Non-market Valuation of Environmental Goods in Portugal

Avaliação Económica dos Bens Ambientais em Portugal

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Abstract /Resumo

This paper reviews the empirical research of the non-market environmental valuation methodologies in Portugal and identifies opportunities for linking results to policy. Four research questions are addressed: what has been done; what common features can be observed; what do we know about the validity of the values; and which trends have been found in the recent research. We conclude that environmental valuation in Portugal has a noticeable regional application, e.g., natural parks and traditional landscapes. Contingent valuation is the leading method. Price, income and the use of the resource for recreational purposes are among the most important explanatory variables. The results confirm the theoretical validity of the methods and their potential for local/regional policy purposes.

Este artigo explora a literatura da avaliação económica de bens ambientais em Portugal com o objetivo de identificar oportunidades para reforçar os contributos para a definição de políticas. A análise considera quatro questões: o que tem sido feito neste domínio; quais as características comuns aos diferentes estudos; o que sabemos sobre a validade das estimações; e quais as tendências mais recentes. Conclui-se que a avaliação ambiental em Portugal tem uma aplicação regional relevante com destaque para parques naturais e paisagens. A avaliação contingente é o método mais utilizado. O preço, o rendimento e o uso do recurso para recreio estão entre as variáveis explicativas mais influentes. Os resultados confirmam a validade dos métodos e o seu potencial para fins de política local/regional.

Keywords: non-market valuation, travel cost method, contingent valuation, choice modelling.

Palavras-chave: avaliação económica de bens ambientais, método do custo de viagem, avaliação contingente, modelação de escolhas.

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1. INTRODUCTION

One of the basic premises of economic analysis is that people live in a world of scarcity where resources tend to be insufficient to produce the products and services that would be necessary to satisfy all the human needs. Among the scarce resources there are the environmental ones, which provide a wide diversity of goods and services that are valuable for society. The set of needs and wants satisfied by these goods is extensive, going from the most basic such as breathing pure air, to much more complex ones such as recreation and short breaks. Moreover, as societies become richer and more urbanized, demand and willingness to pay for environmental goods tend to increase putting great pressure on natural resources (FAO, 2007: 33). Hence, the efficient allocation of the resources involved is increasingly urgent. Moreover, a wide range of different environmental values is likely to be involved. The Total Economic Value (TEV) of environmental goods includes marketable and non-marketable values, their present and future values, and goods provided can be either material or non-material. The values of environmental services are not usually directly revealed in market transactions because many of them are non-tradable. Accordingly, non-market valuation techniques must be used to assess their economic value and promote efficiency. These techniques are usually categorized into two major groups of methods, stated preferences (SP) and revealed preferences (RP) (see Cruz et al. (2014: section 2) for a discussion on the conceptual and methodological framework underlying non-market valuation of environmental goods).

SP and RP methods differ concerning the information required and the values measured. Studies applying SP methods use data derived from what people state when directly asked to reveal their choices or to express their judgements regarding monetary values. RP methods recover people preferences from actual behaviour and this information is used to work out monetary measures of welfare. Any of the methods can be used to estimate actual use values as these values relate to some use, activity or traceable economic behavioural trail. Conversely, only SP methods are able to capture passive use values (non-use values plus option value) as they are independent of any actual use by the people making the evaluation

and they leave no clear behavioural footprint. The contingent valuation method (CVM) is the most well-known SP method, but the application of the choice modelling (CM) in environmental valuation has been growing rapidly. Among the RP methods, the travel cost method (TCM) has been the most widely used.

In Section 2 we briefly present the three most widely used methods. Section 3 focuses on their use in the context of the non-market valuation of Portuguese environmental goods. Section 4 concludes stressing the opportunities for linking the environmental valuation results to regional policies, namely because existing studies in Portugal have been devoted mainly to the evaluation of natural parks and traditional landscapes.

2. THE LEADING NON-MARKET VALUATION METHODS

The CVM was originally suggested by Ciriacy-Wantrup in 1947, but its first empirical application was made by Davis in the 1960s to estimate the economic value of big game hunting in Maine backwoods (Mitchell and Carson, 1989: 9). The CVM is a survey-based methodology which involves the construction of a hypothetical market where a proposed environmental program would be transacted. After the description of the hypothetical scenario, people are asked directly or indirectly how much they would be willing to pay/accept (WTP/A) to guarantee/avoid the proposed action. The method is based on the assumption that individuals are able to identify the amount they would be WTP/A and that they will report the true value if the questionnaire is correctly designed (Hanley, 1989; Mitchell and Carson, 1989; Arrow et al., 1993; Carson et al., 2001; Botelho and Pinto, 2002).

