
How is the public
interest
conceived and
represented, with
reference to
Coillte, in
Ireland's forestry
review 2010?

Una Ruddock

Specialism Independent
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Social Research Methods
Campus One
University of Ulster

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Declaration

I declare that this is all my own work and does not contain unreferenced material copied from any other source. I have read the University's policy on plagiarism and understand the definition of plagiarism as given in the course handbook.

Signed *Una Ruddock*

Date 07/12/2010

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EXECUTIVE SUMMARY

This report examines the submissions from environmental NGOs, commercial forestry organisations, and the Public Service to the Governmental Review of Irish Forestry Policy, with specific reference to the role of Coillte Teoranta (The Irish Forestry Board). The methodology used is content analysis under three headings, ecology, economy and socio-cultural.

The questions explored relate to the intersection of the public and private commercial activity of forestry with the understanding of forestry as a public good and where the public interest lies. Are there areas where the 'public goods' argument may conflict with other interests? Is there a time-scale, which prioritises short to medium term economic interests over long term environmental interests? What can be done to ensure sustainable forestry development going forward?

Environmental Non-Governmental Organisations detail very specific threats to the environment by commercial forestry and make a compelling case for sustainable forestry management. They criticise Coillte's commercial focus and its lack of transparency but are very concerned that this public asset may be privatized.

Commercial forestry organisations want continued access to afforestation grants from the Government, but believe that environmental services should be self-financing. Some organisations regard Coillte as a competitor with almost monopoly advantages, while others are waiting to see if it will be offered for sale.

The Public Service organisations dutifully remind the Government of obligations under EU Directives. Attitudes to Coillte are decidedly mixed.

Regulation links global, EU and national levels of responsibility and may be key to changing from short rotation, clear felling and monoculture to sustainable forestry management, since Ireland is obliged to comply with international protocols or else eventually pay heavy fines. Funding and regulation are the mechanisms by which afforestation policy is implemented. Payment for ecological services may be the way forests are protected in the future.

1.0 INTRODUCTION

1.1 The Significance of Forestry

Forestry is critical to climate change, bio-energy, construction, bio-diversity and green job creation. Trees are a sustainable resource, of great aesthetic value. Ireland has a natural competitive advantage in this area. Trees grow faster here because of the climate. In 1946, when forestry accounted for less than 1% of land use in Ireland, it became Government policy to increase it to 17%. (Carr, 2008) It is currently 7%, one of the lowest levels of coverage in Europe.

Timber is the third largest internationally traded commodity, after oil and gas. Forestry can have either positive or negative externalities, at global and local level. Deforestation is responsible for 20% of global carbon dioxide emissions. (IFS Newsletter, Sept 2009).

The responsibility for providing a sustainable environment is shared between four interdependent levels of decision making, international (United Nations), supranational (the European Union), national Government (the State) and local Government (County Council).

1.2 The International Context

Globally, the importance of protecting forests and managing them sustainably was acknowledged by the United Nations Conference on Environmental Development in Rio (1992). The resulting UN Framework Convention on Climate Change and subsequent the UN Conventions on Biological Diversity and Desertification acknowledge the importance of forests.

The United Nations Environment Programme has initiated a worldwide tree planting programme, the billion tree campaign:

“Trees play a crucial role as fundamental components of the biodiversity that forms the foundation of the living networks and systems that provide us all with health, wealth, food, fuel and vital ecosystem services our lives depend on. They help provide breathable air, drinkable water, fertile soils and a stable climate.”

In 1994, 1998 and 2002, EU Ministerial Conferences for Protection of Forests in Europe (MCPFE) began a process towards sustainable forestry leading to the creation of **Forest Europe**, which makes funding available for afforestation, which complies with sustainable forestry management practices. Forest Europe (2010) defines Sustainable Forest Management as

“The stewardship and use of forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions at local, national and global levels, and that does not cause damage to other ecosystem.”

The UNECE¹ Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (1998) was signed, but not yet ratified, by Ireland. The Aarhus Convention as it is known is a new kind of environmental agreement, which entered into force in 2001. The Convention:

- Links environmental rights and human rights
- Acknowledges that we owe an obligation to future generations
- Establishes that sustainable development requires involvement of all stakeholders
- Links government accountability and environmental protection
- Focuses on interactions between the public and public authorities in a democratic context.

