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ABSTRACT OF THESIS

Candidate's Name	Delphine Arnal
Degree	MSc Ecological Economics
Date	15/11/04
Keywords	
Thesis Title	The Bushmeat Crisis And How To Exploit Sustainably Wildlife Resources

Natural resources contribute actively to fulfil the needs of human populations. Their conservation is therefore fundamental but sometimes in contradiction with the satisfaction of human needs. This reflects the difficulty of the concept of "sustainable development" implying simultaneously the conservation of the resource and the satisfaction of human needs. This paper explores the applicability of a sustainable exploitation of bushmeat species in tropical forests. This issue is particularly complex because bushmeat is a subsistence good for many human populations.

It is argued that no sustainable hunting is possible as long as a correct institutional framework is not in place. If this condition is fulfilled, then a lot of solutions could be implemented efficiently, including the ones changing the human needs associated with bushmeat hunting (providing alternative sources of proteins to households, alternative sources of income to hunters, education) the ones limiting the access to the animals (property rights) and the ones limiting harvest levels (quotas and tradeable permits).

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ABSTRACT OF THESIS

Candidate's Name	Colin Bonnington
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	Fish Farming, Angling, Disease Outbreak, Use And Non-Use Values, Externalities, Optimal Level Of Disease Control
Thesis Title	Review And Synthesis Of Indirect Costs To Scottish Angling From Disease Outbreak In The Fish Farming Industry

In Scotland, both fish farming and angling are important contributors to the country's economy. Overcrowded conditions in a fish farm encourages the outbreak of disease, which may be transmitted to wild fish stocks. The impact of disease may cause a reduction in the wild fish population, and this can subsequently affect angling activity in that region. The regions where wild fish populations are at greatest risk from a disease outbreak are Orkney, Shetland and the West Coast, as these are the areas that lie in close proximity to the fish farms.

Deriving estimates of angler expenditure and WTP of anglers and non-anglers to conserve wild fish stocks and to maintain the current level of angling activity can be used to make total economic valuations of angling, considering both use and non-use values. Benefit transfer techniques are used to obtain valuations of angling in Scotland, from comparative Finnish data.

Using a disease outbreak probability value and four disease outbreak scenarios, representing various degrees of disease infestation, damage estimates to angling can be made for each of the regions at risk.

In the fish farming industry, an effective disease control strategy is critical for successful industrial performance. In order for an optimal level of disease control to be reached, all costs and benefits need to be considered, including indirect costs on other resource users (known as externalities), such as anglers. The economic cost to angling depicts environmental damage resulting indirectly from fish farming activity, through disease transmission.

The economic losses to angling found can be factored into analysis aiming for an optimal level of disease control in the fish farming industry. Valuing the environmental damage (through reduced angling activity) is a small but critical part of any analysis of this nature.

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ABSTRACT OF THESIS

Candidate's Name	Ling Ding
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	
Thesis Title	A Meta Analysis Of Air Quality Valuation

Public awareness and concern about the problems associated with reduced air quality have increased in recent years. Nevertheless, there still remains considerable uncertainty about both the severity and valuation of these impacts. The valuation of environmental damages can play an important role in establishing environmental policy and regulatory standards, and provide guidance in targeting mitigation efforts. In order to achieve environmental objectives at least cost, policymakers and managers need to balance the relevant social cost and benefits. Without reasonable estimates of these values, it is difficult, if not impossible, to formulate efficient environmental policies.

The first chapter is an introduction of this paper, chapter 2 will specify the negative effects caused by air pollution. The next chapter will detail the economic methods used to value the change of mortality risk, morbidity risk and other risks, such as visibility risk and soiling risk. After that, the paper will present the economic analysis of air quality applied in UK air quality policy. CBA (cost benefit analysis) and MCDA (multi criteria decision analysis) will be introduced. Chapter 5 will have an attempt to have a meta analysis of 20 studies about estimating WTP values in the countries all over the world from 1977 to 2003. Chapter 6 is the conclusion.

