de Córdoba, Córdoba 1994, pp. 384-392.

<sup>4</sup> J. Gómez Mendoza, “El marco jurídico y las formas de explotación de los montes de España”, in *VI Coloquio de Geografía Rural*, Asociación de Geógrafos Españoles, Universidad Autónoma de Madrid, Madrid 1992, pp. 79-143. J. Gómez Mendoza, R. Mata Olmo, “Actuaciones Forestales públicas desde 1940. Objetivos, criterios y resultados”, in *Agricultura y Sociedad*, 65, 1992, pp. 15-64.

<sup>5</sup> V. Casals Costa, “Defensa y Ordenación del bosque en España: Ciencia, Naturaleza y Sociedad en la obra de los Ingenieros de Montes durante el siglo

an important role in the rise of this historiographical trend.<sup>6</sup>

During the 1990s, socio-environmental awareness took historiography by storm. Having originally arisen within the field of political ecology, it generated a demand for an alternative development model based on social and environmental sustainability and a respect for cultural and biological diversity;<sup>7</sup> a model advocating the defense of equity at the global level, to be achieved by a multiplicity of local actions by social groups struggling for a more equitable allocation and redistribution of goods. By studying how environmental resources and incomes are allocated in individual societies,<sup>8</sup> we can better comprehend the struggle for survival and the endo- and exosomatic reproduction of human groups.

Distributive disputes take center stage in paradigms for the study of environmental conflicts (this will be dealt with later), and this has become one of the most innovative features of contemporary Spanish environmental history. They are especially to the fore in Joan Martínez Alier's diverse and complex studies, ranging from the global to the local. Martínez Alier has laid down guidelines for ecological history incorporating the concerns of global and "glocal" environmentalism within an interdisciplinary perspective. He has

XIX", in *Geocrítica*, 73, Universidad de Barcelona, Cátedra de Geografía Humana, Barcelona 1988. V. Casals Costa, *Los Ingenieros de Montes en la España Contemporánea, 1848-1936*, Ed. del Serbal, Barcelona 1996.

<sup>6</sup> H. Groome, "El desarrollo de la política forestal en el Estado Español: desde el siglo XIX hasta la guerra civil", in *Arbor*, 474, CSIC, Madrid 1985, pp. 59-89. H. Groome, "El desarrollo de la política forestal en el estado español: desde la guerra civil hasta la actualidad", in *Arbor*, 505, CSIC, Madrid 1988, pp. 65-110. H. Groome, *Historia de la Política Forestal del Estado Español*, Agencia del Medio Ambiente, Madrid 1990.

<sup>7</sup> J. Martínez Alier, *De la Economía Ecológica al Ecologismo Popular*, Icaria, Barcelona 1992.

<sup>8</sup> J. Martínez Alier, "Hacia una historia socioecológica: algunos ejemplos andinos", in *Ecología, Campesinado e Historia*, E. Sevilla Guzmán, M.L. González de Molina (eds), La Piqueta, Madrid 1993, pp. 219-257. J. Martínez Alier, "Indicadores de sustentabilidad y conflictos distributivos ecológicos", in *Ecología Política*, 10, CIP/Icaria, 1996, pp. 35-43. J. Martínez Alier, J. Sánchez, "Cuestiones distributivas de la economía ecológica", in *Ecología Política*, 9, CIP/Icaria, 1995, pp. 77-90.

thus come to the rescue of contemporary thinkers who were still hanging on to the concept of the economic-ecological importance of agrarian systems for the sustainable reproduction strategies of peasant groups. Martínez Alier argues that an emancipatory discourse informs peasant economies and that peasants promote old-new social practices rooted in environmental ethics. This is a new form of environmentalism: the “environmentalism of the poor”.

Political Ecology, Ecological Economics, and Environmental History, merged in scientific proposals granting special attention to changes in energy dynamics and the reproductive dimensions of agroecosystems in today's world, have lately come to the fore in Spain, deploying more materialistic approaches to collective forms of social action and the complex issue of the energy requirements of the operation of current Spanish farming systems. After concentrating on the role of agricultural property as a space for social reproduction in the 1980s and 90s,<sup>9</sup> Environmental historiography has lately been focusing increasingly on the theoretical aspects of the energy consumption of agricultural systems,<sup>10</sup> with the intent to verify the historical sustainability of the transition from traditional organic economies to an industrialized agriculture incorporating new technological and scientific packages that are characteristic of the green revolution. Advances have been made in the study of the material and energetic flow of agricultural systems, and on the historical sustainability of

<sup>9</sup> J. Martínez Alier, *La estabilidad del latifundismo*, Ruedo Ibérico, París 1968. Id., “Peasants and Labourers in Southern Spain, Cuba, and Highland Peru”, in *Journal of Peasant Studies*, vol. 1, 2, Routledge, 1974, pp. 133-163.

<sup>10</sup> P. Campos Palacín, J.M. Naredo, “La energía en los sistemas agrarios”, in *Agricultura y Sociedad*, 15, Ministerio de Agricultura, Madrid 1980, pp. 17-123. Id., “La degradación de los recursos naturales en la dehesa. Análisis de un modelo de dehesa tradicional”, in *Agricultura y Sociedad*, 26, Ministerio de Agricultura, Madrid 1983, pp. 289-381. P. Campos Palacín, “El valor económico total de los sistemas agroforestales”, in *Agricultura y Sociedad*, 71, Ministerio de Agricultura, Madrid 1994, pp. 243-256; P. Campos Palacín, J.M. Naredo, “Los Balances Energéticos de la Agricultura Española”, in *Agricultura y Sociedad*, 15, Ministerio de Agricultura, Madrid 1980, pp. 162-255; J.M. Naredo, *La Evolución de la Agricultura en España (1940-90)*, Biblioteca de Bolsillo, Servicio de Publicaciones, Universidad de Granada, Granada 1996.

different levels of fertilization,<sup>11</sup> whose limitations are dictated by the metabolism of Mediterranean Ecosystems before the introduction of management practices imposed by the paradigm of modernization.