Several years of research and empirical application on CVM created the necessary space so that many methodological issues could be raised and discussed. Among the main topics of discussion and research, there are: the ways to minimize or avoid the biases in responses; the choice of the most suitable elicitation format; and the treatment of uncertainty (Li and Mattsson, 1995; Shaikh et al., 2007; Hanley et al., 2009).

CM is a family of survey-based methodologies which has its roots in conjoint analysis (Adamowicz et al., 1999: 461). It models preferences for goods described as sets of attri-

butes, which have different levels and can be quantitative or qualitative in nature. Each combination of attributes is an alternative in the consumer's choice set. The inclusion of price as one of the attributes and the *status quo* situation as one of the alternatives enables the indirect estimation of the WTP/A and the relative values of different attributes. The CM method is consistent with Lancaster's characteristics theory of value which assumes that the utility consumers receive from the consumption of a good can be decomposed into the utilities from the component characteristics (Hanley et al., 2001: 436). In a CM valuation exercise respondents are presented with various alternative descriptions of a good, distinguished by variations in the levels of the underlying attributes, and must choose one of the alternatives, rank or rate them. These different ways of measuring preferences correspond to the different variants of the CM method (choice experiment (CE), contingent ranking (CRk), contingent rating (CRt) and paired comparisons (PC)). CM techniques provide a natural way of analysing environment multi-dimensionality, but unlike the TCM and the CVM, these techniques were not developed in the context of environmental economics. The earlier applications were made in the fields of psychometrics, marketing and transport (Mackenzie, 1990).

The foundation of the TCM is ascribed to Hotelling, who in 1947 suggested the use of the zonal version of the travel cost model (ZTCM) in a letter to the director of the United States National Park Service. Earlier studies were devoted mainly to the estimation of the monetary value of actual users' benefits derived from water based recreational activities (see, e.g., McConnell and Strand, 1981; Vaughan and Russell, 1982; Desvousges et al., 1983). The TCM has been used in the evaluation of an extensive spectrum of recreational sites, such as forests, parks, lakes, rivers, beaches, heritage sites and related activities (e.g., fishing, kayaking, rock and ice climbing). These sites and activities have two main common features: users must travel to the site to enjoy it and access is free or only a nominal entrance/licence fee is charged.

The TCM establishes a site demand curve by associating the number of trips, or visit rates, to a recreational site with the implicit trip price. Economic benefits are given by the area under this demand curve between the current price and the choke price. The method is based on the premises that visit frequency to a recreational site declines with increasing travel distances (due to higher costs) and that people consider travel costs similarly to entrance fees. The idea is that the observation of the travel cost that people bear to gain access to recreational sites makes it possible to infer how much people value each site.

Travel costs may include several components, such as travel expenditures, entrance fees, the opportunity cost of time, equipment costs and on-site expenditures. A number of factors, such as substitution possibilities and socio-demographic characteristics, act as demand shifters and help in explaining visitors' recreation behaviour. These factors are believed to explain the demand for trips as visitors with particular characteristics travel to specific sites with preferred attributes to attain the desired recreation experience (Shrestha et al., 2007).

Recreation demand analysed in the TCM framework may refer to a single site or to several sites. In the first case, a single site model is used. A multiple site model is usually used to estimate recreation demand for various substitute sites. There are several versions of the multiple site model which have evolved from the earlier demand system (Burt and Brewer, 1971) into other sophisticated models based on a discrete choice framework. Regarding time, choices were originally modelled following one of two possible perspectives: the number of trips made within a period of time, like a year or a season, was analysed; or the decision made at a particular moment regarding what recreational site to visit from a set of sites was examined. When opting for the latter framework, a random utility model or the hedonic travel cost model are usually used (Pendleton, 1999). The development of hybrid approaches is fairly recent. Some of them combine features of the zonal version with features of the individual travel cost model (ITCM). Others combine the choice of the site with the number of visits (Morey et al., 1993).