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ABSTRACT OF THESIS

Candidate's Name	Catherine D Gamper
Degree	MSc Ecological Economics
Date	15/09/04
Keywords	
Thesis Title	Building Energy Scenarios For Eastern Styria (Austria) Using Multi-Criteria Mapping With The Inclusion Of Participatory Methods

This thesis is creating energy scenarios for Eastern Styria using a multi-criteria analysis method developed by Andrew Stirling, namely Multi-criteria Mapping. This work is part of a broader project ARTEMIS that looks at the potential of renewable energies in Austria in 2020. The thesis is structured in three parts: Part 1 constitutes the literature review, Part 2, the case study and Part 3, a discussion of the first two parts.

Part one looks at the available literature to show how multi-criteria analysis can be used to evaluate the potential of renewable energies in future energy scenarios. Multi-criteria analysis can take into account various stakeholders' interests as well as the four pillars of SD necessary to use as criteria for any environmental decision. Multi-criteria mapping allows for using participatory methods in all steps of its process to gather information on stakeholders' opinions. Scenario-building workshops and semi-structured interviews are the chosen approaches for the case study and are in this part outlines in their theoretic procedure.

Based on the output of this research exercise, the case study that involves the creation of energy scenarios in Eastern Styria is conducted (this part of the thesis took place at SERI's Vienna offices and Eastern Styria). At the beginning a broad situational analysis is undertaken to build the decision context and to identify the prevailing problems. It becomes clear that the region already engages relatively more in renewable energies than the rest of Austria. On the other hand, it comes to the surface that the region struggles with achieving the same economic prosperity as the rest of the country. Increasing the engagement in renewable energies could, therefore, lead to more prosperity in the region. How this might actually look like in the future and how it impacts on several criteria is evaluated in the next steps of the multi-criteria approach. Therefore, the second step of the multi-criteria mapping method involves building the scenarios. A scenario-building workshops is organised to evaluate four possible future energy scenarios in Eastern Styria in 2020. Step three of the process is then identifying economic, environmental, social and institutional criteria and objectives against which all scenarios can be measured. The frame of the performance matrix, which is the next study leaves out the scoring and weighting step as well as the final calculations that lead to an outcome description based on figures. The frame of the performance matrix nonetheless shows the four different scenarios evaluated for 2020 and the criteria against which they can be measured to become comparable with one another. Rather than suggesting a certain energy mix and percentage share of renewable energies, the scenarios suggest under which general circumstances renewable energies are likely to develop.

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ABSTRACT OF THESIS

Candidate's Name	Jianbo Li
Degree	MSc Ecological Economics
Date	13/09/04
Keywords	
Thesis Title	Water Use And Prediction For China

China's population more than doubles in the past 50 more years for 0.54 billion in 1949 to the current 1.28 billion. At the same time, china's water utilization has been more than tripled. With fast industrialization and urbanization, China is facing unprecedented water stress both in terms of water scarcity and water pollution.

Since China's economic reform and open door policy has been enacted in 1978, China has enjoyed a burgeoning economic growth. Yet against this scenario, competition amongst sector for water has never stopped, quite often, agriculture sector is always the loser. From another point of view, China's water stress to a larger extent should be redeemed to its uneven population and water resource distribution. In other words, more than 2/3 of all arable land locates in north while only accounts for less than 1/4 total water.

Other than that, China's seven major watersheds have been polluted to different levels which resulted in difficulties for water exploitation in short terms, regional water resource differentiation and pollution left great uncertainties to further water exploitation. At the same time, ever-affluent population growth and further industrial development will further decrease water availability even per capita water utilization remind the current level.

Yet, this assumption might not be realistic as further economic growth will mainly depends on industrial development, lacking investment in water efficient use and wastewater treatment, the situation of water waste and wastewater will still exist. Economic growth will lead to higher household income which will result in dietary pattern shifts, therefore, agriculture sector will still be the major consume for water.

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ABSTRACT OF THESIS

Candidate's Name	Guillermo Pallotti
Degree	MSc Ecological Economics
Date	06/09/04
Keywords	
Thesis Title	The Fair Trade Movement And The Limitations For Argentinean Fair Trade Products In The UK

Fair Trade is an alternative approach to conventional trade. Its aim is to alleviate poverty by providing small producer from the Third World fair opportunities to place their products in the First World markets.