1.3 Irish Forestry Policy

The most recent Irish National Forestry Plan ‘Growing for the Future’ was produced in 1996. It stated that “Coillte (The National Forestry Board) be commercially successful on a sustained basis”. The core activity is timber production and processing; ancillary activities can contribute to the company’s revenues². A National Sustainable Forest Plan, required to meet international commitments, and referred to in the Plan has not been developed. Despite the emergence of global warming and environmental issues, the unique role of forestry as a carbon sink and its potential contribution to ameliorating climate change has yet to be defined at national policy level. Ironically, the complexity of the relationship between afforestation and the environment – highlighted by the precautionary principle in EU directives on birds (1979), on habitats (1992) and water (2000) has created a perceived conflict of interest between forestry and the environment. For example, the requirement for an Environmental Impact Assessment on applications over 50 hectares has resulted in the complete absence of applications over 50 hectares.

The decision by the European Commission in 1999, subsequently upheld by the European Court of Justice, to debar the Irish Forestry Board, Coillte Teoranta from claiming forest premiums meant that afforestation in Ireland became dependent on private afforestation.

¹ United Nations Economic Commission for Europe

² It listed among Coillte’s business units, nurseries, sawmills, leisure, Christmas trees, tree surgery and landscaping. It was mandated to seek possibilities for joint ventures here and abroad.

In 2007, the Fianna Fail/Green Party coalition Government agreed to the continuation of afforestation grants, the decentralisation of forestry enterprises, the creation of community forests, and the promotion of agro-forestry/farm woodlands.

Private afforestation is largely dependent on Government grants, which enables commercial forestry organisations to offer tax efficient, socially responsible investment opportunities. (IFS Newsletter 2008). Whether or not they are environmentally friendly is open to question. However, they certainly present themselves as such, quoting research on the value of northern hemisphere forests. (IFS Newsletter, Apr 2009).

1.4 Irish Forestry Policy Review

In March 2010, the Government announced a review of forestry policy. The Department of Agriculture, Fisheries and Food produced a Background Paper, assessing the challenges and opportunities facing the forestry sector. On the plus side, the sector's strengths include:

- A major employer and contributor to export earnings
- Afforestation mitigates climate change
- Wood is renewable, sustainable and versatile

On the minus side, the forestry sector weaknesses include:

- Funding constrained to sustain the afforestation programme at 10,000 – 15,000 ha pa.
- The critical mass of forestry to ensure sustainable supply has not yet been achieved
- Exports dependent on a single market, the UK
- Afforestation and forest management overly dependent on State support
- Lack of knowledge among farm forest owners

Three committees were formed to examine national forest policy, premiums and grants and the role of Coillte Teoranta or 'Coillte'.

Coillte is a State company, co-owned by the Ministers for Finance and Agriculture, Fisheries & Food, formed in 1988 by CJ Haughey and R McSharry, when public forests were vested to it with a commercial mandate. Coillte owns over 445,000 hectares of land, about 6% of the land cover of Ireland. It operates nine businesses in forestry and renewable energy. It sells approximately 2.4 million m³ of Roundwood p.a. Eighteen million people visit its 10 forest parks and 150 recreation sites. Coillte owns the longest trail network in Ireland.

The terms of reference for the review of the role of Coillte, subdivided into three potentially mutually exclusive strands, are:

- **Business Areas** - forest management from afforestation through to log production, land use and renewable energy
- **Public Goods** - climate change mitigation, recreation and protection of the environment, biodiversity, landscape, water resources and heritage
- **Corporate Development** - funding, dividend policy, asset disposal, privatisation, wider share ownership, regulatory framework and relationships with stakeholders, public and private organisations.

The stakeholders are the Government, Coillte, the Forest Service, the Parks and Wildlife Service, the Environmental Protection Agency (EPA), Regional Fisheries Boards, Fáilte Ireland³ and Teagasc⁴, farmers, forest owners and commercial forestry, the public and future generations.

The Environmental Pillar is an umbrella grouping of over 30 environmental NGOs, including An Taisce, Irish Peatland Conservation Council and Friends of the Earth. It became a member of Social Partnership⁵ in 2009. Its role is to promote sustainable policy, to engage with other social partners to provide a public profile for the environmental sector. Despite its environmental stewardship role, it was not invited to sit on any of the forestry review committees.