In this historiographical transition, an important precedent that has set the guidelines for all subsequent studies on the metabolism of contemporary farming systems is the work of Pablo Campos and Jose Manuel Naredo. The imposition of the green revolution as a technological and productive package marked a break with the pre-industrial farming system prevailing in Spain up until the second half of the twentieth century, and led to a quick transition to industrialized agriculture. However, the only sources available on this process are limited and fragmented empirical information and unofficial records. The irruption of industrialized agriculture led to the loss of the natural fertility of the soil through the loss of the traditional crop rotation system and the reduction of livestock as pastures gave way to an expanding agriculture. There was a shift to an agricultural model based on non-renewable inputs, with a low energy efficiency of the livestock sector and a growing dependence on imported feed. Campos and Naredo made a huge empirical effort to understand how in the first quarter of the twentieth century the peasant economy was forced to make the leap to a mechanized industrial agriculture largely relying on fossil fuels. Their studies offer in-depth analyses, of broad empirical scope, of the performance of ecosystems, despite the absence of useful official statistics for the Franco period. By shedding light on how these ecosystems work energy-wise, the two historians aimed to provide a useful frame of reference for the setting up of programs in the Spanish Mediterranean mountains during the 1990s to generate an income for local rural communities. Campos and Naredo have illustrated how the spread of industrial agriculture in Spain altered biological cycles of reproduction of agro-ecosystems, redefining traditional systems of crop rotation in order to increase production beyond the limiting factors in environmental Mediterranean Ecosystems.<sup>12</sup>

<sup>11</sup> R. Garrabou, J.M. Naredo, *La Fertilización en los sistemas agrarios. Una perspectiva Histórica*, Fundación Argentaria Visor, Madrid 1996.

<sup>12</sup> P. Campos Palacín, J.M. Naredo, "Los balances energéticos de la economía

## From the South: the social turn of environmentalism in Spain

Spanish environmental history has incorporated methodologies, fields of study, and paradigm revisions from realities outside Europe, later developing its own approaches, which promote the emancipation of local communities in the face of pressure from the state or local power structures. This trend latched onto the “third wave of environmentalism”, inspired by Rama Guha’s reinterpretation of the unsustainability of North–South economic relations. Today the debate is leaning towards active participation in environmental struggles for the defense of spaces and resources of reproductive or symbolic value for rural or urban communities. In Spain, the former in particular, under the pressure of Nation-State Forestry Laws and the influence of the capitalist market, found themselves deprived of control of the management of natural resources. In other countries, instead, it was transnational companies that were the actors of this change in the access to and allocation of natural goods.<sup>13</sup>

In the 1990s, Spanish environmental history received especially significant impulse from Indian historiography. In India, monographs, regional studies, and research projects had been focusing on land use, forest management, irrigation systems, and the reemergence of social conflicts between local groups and colonial authorities or corporate commercial entities. Agricultural surveys highlighted changes in land tenure, social inequality, and the role of coloni-

española”, cit., pp. 163-255. Id., “Los energía en los sistemas agrarios”, cit., pp. 17-113; Campos Palacín, *El valor económico total* cit., pp. 243-256. Id., “La degradación de los recursos naturales en la dehesa. Análisis de un modelo de dehesa tradicional”, in *Agricultura y Sociedad*, 26, Ministerio de Agricultura y Pesca, Madrid 1986, pp. 289-380. Id., “Hacia la medición de la renta de bienestar del uso múltiple de un monte”, in *Las Montañas del Mediterráneo*, A. Ortega Santos, J. Vignet Zunz (eds), Exma, Diputación Provincial de Granada, Granada 2002, pp. 61-75.

<sup>13</sup> For a more extended overview, M.J.G. Parnwell, R.L. Bryant, *Environmental Change in South East Asia. People, Politics and Sustainable Development*, Routledge, London 1996. R.H. Grove, V. Damodaran, S. Sangwam, *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi 1998.

alism, drawing a scenario calling for strong social action.<sup>14</sup> Social protests and reactions to the appropriation of the biomass of natural areas through forestry laws and the placing of entire ranges of forest resources at the service of commercial interests are the key elements in the work of Ramachandra Guha and Madhav Gadgil,<sup>15</sup> who offer valuable methodologies for the study of European realities.<sup>16</sup>

In recent times, the field has become ready for the study of new forms of struggle. These have been designated as “environmentalism of the poor”<sup>17</sup>, a defense of the reproducibility of resources from predatory northern ecological models. The study of disputes over the allocation of assets and resources within and between societies<sup>18</sup> enhances the interdisciplinary facet of environmental history, staking out a space in the fields of political ecology<sup>19</sup> and ecological economy. Such disputes were well summarized by Rama Guha as being between *omnivores* and *ecosystem people*. They are the result of people’s struggle for access to productive resources and reproductive rights against a model of developed capitalism that rests on increasingly global social asymmetries; an “environmental scenario” in which both intra and inter-society conflicts arise, creating new and old forms of *environmental*

<sup>14</sup> A. Agrawal, K. Sivaramakrisnan, *Agrarian Environments. Resources, Representation and Rule in India*, Duke University Press, London 2000.

<sup>15</sup> R. Guha, *The Unquiet Woods. Ecological Change and Peasant Resistance in Himalaya*, University of California Press, Berkeley 1990. M. Gadgil, R. Guha, “State Forestry and Social Conflict in British India”, in *Past and Present*, 123, Past and Present Society, Oxford 1993, pp. 141-177. M. Gadgil, R. Guha, *This Fissured Land. An Ecological History of India*, University of California Press, Berkeley 1992. Id., *Ecology and Equity. The Use and Abuse of Nature in Contemporary India*, Routledge, New York 1995. R. Guha, “The Prehistory of Community Forestry in India”, in *Environmental History*, vol. 6, 2, White Horse, Cambridge 2001, pp. 212-238.

<sup>16</sup> M. Gadgil, R. Guha, “Los hábitats en la historia de la humanidad”, in *Ayer*, 11, Marcial Pons, Madrid 1993, pp. 49-111.

<sup>17</sup> J. Martínez Alier, *El Ecologismo de los pobres. Conflictos ambientales y lenguajes de valoración*, Icaria, Barcelona 2005. R. Guha, J. Martínez Alier, *Varieties of Environmentalism. Essays North and South*, Earthscan Publications, London 1997.

<sup>18</sup> Martínez Alier, *Indicadores de sustentabilidad* cit., pp. 35-44.

<sup>19</sup> On the interdisciplinary connection between environmental history and political ecology, see Martínez Alier, *De la Economía Ecológica* cit. Id., *Hacia una Historia Socioecológica* cit., pp. 19-257.