In this dissertation, the origins of Fair Trade and the impact that it has had on producers from the Third World is briefly outlined. This is followed by an analysis of the limitations that the movement faces with special attention given to the limitations that Argentinean fair trade products face in the UK.

A case study using semi structured interviews with different organisations and a ranking exercise based on the Analytical Hierarchy Process identifies the main limitations for Argentinean Fair Trade products in the UK, with weight assigned to establish the importance of a set of limitations. Most of the respondents were aware in general of the problems that Fair Trade faces. However, many of them showed a scarce knowledge about Argentina, its socio-economic situation and its products.

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ABSTRACT OF THESIS

Candidate's Name	James R Pittman
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	
Thesis Title	Valuing Sustainability: Analysis Of Stakeholder Preference And Water Resource Management Strategies In The Colorado Front Range Region

The human economy exists as a sub-system of natural systems on the earth and depends on this larger contextual system for resource inputs and outputs. Because of this fact, issues of sustainability require that economic development conform to the limits imposed by natural systems and resource management policies should therefore take into account the significance of critical natural capital stocks. This paper explores the complex dynamics affecting water resource management with special attention to the Colorado Front range region and surrounding areas; specific focus is on the extent to which resource management policies and consumption rates can be accurately described as being sustainable. Conclusions include the tentative suggestion that current patterns of water resource are not sustainable, more definitive conclusions show that water demand will exceed supply in the next three decades. Based on the fact that water resource scarcity and unsustainable consumption patterns will increasingly exist in the area, it is clear that choices must be made as to the most appropriate and valuable uses for this limited resource.

A brief overview of various tools for assessing resource management policies and strategies is offered along with advantages and disadvantages of each. Proposed strategies being discussed by decision-makers and stakeholders in the region with the goal of ameliorating the gap between water supply and demand are presented. These strategies are analysed through the application of one assessment tool: Q Methodology. This analysis explores the relative value subjectively placed on proposed strategies by several local stakeholders and draws generalised conclusions about similarities and differences in their perspectives. Conclusions are drawn about the overall acceptability of each proposed resource management strategy as well as the efficacy of Q Methodology as a tool for assessment of natural resource management in general.

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ABSTRACT OF THESIS

Candidate's Name	Georges Roupgides
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	
Thesis Title	Cost-Benefit Analysis of the ITER nuclear fusion Project in Cadarache, France

The demand for electricity is constantly increasing, creating a difficult framework for the achievement of the Kyoto protocol goals and objectives. Nuclear fission cannot be established as a clean energy due to the risks associated. Amid this situation comes a new technological breakthrough, the ITER project, the first attempt to built and operate a nuclear fusion plant of this size. During Paper A, the particular technology along with the conventional nuclear fission will be explained so as to note down the differences between the two. Paper B will try to examine the application of fusion technology through applying Cost-Benefit Analysis at the ITER project in Cadarache, France. The main objective of the method would be to examine the potentials of nuclear fusion instead of providing the reader with applicable raw data. This is due to the uncertainties and risks involved at any pioneering, experimental project. Thus the main focus of the study would be in examination of the social benefits derived from the application of the technology in contrast with the currently available technological options. In the case of lack of data, data from other sites have been used and in one occasion the method of Benefits Transfer. The conclusion of the CBA will be positive although this should be considered only as an indication that given the uncertainties regarding the technology might be even more useful in combination with a Multi-Criteria Analysis in order to further identify the potential of nuclear fusion technology.