The CVM and CM are both SP methods and as such, theoretically, can both deal with any component of the TEV. However, these methods have been approached differently in literature. Much research on the CVM has been devoted to the analysis of its main biases and

ways of overcoming them. The discussion regarding the application of CM in environmental non-market valuation has been more focused on its advantages relative to the CVM and on the comparison of results across techniques. The most widely emphasized advantages of CM regard the fact that respondents are made aware that different amounts of each attribute might be available, and that price is treated simply as one of the attributes without being the focus of the survey (Mackenzie, 1990). The flipside to each of these advantages is a disadvantage. The most obvious is the higher degree of complexity in comparison with the CVM. For example, Madureira et al. (2011: 402) report the excessive cognitive burden noticed in the pilot survey using CE as the reason for applying the CVM in the main survey instead.

Each technique has its own strengths and weaknesses. An important advantage of the TCM is that it is based on observed behaviour and so it is not affected by the biases directly related to the use of constructed hypothetical scenarios. However, in comparison with the SP methods, the TCM is more limited in scope. It cannot be used to estimate any component of passive use value and, as it is based on historical data, it does not enable the estimation of values for quantity/quality levels that have not been experienced. Furthermore, except for models based on the random utility theory, the welfare measure directly obtained from the TCM is the Marshallian consumer surplus while the Hicksian welfare measures can be recovered directly when applying the CM or the CVM.

3. EMPIRICAL RESEARCH FOCUSING ON ENVIRONMENTAL GOODS IN PORTUGAL

The survey of empirical research which focuses on Portuguese environmental goods presented in this section aims to answer four main questions, beginning with: "*What has been done in the domain of non-market environmental valuation in Portugal?*". The following logical questions are "*What common features can be observed across different studies?*" and "*What do we know about the validity/reliability of the monetary values obtained?*". The last question is "*Which trends have been found in the most recent research?*".

3.1 What has been done in the domain of non-market environmental valuation in Portugal?

Table 1 lists some of the most relevant references concerning this first question as it records the main studies and for each one identifies: i) the type of publication; ii) the environmental good involved and the year the survey was administered; iii) the policy measure (when applicable); iv) the method, plus the indication of the CVM question format or the CM variant and the sample size; v) the population surveyed; vi) the component(s) of the TEV under evaluation; and vii) the payment vehicle (when applicable). Research results have been made available through different channels, namely, academic theses, books

Table 1: Studies applying non-market valuation methods to environmental goods in Portugal [a)]

Area (*Figure 1*)	Study	Type of publication	Goods and year of the survey	Policy measure	Method (format[b)]/variant) and sample size	Population surveyed	Values	Payment vehicle
1	Perna (1994)	Master's thesis	*Culatra* Island beaches, Ria Formosa Natural Park (1992)	---	Single site ZTCM, n=406	Visitors	Recreational use	---
					CVM (DC), n=406			
2	Machado and Mourato (1998)	Conference paper	Estoril Coast beaches (1997)	Water quality improvement	CVM (MBDC), n=401	Region visitors	Health benefits	Fee
				---	CM (CRk), n=195		Use value	Access cost
3	Santos (1998)	Book	Agricultural landscape of the Peneda-Gerês National Park (PGNP) (1996)	Landscape conservation	CVM (DC), n=704	Visitors	Recreational use + Passive use	Household income tax increase