*refugees*.<sup>20</sup> Understanding such scenarios requires a sophisticated vision of conflict, far removed from the institutionalized paradigm of social history. We are looking here at everyday forms of protest that Scott<sup>21</sup> sees as reminiscent of Gandian passive resistance,<sup>22</sup> but which also display an endogenous capacity to develop strategies built around the rejection of industrial or agricultural models imposed from outside the community. These people are fighting against a “looting of the economy” which has not only destructured economies in the south but also squandered its natural and human capital, depriving present societies of their reserves for future development.

If the interdisciplinary work in India made its mark in the agenda of Spanish environmental history, the same is true of socio-environmental themes developed in studies on Latin America.<sup>23 24</sup> Here, an approach based on political ecology, environmental history, and ethnic identity has prevailed in recent years, producing studies centered on the history of agriculture, forestry, and environmental conflict. These studies, which include several monographs, place special emphasis on the relationship between humankind and environment, most notably as regards the impact of natural resource management.

Some studies on Mexico,<sup>25</sup> Argentina,<sup>26</sup> and Brazil<sup>27</sup> have shown

<sup>20</sup> R. Guha, “From Experience to Theory: Traditions of Socio-Ecological Research in Modern India”, in *Sustainability and the Social Sciences. A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*, E. Becker, T. Jahn (eds), Zed Books, New York 1999, pp. 96-112.

<sup>21</sup> J. Scott, *Weapons of the Weak. Everyday Forms of Peasant Resistance*, Yale University Press, New Haven 1995.

<sup>22</sup> For an overview of social resistance, see R. Guha, “El Ecologismo de los Pobres”, in *Ecología Política*, 8, CIP/Icaria, Madrid 1994, pp. 137-153.

<sup>23</sup> G. Castro Herrera, “The Environmental Crisis and the Task of Environmental History in Latin America” in *Environment and History*, 3, White Horse Press, Cambridge 1997, pp. 1-18.

<sup>24</sup> An excellent resource for literature on environmental actions in Latin America is [www1.lanic.utexas.edu/la/region/environment](http://www1.lanic.utexas.edu/la/region/environment), and also [www.csulb.edu/projects/laeh](http://www.csulb.edu/projects/laeh).

<sup>25</sup> F. Ortiz Monasterio, *Tierra profanada: historia ambiental de México*, Instituto Nacional de Antropología e Historia, Ciudad de México 1987. A. Tortolero Villaseñor, *Tierra, Agua y Bosques. Historia y Medio Ambiente en el México Cen-*

remarkable profundity of thought and achieved especially significant results. Some incorporate philosophical thought<sup>28</sup> on environmental issues to address subjects such as changes in land use and the impact of extractive activities in colonies in Latin American ecosystems.<sup>29</sup> Reinaldo Funes' study of Cuba clearly shows that since the nineteenth century, or even earlier, industrial complexes were tools in the service of economic growth models implemented in ecosystems without regard to their destructive consequences; most notably, their dependence on intense historical processes of deforestation.<sup>30</sup>

Since E. Leff's original work,<sup>31</sup> the debate on the environmental

*tral*, Centre Français d'études mexicaines et centroaméricaines, Ciudad de México 1996; G. López Castro, *Sociedad y Medio Ambiente en México*, El Colegio de Michoacán, Zamora 1997. A. Tortolero Villaseñor, "Tierra, Agua y bosques en Chalco (1890-1925). La innovación tecnológica y sus repercusiones en un medio rural", in *Agricultura Mexicana: crecimiento e innovaciones*, M. Menegus, A. Tortolero Villaseñor (eds), Instituto Mora, Colegio Michoacán, Instituto de Investigaciones Históricas, México 1999, pp. 174-236.

<sup>26</sup> E. Brailovsky, D. Foguelman, Memoria Verde. *Historia Ecológica de la Argentina*, Sudamericana, Buenos Aires 1991. G. Zarilli, "Capitalism, Ecology and Agrarian Expansion in the Pampean Region, 1890-1950", in *Environment and History*, 6, White Horse, Cambridge 2001, pp. 561-583.

<sup>27</sup> W. Dean, *Brazil and the Struggle for Rubber: a Study in Environmental History*, Cambridge University Press, New York 1987. Id., *With Broadax and Firebrand. The Destruction of Brazil's Atlantic Forest*, University of California Press, Berkeley 1995. S. Miller, *Fruit less Tress. Portuguese Conservation and Brazil's Colonial Timber*, Stanford University Press, Stanford, 2000.

<sup>28</sup> J. Augusto Padua, *Un Sopro de Destruição. Pensamento Político e Crítica Ambiental no Brasil Esclavista (1786-1888)*, Jorge Zahar Editor, Rio de Janeiro 2002.

<sup>29</sup> For references to works on Colombia, see [www.unal.edu.co/webidea](http://www.unal.edu.co/webidea) (Instituto de Estudios Ambientales). For Chile, [www.historiaecologica.cl](http://www.historiaecologica.cl). For studies on natural resource management, CIECO-México, [www.oikos.unam.mx/cieco/](http://www.oikos.unam.mx/cieco/). For a general approach to environmental studies in different South American states, [www.stanford.edu/group/LAEH](http://www.stanford.edu/group/LAEH).

<sup>30</sup> R. Funes Monzote, "La conquista de Camagüey por el azúcar. 1898-1926. El impacto ambiental de un milagro económico", in *Tiempos de América*, 8, Centro de Investigaciones de América Latina, Castellón 2001, pp. 3-28. Id., *De bosque a sabana: azúcar, medio ambiente y deforestación en Cuba, 1492-1926*, Siglo XXI Editorial, México 2004.