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ABSTRACT OF THESIS

Candidate's Name	Tatiana Sagdieva
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	Contingent Valuation, Fuelwood Collection, Willingness To Pay, Stated Preferences
Thesis Title	Contingent Valuation: An Analysis Of Willingness To Pay For The Improved Energy Consumption Patterns, Applied The The Shahs Dag Rural Area, Azerbaijan

Resource scarcity made people think about the new way of economic development – sustainable development which implies conservation of nature, the rational use of resources and implementation of new approaches in policy decision-making process. Subsistence households are a leading source of deforestation and their consumption of fuelwood from forested commons is important for many rural areas of developing countries and countries with transition economies. The focus of this paper is on methods of assessing the value people place on implementation of more efficient technologies four household heating systems and improved changes in energy service. The application of environmental valuation methods in the decision-making process is further discussed. Of principle interest in the methodology on contingent valuation, which is the method of asking people directly about their preferences. Contingent valuation (CV) has become one of the most widely used non-market valuation techniques, though it is surrounded by debate. This paper explores the aims and principles of environmental valuation methodologies, focusing on contingent valuation, its theoretical and practical foundation, merits and possible problems. The proposed approach is explored through a case study based on the survey data collected from the Shah Dag rural area of Azerbaijan.

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ABSTRACT OF THESIS

Candidate's Name	Arjen Simons
Degree	MSc Ecological Economics
Date	14/09/04
Keywords	
Thesis Title	Determining the non-use values of Managed Realignment: A crucial factor in decision making?

As a result of sea level rise the intertidal area is declining. In a natural situation this area would move landwards and therefore not decline. However, in most cases men build sea defences and this area cannot move landward because it is stopped by the seawall and is getting smaller.

A fairly new policy in the UK is 'Managed Realignment'. This policy consists of the removal or breach of the current sea defences in the order to recreate intertidal areas. Of course public safety is still one of the most important features of sea defence, but with this type of management this can be combined with environmental benefits.

This paper looks at the economic value of the non-use values of intertidal areas created by managed realignment. Biodiversity and scenery are examples of these non-use values. Since these are non-marketed goods it is not that straightforward to put monetary figures on these values.

The method to put monetary figures on these values which is used in this paper is 'Benefit Transfer'. BT uses the values from different studies (study sites) and transfers these values to other sites (policy sites). In this paper the focus is on three sites managed by the Royal Society for the Protection of Birds (RSPB) namely: Nigg Bay in Scotland, Freiston Shore and Paull Holme Strays in England.

Conclusions that can be drawn from this study is that the inclusion of non-use values in cost benefit analyses can make a difference in the benefit/ cost ratio. This is very much site dependent. When the value of the hinterland, which has to be protected, is high these non-use values form only a small part of the total benefits and the difference in the benefit/ cost ratio is not significant. However, when the value of the hinterland is relatively low the inclusion of the non-use values in the cost benefit analysis does make a significant difference on the benefit/ cost ratio.

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ABSTRACT OF THESIS

Candidate's Name	Jonathan Peter Stewart
Degree	MSc Ecological Economics
Date	03/09/04
Keywords	Water Pricing, Price Elasticity Of Demand, Average Incremental Cost Full Cost Pricing, Northern Ireland
Thesis Title	The Introduction Of Water Charging To Northern Ireland In Line With The EU Water Framework Directive

Article 9 of the EU Water Framework Directive (2000/60/EU) requires that all member states make water consumers face the full costs of their water supply and that the state provides incentives for them to conserve water. This emphasises the point that water must now be considered as a economic good.

In Northern Ireland, the water supply is still funded by the Assembly from general tax and no direct charge is made to the consumer or water supply. To comply with this directive, Northern Ireland must progress towards a self-financing water industry with users facing the costs. The full cost of water supply must include a charge for the economic, environmental and social costs of water. In order to do this, a water pricing and charging scheme must be introduced to meet these three goals.

This paper examines the financial costs of water supply in Northern Ireland through operation and maintenance and the future investment costs. The environmental costs are assessed depending on the water source and collection method, while the social aspects of water charging are dealt with in the proposed charging model for Northern Ireland. The average Incremental Cost of water is estimated to be £12.66/when all users face the same charge. The environmental costs in Northern Ireland are relatively small because the water is mostly collected for natural sources rather than costly impoundments. A socially optimal charging scheme is also proposed including; a standard charge based on the rateable value of the dwelling combined with volumetric charging through meters on an increasing block tariff with a free first block and bill capping for the vulnerable groups.