1	Perna (2001)	Ph.D. thesis	*Culatra* Island beaches, Ria Formosa Natural Park (1997)	Conservation	CVM (OE), n=604	Visitors	Recreational use	Environmental fee
n.a.	Santos et al. (2001)	Report	Sportive Fishing (2000-2001)	---	Multiple site ZTCM, n=905	Users	Recreational use	---
4	Madureira (2001)	Ph.D. thesis	Traditional landscape of almond trees (1998-1999)	Landscape conservation	CVM (DC), n=1 027 / CM (CE), n=796	Visitors and region residents	Recreational use + Passive use	Increase in the annual income tax
n.a.	Ribeiro (2002)	Master's thesis	Sportive fishing in Lagoons in the Alentejo region (2000)	Access restriction / ---	CVM (DBDC), n=223 / Multiple site ZTCM, n=497 ITCM, n=325	Users	Recreational use	Entrance fee / ---
5	Nunes (2002a, b)	Journal article	*Sudoeste Alentejano* and *Costa Vicentina* Natural Park (1997)	Protection programs	CVM(DBDC), n=1 678	General population	Recreational use + Passive use	One-time donation
1	Pereira (2004)	Master's thesis	*Cacela fossiliferous deposit,* Ria Formosa Natural Park (2003)	Protection program	CVM (OE), n=346	Potential users	Use and non-use	Entrance fee; donations or use fee
6	Marta-Pedroso et al. (2007)	Journal article	Cereal Steppe of *Castro Verde* (2001)	Landscape preservation	CVM (OE), n=422	General population	Passive use	Annual tax increase or One-time donation
7	Madureira et al. (2011)	Journal article	Forestry perimeter of *Cantão das Hortas* (2003)	Management strategies	CVM (DC), n=900	Region residents	Recreational use + Passive use	Increase in annual household income tax
3	Mendes and Proença (2011)	Journal article	PGNP (1994)	---	Single site ITCM, n=243	Visitors	Recreational use	---
8	Cunha-e-Sá et al. (2012)	Journal article	Traditional landscape in the Douro Region (2006)	Landscape conservation	CVM (DC), n=706	Visitors	Recreational use + Passive use	Annual household income tax increase
9	Oliveira (2012)	Ph.D. thesis	Marinha Grande National Forest (2009)	Facilities improvement	CVM (DC), n=419	Visitors	Recreational use	Monthly payment
10	Simões et al. (2013a, b)	Journal article	Bussaco National Forest (2009-2010)	---	TCM TCM–CB, n=311	Visitors	Recreational use	---
11	Madureira et al. (2013)	Book	Serra da Estrela Natural Park (2011)	Comprehensive policy	TCM CM (CE), n=259	Residents, visitors and indirect users	Recreational use, provision and regulation services	---
8	Lourenço-Gomes et al. (2013, 2014)	Journal article	Alto Douro Wine Region Landscape (2008)	Preservation program	CM (CE), n=189	Visitors	Recreational use + Passive use	Annual income tax per household

[a] Note that we left out of this survey the following studies: i) A report by Cruz and Royuela (2009) concerning the estimation of the socio-economic benefits of the Special Protected Area of Pico da Vara/Ribeiro do Guilherme in the S. Miguel Island (in the Azores archipelago). Though estimations based on the TCM and the CVM are referred to, methodological details are not provided. ii) Figueira (1994) who tried to apply the CVM to estimate the WTP for water quality improvement in the public supply system. The research was conducted in an unfavourable social context: the population was elderly, had a low level of education and participation was low. The WTP could not be asked directly and only 41 people took part.
[b] Contingent Behaviour (CB); Dichotomous choice (DC); Multiple bounded dichotomous choice (MBDC); Double bounded dichotomous choice (DBDC); Open Ended (OE).

technical reports, working papers, conference papers or/and journals articles. When one main piece of research gave rise to different publications, only the main work is included in Table 1.

Shaded areas in the map displayed in Figure 1 show the regional location of each good in the Portuguese mainland (the numbers identify the approximate areas where the studies were made – see first column of Table 1).

Figure 1: Regional location of the studied areas

(Adapted from http://www.icnf.pt/portal/naturaclas/ap/nac/parq-natur)

Research in the field began about twenty years ago. The earliest study we could find is Perna's (1994) Master's thesis, where the CVM and TCM were used in evaluating the recreational use value of the Culatra Island beaches. Judging by the number of studies and articles published in journals, interest in environmental non-market valuation seems to have been increasing since the late 1990s, following the general trend of research in the economic field in Portugal (Guimarães, 2002: 8).

As a general overview, we emphasize five main features. First, the CVM is the prevailing method due to its ability to estimate any component of economic value and its lower degree of complexity in comparison with CM. Second, visitors have been the population most often surveyed in SP studies because assessing recreational use value is particularly important. Third, the PGNP has received special attention, most likely due to its features, which make it the only national park in the country. Fourth, the loss of positive externalities as a result of the abandonment of traditional agricultural activities with impacts on fauna, landscape conservation and fire resilience has been a matter of concern for researchers in this area. Finally, it is clear that not only economists, but also agronomists and biologists recognise that non-market valuation methods are important tools which can provide data to be used by environmental resources managers.