<sup>31</sup> E. Leff, *Ecología y capital. Racionalidad ambiental, democracia participativa*

contradictions of capitalism and the creation of an alternative capitalist development model has led historians to condemn capitalism's dispossession and marginalization of the rural world.<sup>32</sup> In a recent study by Leff on Latin America, political ecology occupies a border zone between ecological economics and economics, as the author strives to analyze the significance of the reappropriation of nature for the purpose of socio-economic development. Such an approach is necessary to address the inadequacy of a purely economic valuation of nature and the concomitant issue of the allocation of environmental goods in a market economy.<sup>33</sup>

According to another South American author, Escobar, on one hand we have organic nature, on the other the capitalization and *technicalization* of nature by a dominant culture founded on science and the market. There is resistance to the hegemonic dominance of uniformity, to *thingification*, as environmentalists and ethnic minorities struggle for social justice and equality.<sup>34</sup> Environmental conflict is indeed destined to become one of the principal historiographic topics.<sup>35</sup> There are already some studies on social struggles over goods and natural resources, connected with, but outside of, the paradigm of social history. These studies have redefined the forms of struggle and the key motivations of resistance against the state, local authorities, and transnational companies, challenging Folchi's arguments,<sup>36</sup>

*y desarrollo sustentable*, Siglo XXI Editorial, México 1986. Id., *Los problemas del conocimiento y la perspectiva ambiental del desarrollo*, Siglo XXI Editorial, México 1986. Id., *Medio ambiente y desarrollo en México*, UNAM-M.A, Porrúa, México 1990. E. Leff, J. Carabias, *Cultura y manejo sustentable de los recursos naturales*, UNAM-M.A, Porrúa, México 1993.

<sup>32</sup> D. Barkin, *Riqueza, pobreza y desarrollo sustentable*, Centro de Ecología y Desarrollo, Editorial Jus, México 1998.

<sup>33</sup> E. Leff, "La Ecología Política en América Latina. Un Campo en construcción", in *Los Tormentos de la Materia. Aportes para una Ecología Política Latinoamericana*, H. Alimonda (ed.), CLACSO, Argentina 2007, pp. 21-41.

<sup>34</sup> For ethnoecology and its link with environmental history, see V. Toledo's illustration, available at [www.oikos.unam.mx/prueba\\_menus/toledo](http://www.oikos.unam.mx/prueba_menus/toledo), and the journal *Ethnoecología*, [www.ethnoecologia.org.mx](http://www.ethnoecologia.org.mx).

<sup>35</sup> For the study of environmental conflicts, [www.olca.cl](http://www.olca.cl) (Observatorio Latinoamericano de Conflictos Ambientales), and <http://conflict.colorado.edu>

<sup>36</sup> M. Folchi Donoso, "Conflictos de contenido ambiental y ecologismo de los

which neglect to consider the role of individual or social perception of environmental damage in determining conflicts. Historiography on environmental conflicts has a more sophisticated approach. It takes into account dynamics of exclusion and dislocation implemented by the state legislative apparatus, and their impact on community management practices. In many cases, such as that of Chile, environmental historians have been analyzing conflicts against industrial development, mining, or a model of forest management.<sup>37</sup>

Some environmental struggles have stimulated the production of numerous works reflecting the wide dissemination of so far hidden forms of environmentalist resistance such as protest speeches and social mobilization in defense of land ownership and the environment. These struggles have the potential to lead to new ways of managing natural resources. From the earliest work in this particular field by Arturo Escobar<sup>38</sup> and Sonia E. Alvarez<sup>39</sup> to the most recent by H. Collison,<sup>40</sup> scholars have been arguing that socio-environmental sustainability has been gaining increasing importance in the eyes of Latin American ethnic-peasant groups. The logic of the monetary

pobres: no siempre pobres, no siempre ecologistas”, in *Ecología Política*, 22, Icaria, Barcelona 2001, pp. 79-100.

<sup>37</sup> Id., “La insustentabilidad del boom minero chileno, política y medio ambiente 1983-2003”, in *Ecología Política*, 23, Icaria, Barcelona 2003, pp. 23-50. R. Montalba-Navarro, N. Carrasco, “Modelo forestal chileno y conflicto indígena ¿ecologismo cultural mapuche?”, in *Ecología Política*, 26, Icaria, Barcelona 2003, pp. 63-76. Id., “La insustentabilidad de la industria del cobre en Chile: Los hornos y los bosques durante el siglo XIX”, in *Revista Mapocho*, 49, Biblioteca Nacional de Chile, Chile 2001, pp. 149-175. E. Dore, “Environment and Society. Long-Term Trends in Latin American Mining”, in *Environment and History*, 6, White Horse Press, Cambridge 2000, pp. 1-29.

<sup>38</sup> A. Escobar, “Cultural Politics and Biological Diversity. State, Capital and Social Movements in the Pacific Coast of Colombia”, in *Between Resistance and Revolution. Cultural Politics and Social Protest*, R.G. Fox, O. Starn (eds), Rutgers University Press, New Jersey 1997, pp. 40-65.

<sup>39</sup> S.E. Álvarez, “Reweaving the Fabric of Collective Action: Social Movements and Challenges to ‘Actually Existing Democracy’ in Brazil”, in Fox, Starn (eds), *Between Resistance and Revolution* cit., pp. 83-118.

<sup>40</sup> H. Collinson (ed.), *Green Guerrillas. Environmental Conflicts and Initiatives in Latin American and the Caribbean*, Black Rose Books, Montreal 1997.

valuation of environmental goods and the imposing of the dynamics of global market all over the world has resulted in the depredation of natural resources and confronted international market actors with the problem of settling environmental claims. Some protests adopt a defensive logic, choosing strategies linked to the reproductive needs of human groups or designed to counter the threat of external social forces in the context of capitalist economy. These strategies involve discourses and acts of environmental resistance that are close to those of environmental movements in the North.<sup>41</sup>

## **Environmental history in Spain: an emerging field for understanding of the future**

Today, at the beginning of the twenty-first century, Spanish environmental history has been incorporating some elements of its constitutive origins, outlined in the first part of the present article. At the same time, it is leaning towards programs with the above-discussed Southern, social-environmental bent. To a large extent, researchers and emerging groups of the 1980s have moved from forest history to environmental history, expanding their methodologies and proposals for the study of the energy balances of farming activity.

It has not been an easy road, but during the last decade scientific meetings have been held which have set down guidelines for new work in environmental history in Spain. The first Meeting of Environmental History in Spain was held in May 1999 at Andujar (Jaen), the second in November 2001 at Huesca, and a third one in April 2006 at Carmona (Seville), in parallel with the III Latin American and Caribbean Environmental History Symposium. It has taken the commitment of many researchers to achieve all this.<sup>42</sup>

<sup>41</sup> For a typology of peasant-environmental conflicts, in a more complex perspective, D. Soto Fernández, A. Herrera González de Molina, M.L. González de Molina Navarro, A. Ortega Santos, “La protesta campesina como protesta ambiental, siglo XVIII-XX”, in *Historia Agraria*, 47, SEHA/Servicio Publicaciones Universidad de Murcia, Murcia 2007, pp. 31-55.

<sup>42</sup> One of the first building blocks in the construction of environmental history in Spain is J. Martínez Alier, M. González de Molina (eds), “Historia y Ecología”,

These meetings have helped scholars to revise approaches first inaugurated in the 1980s and enrich them with new methodology and objectives. As in the early years of the emergence of environmental history, a central axis has been forest history, notably as regards changes in forms of ownership (from communal to state or private) in the late twentieth century and changes in natural resource management. Little attention has been given so far to the impact of these transformations on the functioning of ecosystems. Some local studies on Galicia,<sup>43</sup> the Basque country, Navarra<sup>44</sup> and Andalucía,<sup>45</sup> as well as other areas<sup>46</sup>

in *Ayer*, 11, Marcial Pons, Madrid 1993, (incorporating new methodologies proposed by J. Martínez Alier, R. Guha, M. Gadgil, C. Merchant, J. Radkau, and P. Bevilacqua).

<sup>43</sup> A. Arteaga Rego, X. Balboa López, "Montes públicos y desamortización en Galicia", in *Agricultura y Sociedad*, 57, Ministerio de Agricultura, Madrid 1990, pp. 157-201. Id., "La individualización de la propiedad colectiva: aproximación e interpretación del proceso en los montes de Galicia", in *Agricultura y Sociedad*, 65, Ministerio Agricultura, Madrid 1992, pp. 101-120. X. Balboa López, *O Monte en Galicia*, Xerais, Vigo 1990. O. Rey Castelao, *Montes y política forestal en la Galicia del Antiguo Régimen*, Universidad de Santiago de Compostela, Santiago de Compostela 1995. E. Rico Boquete, *Política forestal e repoboacions en Galicia, 1941-71*, Universidad de Santiago de Compostela, Santiago de Compostela 1995. O el más reciente Grupo de Estudio de la Propiedad Comunal, "La devolución de la propiedad vecinal en Galicia (1960-1985)", in *Historia Agraria*, 33, Servicio Publicaciones Universidad de Murcia, Murcia 2004, pp. 107-131.

<sup>44</sup> I. Iriarte Goñi, *Bienes comunales y capitalismo agrario en Navarra*, Serie Estudios Ministerio de Agricultura, Madrid 1997. J.M. Lana Berasain, "Los aprovechamientos agrícolas comunales en el Sur de Navarra entre los siglos XIX-XX", in *Agricultura y Sociedad*, 65, Ministerio de Agricultura, Madrid 1992, pp. 361-368.

<sup>45</sup> J.I. Jiménez Blanco, "Presente y pasado del Monte Mediterráneo en España", in *Agriculturas Mediterráneas y mundo campesino. Cambios históricos y retos actuales*, A. Sánchez Picón (ed.), Instituto de Estudios Almerienses, Almería 1994, pp. 111-134. J. I. Jiménez Blanco, *Privatización y apropiación de tierras municipales en la Baja Andalucía, 1750-1995*, Biblioteca de Urbanismo y Cultura, EMEMSA/Ayuntamiento de Jerez de la Frontera, Jerez de la Frontera 1996. A. Ortega Santos, "Common Woodlands in Mediterranean Societies: Commercial Management versus Forms of Peasant Resistance in Andalucía (Spain), 1750-1930", in *Forest History. International Studies on Socioeconomic and Forest Ecosystem Change*, M. Agnoletti, S. Anderson (eds), CABI Publishing, New York 2000, pp. 223-237. Id., "La desarticulación de la propiedad comunal en España, siglos XVIII-XX: una aproximación multicausal y socioambiental a la historia de los montes públicos",

exist, but they do not address the issue of the socio-functionality of natural resources; notably, in these studies commons hardly emerge as a resource for the reproduction of rural communities. Commons were the target of legislative levers created by liberal policies to transform them into inputs for the budding agricultural-industrial production system. This process made management more efficient in monetary terms, but not in socio-environmentalist ones.<sup>47</sup> During the 1990s, this study trend was revised and expanded by other publications on commons, which went beyond Hardin's at the time hegemonic paradigm regarding the managing of commons and rejected the priority of economic returns. Evaluating the socio-environmental profitability of different forms of natural resource management requires information gathered in the field on the energy balances of agro-ecosystems, and notably on the metabolic function that forest areas perform for the agro-ecosystem as a whole. Such studies formed a separate trend in Spanish environmental history, concentrating on the study of flows of nutrients and energy in different ecosystems, according to methodological proposals formulated by members of the Institute for Social Ecology in Vienna. From their earliest work in this field, scholars adhering to this trend opted for a reexamination of the constituent elements of peasant economies and a redefinition of the evolution of capitalist economy following the industrial revolution.<sup>48</sup>

in *Ayer*, 42, Marcial Pons/Asociación de Historia Contemporánea, Madrid 2001, pp. 191-213. Id., *La tragedia de los cerramientos. Desarticulación de la comunalidad en la provincia de Granada*, Centro Francisco Tomás y Valiente, Fundación Instituto de Historia Social, Alzira 2002.

<sup>46</sup> J.R. Moreno Fernández, *El Monte Público en La Rioja durante los siglos XVI-II-XX: aproximación a la desarticulación del régimen comunal*, Diputación Provincial de Logroño, Logroño 1994. Id., "El Régimen Comunal y la reproducción de la comunidad campesina en las sierras de La Rioja, Siglos XVIII-XX", in *Historia Agraria*, 15, Servicio de Publicaciones de la Universidad de Murcia, Murcia 1998, pp. 75-113.

<sup>47</sup> Grupo Estudios Historia Rural, "Más allá de la propiedad perfecta. El proceso de privatización de los montes públicos españoles (1859-1920)", in *Noticiario de Historia Agraria*, 8, Servicio de Publicaciones e Intercambio Científico, Universidad de Murcia, Murcia 1994, pp. 99-155.

<sup>48</sup> In a more complex theoretical perspective about the integration of peasant-

The economies of southern Europe continued in their path of adaptation and integration into world markets. Compared to the economies of the north, these economies are constrained by ecosystems with serious limitations as regards the availability of resources, water and nutrients.<sup>49</sup> Recently, there has been a trend in environmental history to produce studies at both the macro and the micro level that employ historical sources to estimate balances of flows, material, and energy at a nation-state scale. Micro-level studies target restricted areas – municipalities or counties – bringing to bear a whole methodological array developed in studies on other areas of the world.<sup>50</sup> This strategy involves addressing the balance sheets of energy flows and allows reconstructions within small error margins of the metabolism of the ecosystems under examination. Above all, it allows researchers to precisely evaluate the historical sustainability of the agro-ecosystems<sup>51</sup> impacted by the agrarian policies of the nineteenth century.