3.2 What common features can be observed across different studies?

Concerning the CVM, three elicitation formats have been used in the WTP questions. The report of the National Oceanic and Atmospheric Administration, known as NOAA panel (Arrow et al., 1993), recommended the use of dichotomous choice (DC) because it better mimics the market *take it or leave it* situation, characteristic of private goods' markets. Instead of DC, its variants are frequently preferred because the additional question(s) improves the efficiency of estimates. In the studies surveyed, the DC variants are indeed dominant but only Machado and Mourato (1998) assessed the degree of certainty in responses. The open ended (OE) format has been used as well. The preference for this format is usually justified by its more conservative estimates. This result is corroborated by Perna (2001), whose estimates using the DBDC are 1.57 higher than using the OE format.

There are a few variables that seem to be globally important to explain the WTP, as they are statistically significant across studies. In SP models, the past and current use of the site being studied is associated with higher WTP levels. WTP is also positively related to income and formal education, while age seems to exert a negative influence. Furthermore, Nunes (2002b) and Santos (1998) concluded that the WTP of urban populations is significantly higher than that of rural ones.

Madureira (2001) used the CE in addition to the CVM to assess the value of different landscape attributes. Two important conclusions are that the order of preference concerning different combinations of landscape attributes does not differ among methods and that the CVM produced the most conservative estimates. The author attributes the difference to a flawed focus of the respondents on the price in the CM exercise, which counters the idea that treating price as one among many attributes is an advantage.

The internet is the most recent channel used in questionnaire administration and was used by Pereira (2004) and Marta-Pedroso et al. (2007) in parallel with in-person interviews. This seems to be a promising option in Portugal as well because in spite of the very low response rate, no major differences were found between the sub-samples. This channel is advantageous in what concerns time and budget constraints, which are always important obstacles to obtaining larger samples.

The TCM was used in the estimation of the recreational values of quite different resources and activities: a beach, used mainly for bathing; a set of lagoons, used for fishing activities; a forest, a natural park and the PGNP. Studies using the zonal version computed econometric regressions based on data from administrative zones due to the difficulties in obtaining data to deal with concentric rings. The most recent studies opted for the individual version of the model which currently dominates the literature. In both versions, besides travel cost, some measure of income (household income, income available for recreational activities and purchasing power) proved to be significant in explaining the demand level. The effect of the travel cost is always negative (as expected), while the influence of income on demand differs across studies. All of the authors considered the opportunity cost of time as a component of the total travel cost. The percentage of the wage rate used as a proxy for the opportunity cost was not uniform across studies, which is evidence of the lack of consensus among researchers.

3.3 What do we know about the validity/reliability of the monetary values estimated?

In preference studies, researchers are unable to observe true economic values. Hence, one of the main areas of concern regards the ability of valuation methods to produce reliable and valid estimates. Reliability concerns the replicability of the measurements and validity is about the correspondence between what one wishes to measure and what is actually measured (Carson et al., 2001: 193).

Three main types of validity can be assessed: content, criterion-related and construct (Mitchell and Carson, 1989: 190). Content validity "refers to the extent to which design and implementation of the survey conform to the generally recognized best practice or state of the art" (Freeman, 2003: 178). Criterion-related validity is confirmed when the welfare measure estimated is not statistically different from a value known to be the truth or close to the theoretical construct under investigation (Carson et al., 1996: 80). Construct validity includes convergent and theoretical validity (Bishop, 2003: 543). Theoretical validity is verified when results conform to the economic theory. Convergent validity is confirmed when different methods yield measures that are not statistically different, without any presumption about which method is the most correct one. In the words of Bishop (2003: 543), "the measures have roughly equal status", otherwise it would be a criterion test.

The research contexts underlying the studies surveyed are conducive to content validity as these studies were produced in the context of supervised academic research or evaluated by peers before publication. There is also evidence of theoretical validity since price and income are significant explanatory variables of demand and results demonstrate sensitivity to scope. Convergent validity can only be assessed when more than one method is used in a similar evaluation exercise. That is, when the good and components of value involved coincide. Convergent validity was not confirmed by Ribeiro (2002) who compared the results

derived from the CVM and the TCM. In Madureira (2001), after correcting for the *yea-saying* bias in the CVM, welfare measures were not statistically different from the ones obtained through the application of CE.