Along with this implementation of micro socio-environmental methodology, there is a whole new series of publications that have been reconstructing the function of Spanish economy through analyses of materials and energy flows. Distancing themselves from the ideas of traditional liberal economy, these studies approach economic problems at the actual level of *oikonomía*, going back to a more material vision of

rural communities in emergence of capitalism in Andalucía, E. Sevilla Guzmán, M. González de Molina, “Ecología, campesinado e historia”, in *Col. Genealogía del Poder*, 22, La Piqueta, Madrid 1993.

<sup>49</sup> M. González de Molina, “Condicionamientos ambientales del crecimiento agrario español, siglos XIX y XX”, in *El pozo de todos los males. Sobre el atraso de la Agricultura Española Contemporánea*, J. Andreu Pujol, M. González de Molina (eds), Crítica, Barcelona 2001, pp. 43-95. M. González de Molina, “Environmental Constraints on Agricultural Growth in XIXth Century Granada (Southern Spain)”, in *Ecological Economics*, 41, 2, Elsevier Science, Amsterdam 2002, pp. 257-270.

<sup>50</sup> For more information [www.iff.ac.at/socec/forschung/forschung\\_stoff\\_en.php](http://www.iff.ac.at/socec/forschung/forschung_stoff_en.php).

<sup>51</sup> G. Guzmán Casado, M. González de Molina, “Sobre las posibilidades del crecimiento agrario en los siglos XVIII, XIX y XX. Un estudio de caso desde la perspectiva energética”, in *Historia Agraria*, 40, SEHA/Universidad de Murcia, Murcia, 2006, pp. 437-471. M. González de Molina, *Tras los pasos de la insustentabilidad. Agricultura y medio ambiente en perspectiva histórica, siglo XVIII-XX*, Icaria, Barcelona 2006.

economic activity. Jose Manuel Naredo,<sup>52</sup> in particular, has produced one of the most innovative revisions in this field. Following in his tracks, Oscar Carpintero<sup>53</sup> argued that the Spanish economy *sustained* the *unsustainability* of a model of high consumption of raw materials and non-renewable resources throughout the second half of the twentieth century. This concept had already been applied to the case of agriculture by P. Campos and J. M. Naredo in the 1980s, at both levels, that of economic dependency and that of the environmental consequences of the model in the context of the global ecological crisis.

A contribution of ideas has also been coming from the field of economics, notably from workgroups in Catalonia gathered around E. Tello and R. Garrabou. Their research started out with studies addressing changes in land ownership structures in Catalonia<sup>54</sup> and culminated in projects analyzing changes in historical landscapes and the social metabolism of agro-ecosystems.<sup>55</sup> E. Tello's most re-

<sup>52</sup> J.M. Naredo, "La modernización de la agricultura española y sus repercusiones ecológicas", in *Naturaleza Transformada*, M. González de Molina, J. Martínez Alier (eds), Icaria, Barcelona 2001, pp. 55-86. Id., *La Evolución de la Agricultura en España (1940-2000)*, Universidad de Granada, Granada 2004. J. M. Naredo, P. Campos, "Los balances energéticos de la economía española", in *Agricultura y Sociedad*, Ministerio Agricultura, Madrid 1980, pp. 163-255. Id., "Los energía en los sistemas agrarios", in *Agricultura y Sociedad*, 15, Ministerio Agricultura, Madrid 1980, pp. 17-113.

<sup>53</sup> O. Carpintero, *Entre la economía y la naturaleza*, Libros de la Catarata, Madrid 1999. Id., *El metabolismo de la economía española. Recursos naturales y huella ecológica (1955-2000)*, Fundación Cesar Manrique, Lanzarote 2005.

<sup>54</sup> R. Garrabou, J. Planas, E. Saguer, "Sharecropping and the Management of Large Rural Estates in Catalonia, 1850-1950", in *Journal of Peasant Studies*, 28, 3, 2001, pp. 89-108. R. Garrabou, E. Tello Aragay, "Constructor de paisatjes. Amos de masies, masovers y rabassaires al territori del Vallès (1716-1860)", in J. Fontana (ed.), *Història i projecte social. Reconeixement d'una trajectòria*, Crítica, Barcelona 2004, pp. 83-104.

<sup>55</sup> E. Tello Aragay, "La formación histórica de los paisajes agrarios mediterráneos: una aproximación coevolutiva", in *Historia Agraria*, 19, SEHA/Universidad de Murcia, Murcia 1999, pp. 195-211. X. Cussó, R. Garrabou, J.R. Olarieta, E. Tello Aragay, "Balances Energéticos y usos del suelo en la agricultura catalana. Una comparación entre mediados del siglo XIX y finales del siglo XX", in *Historia Agraria*, 40, SEHA/Universidad de Murcia, Murcia 2006, pp. 471-501. E. Tello Aragay, J. Marull, J. Pino, J.M. Mallarach i Carrera, "Análisis estructural y

cent publication addresses the issue of global unsustainability from the perspective of ecological economic history.<sup>56</sup>

Moving from his criticism of a monetary approach to economic reality (*crematística*) as opposed to one based on *oikonomía*, E. Tello proposes going back to “alternative economic thought”. This allows alternative thinking and a better critical understanding of the problems of the global socio-environmental crisis and the measurable impacts of socio-economic systems on the environment.<sup>57</sup> Action on the human *tecnosfera* implies a change in the metabolism of human societies. This requires a revised epistemology capable of reformulating the concepts of development, growth and efficiency at a global scale. The incompatibility of the satisfaction of vital needs and the requirements of capitalist exploitation lies at the origin of the lack of sustainability of the North-South relationship.

A third element that has found a place in Spanish environmental historiography is that of the education of the general public.<sup>58</sup> Works such as Manuel Gonzalez de Molina's<sup>59</sup> have become essential sources for teachers and researchers seeking to inform themselves about the path taken by environmental history in recent decades.

Claiming the ability to understand the complexity of Western society involves a capability to develop a criticism of its predation of global resources and calling into question a way of life that is cur-

funcional de la transformación del paisaje agrario en el Vallés durante los últimos 150 años (1853-2004): relaciones con el uso sostenible del territorio”, in *Revista de Ciencias Sociales*, 25, 2006, pp. 105-126.

<sup>56</sup> E. Tello Aragay, *La historia cuenta: del crecimiento económico al desarrollo humano sostenible*, El Viejo Topo, Barcelona 2005.

<sup>57</sup> Id., “La mundialización capitalista y el ecosocialismo de andar por casa”, in *Mientras Tanto*, 76, 2000, pp. 31-40. Id., “Globalización del comunismo? Huelas y deudas ecológicas”, in *Mientras Tanto*, 80, 2001, pp. 83-93. Id., “Economía y ecología de las sociedades humanas: una nueva cultura para la justicia global”, in *El valor de la ciencia*, S. López Arnal (ed.), El Viejo Topo, Barcelona 2001, pp. 101-150.

<sup>58</sup> J. Alonso Millán, *Una tierra abierta. Materiales para una historia ecológica de España*, Compañía Literaria, Madrid 1995.

<sup>59</sup> M. González de Molina, *Historia y medio ambiente*, Eudema Historia, Madrid 1993. Id., *Hombre y naturaleza en el siglo XIX. La raíces de la crisis ecológica*, Santillana Hoy Historia, Madrid 1996.

rently threatened by a global ecological crisis rooted in the industrialization model. Researches working in this direction can be found in the journal *Ayer*,<sup>60</sup> which has adhered to the agenda of some recent United States environmental history – notably work by John McNeill on the international system and environmental change in the twentieth century – by publishing a variety of studies identifying similar patterns in the Spanish context. Other notable work of recent years includes publications on Neo-Malthusianism,<sup>61</sup> a study in the still insufficiently trodden field of urban environmental history,<sup>62</sup> essays on biological indicators,<sup>63</sup> and works in forest or environmental history dealing with energy balances in agro-ecosystems.<sup>64</sup>

The constituent elements of Spanish environmental history were brought together to form a new paradigm in a book edited by Manuel Gonzalez de Molina and Joan Martinez Alier,<sup>65</sup> a compilation of some of the best studies representing the various trends of environmental history in Spain and America. This is one of the results of the synergy created at the scientific meetings mentioned above. The book is structured around several themes. One of the first is a proposed update of conventional agricultural history, both from the perspective of local and regional dynamic economic development and from that of the study of climate and its impact on Mediterranean agriculture; an approach cen-

<sup>60</sup> A. Sabio Alcutén (ed.), “Naturaleza y conflicto social. La historia contemporánea desde el medio ambiente”, in *Ayer*, 46, Marcial Pons/Asociación Historia Contemporánea, Madrid 2002.

<sup>61</sup> E. Masjuan, “Procreación consciente y discurso ambientalista: anarquismo y neomaltusianismo en España e Italia, 1900-1936”, in *Ayer*, 46, Marcial Pons/Asociación Historia Contemporánea, Madrid 2002, pp. 63-93.

<sup>62</sup> J. Martínez Alier, “Los indicadores de insustentabilidad urbana como indicadores de conflicto social”, in *Ayer*, 46, Marcial Pons/Asociación Historia Contemporánea, Madrid 2002, pp. 43-63.

<sup>63</sup> J.M. Martínez Carrión, “Biología, historia y medio ambiente. La estatura como espejo del nivel de vida de la sociedad española”, in *Ayer*, 46, Marcial Pons/Asociación Historia Contemporánea, Madrid 2002, pp. 93-123.

<sup>64</sup> M. González de Molina, G. Guzmán Casado, A. Ortega Santos, “Sobre la sustentabilidad de la agricultura ecológica. Las enseñanzas de la historia”, in *Ayer*, 46, Marcial Pons/Asociación Historia Contemporánea, Madrid 2002, pp. 155-187.

<sup>65</sup> González de Molina, Martínez Alier (eds), *Naturaleza Transformada* cit.

tered on the recognition of the limits of growth in the contemporary world<sup>66</sup> and the need for *adaptive management* of the environment.

A second, underinvestigated thematic terrain is that of industry and the environment in Spain. There have been some studies on mining activities and their environmental impact from a historical perspective, or on cases of pollution in the industrial use of natural resources.<sup>67</sup> Only a few authors have researched the impact of population growth on vegetation and potential industrial uses of the countryside.<sup>68</sup>

A current trend in Spanish environmental history is to reexamine changes in ownership of communal goods, especially of public-state woodlands, which have been subject to a wider range of processes of disentailment. Above all, there is a reinterpretation of the role of these forest areas in meeting the reproductive needs of rural communities. Iñaki Iriarte provides an accurate breakdown of the evolution of forms of ownership.<sup>69</sup> Another study,<sup>70</sup> by the author of the

<sup>66</sup> J.M. Naredo, "La modernización de la agricultura española y sus repercusiones ecológicas", in *ibid.*, pp. 55-85. M. González de Molina, "El modelo de crecimiento agrario del siglo XIX y sus límites ambientales. Un estudio de caso", in *ibid.*, pp. 87-125. V. Pinilla Navarro, "Desarrollo agrícola y medio ambiente. La agricultura aragonesa (1800-1975)", in *ibid.*, pp. 125-160. F. Sánchez Rodrigo, "Clima y producción agrícola en Andalucía durante la edad moderna (1587-1729)", in *ibid.*, pp. 161-180.

<sup>67</sup> A. Sánchez Picón, "Transición energética y expansión minera en España", in González de Molina, Martínez Alier (eds), *Naturaleza Transformada*, cit., pp. 265-287. J.D. Pérez Cebada, "Lluvia ácida y deforestación en la mina: el primer expediente de compensación por daños causados por efecto de la contaminación atmosférica (1847)", in *ibid.*, pp. 239-264.

<sup>68</sup> J.G. Latorre, A. Sánchez Picón, J.G. Latorre, "The Man-Made Desert Effects of Economic and Demographic Growth on the Ecosystem of Arid Southeastern Andalusia", in *Environmental History Review*, 6, 1, American Society for Environmental History, 2001, pp. 75-95. Id., "Dealing with Aridity: Socioeconomic Structures and Environmental Changes in an Arid Mediterranean Region", in *Land Use Policy*, 18, Elsevier Science, Amsterdam 2001, pp. 53-64. J.G. Latorre, *Almería, Hecha a mano: una historia ecológica*, Fundación Cajamar, Almería 2007.