Reliability involves the extent to which a survey will yield statistically equivalent estimates in repeated trials. Test-retest procedures and temporal stability tests have been used to assess reliability. Temporal stability is tested by comparing monetary values obtained interviewing two different samples using the same survey instrument, at two different points in time (Carson et al., 2001: 195). Test-retest procedures are even more demanding as they require the same sample to be re-interviewed using an identical survey instrument (Loomis, 1993: 184). These tests are very rare, mainly due to the high costs involved, and this is probably the reason why none of the studies listed above has conducted them.

3.4 Which trends have been found in the most recent research?

Centring our attention in the research published after 2010, it is possible to observe a growing interest on non-market valuation of public forests not located in protected natural parks. Preferences about the management of a forestry perimeter (*Cantão das Hortas* – Madureira et al., 2011) and of two national forests (Bussaco National Forest – Simões et al., 2013a,b – and Leiria National Forest – Oliveira, 2012) have been analysed, as well as recreation patterns in the two national forests.

In Portugal there are no national surveys on forest recreation, hence these studies relied on data obtained through the administration of questionnaires designed by their authors. All of them included attitudinal questions about environmental issues. Three main common conclusions can be identified. First, the majority of the respondents prefer the actual forests conditions to be maintained and consider improvements in recreational facilities to be unnecessary. Second, respondents visited these forests mainly to have contact with nature, to enjoy the landscape, to socialize with friends and family and to walk. Third, the effect of socio-demographic characteristics on demand and on the WTP is not clear. Yet, there are signals that respondent's interest on environmental causes are positively related to the level of formal education and that income exerts a positive influence on demand and on the WTP. Hence, forest protection and forest recreation seem to be normal goods.

The work of Madureira et al. (2013), applied to Serra da Estrela Natural Park, is part of a new trend in environmental economic analysis, which relies on the concept of ecosystem services (as defined by the Millennium Ecosystem Assessment, 2005) and follows the steps proposed by The Economics of Ecosystems and Biodiversity (TEEB, 2010) in economic valuation.

4. CONCLUSIONS

This paper has briefly introduced the approaches that are available for valuing environmental goods and provided an overview of the three most widely used methods on non-market valuation. CM is the newcomer, whereas the CVM and the TCM have a long tradition in the field. From a global perspective, one can say that research relying on these methods has been intense and fruitful. In Portugal, the decade of the 1990s can be identified as the turning point on the number of environmental valuation empirical studies. The increasing number of valuation studies and the type of environmental goods analysed reflects a general view that it is relevant to pay consideration to the environment and ecosystem services in regional/local economic analyses, not least when designing and implementing policies.

A major purpose of this paper is to emphasise the value of these analysis and thus explore their potential as a sound basis for environmental policy decisions. Results from earlier work show that past and current use of natural areas and similar sites for recreation purposes positively influences the WTP. In general, income has been disclosed to have a significant and positive effect on the value of goods. Furthermore, evidence that higher levels of formal education are associated with higher demand for outdoor recreation sites and with a higher WTP for conservation (Madureira, 2001; Nunes, 2002b), lead us to expect that, as the level of formal education improves in Portugal, values assigned to natural resources will tend to increase. The accelerated urbanization of the country is likely to act in the same direction.

Assessing the preferences, perceptions and concerns of Portuguese citizens regarding spe-

cific, regionally located, natural areas is particularly relevant for policy-makers. Abroad, public agencies recognize the usefulness of the estimates obtained by the application of these techniques for deciding among alternative policies (List, 2005; Sugden, 2005) and studies have been conducted in order to meet the needs of public agencies (Cameron et al., 1996). However, the task of designing modern, cross-cutting, transparent, evidence-based interdisciplinary decision making is not only conceptually challenging, but also necessitates a huge increase in local capacity for democracy and decision making. It seems that in Portugal, in twenty years, the state of affairs has not changed significantly. As observed by Perna (2001: 254), in Portugal "out of the academic circle, there is not enough knowledge and/or trust to use results of non-market valuation as data sources for public decisions yet".

Ultimately, this paper contributes to an increased knowledge of methodological development in valuation methods and accelerates networking among people interested in economic valuation of the environment in Portugal, e.g., challenging policy-makers to seriously consider the interrelationships among environment, economic and social issues in efforts to solve sub-national and local government problems as those typically addressed through local Agenda 21 processes.

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