<sup>69</sup> I. Iriarte Goñi, "Explotación forestal, medio ambiente y derechos de propiedad de los montes municipales de Navarra (1900-1935)", in González de Molina, Martínez Alier (eds), *Naturaleza Transformada* cit., pp. 211-238.

<sup>70</sup> A. Ortega Santos, "Montes comunales en sociedades mediterráneas: modos

present article, proposes a view of environmental changes in forest woodlands and the ensuing complications in the commons issue as it has existed up until now. Common goods<sup>71</sup> appear as a key element in the reproduction of rural communities. The pressure of liberal agrarian and forestry legislation undermined customary practices for the management of these spaces. According to R. Guha and Gadgil, the mountain commons of Mediterranean countries have witnessed a transition from a peasant to an industrial mode of use of natural resources. It is industrial interests that put pressure on the bureaucratic administrative state to convert forest areas into suppliers of inputs for the expanding capitalist agriculture and industry.<sup>72</sup>

However, the main connection of Spanish environmental with southern historiography is a widespread commitment to the study of environmental conflicts. For several years, researchers from Andalusia have been publishing work that reflects the setting up of a scientific management of natural resources by forest scientists and the state forestry administration throughout the nineteenth century; an approach that spelled the end of local traditional uses of natural resources. While no social group or civilization has been “ecologically innocent” throughout history, the alienation of peasant land through privatization implemented by state forest administrative apparatus elicited especially strong social protest. The first studies on forest criminality<sup>73</sup> recognized the rejection of privatization of

de uso de los recursos naturales en Andalucía Oriental, siglos XVIII-XX”, in *ibid.*, pp. 367-391.

<sup>71</sup> On the interaction between commons and environmental history, see M. González de Molina, A. Ortega Santos, A. Herrera González de Molina, “Bienes comunales desde la perspectiva socioambiental”, in *Historia de la propiedad en España. Bienes comunales, pasado y presente*, S. De Dios, J. Infante, R. Robledo, E. Torijano (eds), Centro de Estudios Registrales, Madrid 2002, pp. 493-533.

<sup>72</sup> A. Ortega Santos, “Where Have All the Flowers Gone? Aprovechamientos forestales y desarticulación de la comunalidad en la provincia de Granada, siglos XIX-XX”, in *Los montes andaluces y sus aprovechamientos: experiencias históricas y propuestas de futuro*, E. Araque Jiménez, J.D. Sánchez Martínez (eds), Universidad de Jaén, Jaén 2007, pp. 59-95.

<sup>73</sup> F. Cobo Romero, S. Cruz Artacho, M. González de Molina Navarro, “Privatización del monte y protesta social. Una primera aproximación a los delitos

forest areas as an established social practice. Thus, researchers began to rescue conflicts over natural resources from the historiographical opacity they had been relegated to up to then. These studies reinterpreted in an environmental key many episodes already previously dealt with by conventional social history. To paraphrase Tilly, it is a matter of retrieving the languages of dispute. The logic of confrontation between social actors, dynamics of class conflict within environmental conflicts, and peasant struggles against local authorities for privatization or state-imposed monetization of common uses are just some of the elements that place these studies among the most advanced being carried on today, both in and outside Europe.<sup>74</sup>

Today, studies on environmental conflict are striving to rethink the intra and inter-relationships involved in the history of the management of natural resources. They focus on property disputes reflecting a social stake, viz., maintaining and enhancing sustainable development practices answering the productive needs of the community and forming a basis for community identity. Studies on en-

forestales (1836-1920)", in *Agricultura y Sociedad*, 65, Ministerio de Agricultura, Madrid 1992, pp. 253-302. Id., "Propiedad Privada y protesta campesina. Aproximación a la criminalidad rural en Granada, 1836-1920", in *Areas*, Revista de Ciencias Sociales, 15, Universidad de Murcia/Fundación Caja Murcia, Murcia 1993, pp. 33-54.

<sup>74</sup> A. Ortega Santos, M. González de Molina Navarro, "Bienes comunes y conflictos por los recursos en las sociedades rurales, siglos XVIII-XX", in *Historia Social*, 38, Fundación de Historia Social, Valencia 2000, pp. 95-116. A. Ortega Santos, "Common Woodlands in Mediterranean Societies: Commercial management versus Forms of Peasant Resistance in Andalucía, Spain, 1750-1930", in *Forest History. International Studies on Socioeconomic and Forest Ecosystem Change*, M. Agnoletti, S. Anderson (eds), CABI Publishing, New York 2000, pp. 223-237. A. Ortega Santos, "Über die historische nachhaltigkeit der kollektiven bäuerlichen Aktiosformen. Sozio-ökologische Konflikte in Ost-Andalusien (18 bis 20. Jahrhundert)", in *Von der Gottesgabe zur Ressource: Konflikte um Wald, Wasser and land in Spanien und Detschland Seit der Frühen Neuzeir*, M. Luise Allemeyer, M. Jakubowski Tiessen, S. Rus rufino (eds), Klartext-Verlag, Essen 2007, pp. 239-269. D. Soto Fernández, A. Herrera González de Molina, M. González de Molina Navarro, A. Ortega Santos, "La protesta campesina como protesta ambiental, siglo XVIII-XX", in *Historia Agraria*, 47, SEHA/Servicio Publicaciones Universidad de Murcia, Murcia 2007, pp. 31-55.

vironmental conflict seek to rethink the position of citizens before access to resources was changed by the legislative action of nation-states, and analyze rural communities' collective reactions against attacks by agents outside the community (state and local powers, commercial-industrial sectors, etc). Peasants, farmers, and livestock breeders were social agents whose response to the "privatization" of commons was not one of mere rejection. Their struggle was about the preservation of peasant management of resources against the encroaching of the industrial management of natural assets and attempts to force them to adopt the logic of the market in their relationship with the environment.

The study of environmental history involves understanding environmental struggles (rural and urban) at a global scale as reactions against political inequity and unsustainability by different social groups resisting the impositions of the state, market economy, or political institutions. The complex and rich panorama of Spanish environmental history is expanding, with various groups working in different areas, and a distinctive approach that applies methodologies and interpretive proposals directly to the co-evolution of human societies and the environment in contemporary times.