In light of the scientific (Oreskes, 2004) and increasingly political consensus that unsustainable exploitation of natural resources has precipitated climate change and continues unabated, the importance of forestry as a public good in the review of Irish forestry policy cannot be overstated.

1.5 Aims of the Research

This research aim is to explore the intersection of the public and private commercial activity of forestry with the understanding of forestry as a public good and asks where the public interest lies. Are there areas where the 'public goods' argument may conflict with other interests? Is there a time-scale, which prioritises short to medium term economic interests over long term environmental interests? Does Irish public policy on forestry reflect an awareness of its positive and/or negative externalities? What have been the drivers of its development? What can be done to ensure sustainable forestry development going forward?

³ the National Tourist Board

⁴ the Irish Agriculture Food and Development Authority

⁵ The Social Partners are the Government, the Employers, (IBEC), the Trade Unions, (ICTU), the Community and Voluntary Sector and now the Environmental Pillar.

2.0 LITERATURE REVIEW

The Tragedy of the Commons offers a useful metaphor for unsustainable forestry practices. In this parable, the commons is an open pasture to which herders may bring animals to graze. Rational economic self interest prompts each herder to increase the number of animals.

“Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a society that believes in the commons”. (Hardin 1968: 1254)

Deforestation is a global public bad. Conversely, averting future climate change is a global public good i.e. it is non-excludable, non-rival and benefits humanity (Kaul 2000). If accomplished, the benefits are both international and intergenerational.

Unsustainable exploitation of natural resources has precipitated climate change and continues unabated despite dire warnings.

“We the undersigned, senior members of the world's scientific community, hereby warn all humanity of what lies ahead. A great change in our stewardship of the earth and the life on it, is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated.” (Union of Concerned Scientists, 1992)

Environmental values are challenged by commercial values, as shown by the leaked memo from the Oil and Gas Industry, which encouraged a campaign of disinformation to the mass media, questioning the validity of scientific research findings on global warming. (Gore: 2007)

2.1 Science and Economics: The Disconnection

Rebello (2009) believes there is a disconnect between scientists, economists and policy makers in relation to the conservation of forests with little collaboration between the disciplines of environmental science, social and political science or economics.

Scientists, according to Clark (2009) are good at getting basic information on biodiversity and on ecosystems, but this information is not as widely disseminated as it could be and has not produced significant effect in the quality of decision making in society. Weak intelligence activities give rise to

conflict. Conflict occurs from the lack of information about problems, the meaning of information, or information not being shared. She identified six kinds of participants: nations, international organizations, political parties, pressure groups, private associations, and individuals, using only four basic strategies—education, diplomacy, economic, and military. Comprehensive intelligence requires an interdisciplinary approach where biological and social scientists use both conceptual and applied integrative tools. She argues that this is seldom attempted, never mind achieved and stands as a continuing challenge in conservation.

2.2 Sustainable Forestry Management

Andersson and Mårell (2007) refer to three dimensions of Sustainable Forest Management (SFM), ecological, economic and social-cultural. An integrated resource management system requires an equal emphasis on all three elements. They acknowledge that sustainability is an evolving concept, moving from theory to practice, as it becomes a political priority at regional, national and international levels.

Table 1 Forest Functions

Sustainable Forestry Management	Ecology	Economic	Socio-cultural
Driving Force	Protection	Want	Need
International	Biodiversity	Globalisation	Governance
National	Ecosystems	Tax or Subsidy	Law
Knowledge	Environmental Science	Economics	Social Science

Adapted from Andersson and Marell

For Foster et al (2010) SFM means perpetuating ecological, economic, and social forest assets, “securing an improved livelihood for present generations, while maintaining the potential of the forest heritage for future generations.” (2010:80) They quote Daly (1990) who believes that ecological capital provides the foundation for social capital which enables the development of economic capital. Daly proposes three rules for sustainability:

- renewable resource harvests equal rate of regeneration;
- non-renewable resource harvests equal rate of substitute creation; and
- waste emissions not exceed natural assimilation capacity.

Freer-Smith (2007:169) argues that the threat to the sustainability of forests is anthropogenic; pollution, overgrazing, damage to soil structure and nutrients, stands with low genetic diversity, pests and alterations of hydrology.

Dubé et al (2007:59) argue that, "When all non-market goods and services provided by forests are included in the analysis, there is often a strong argument for forest conservation, or at least lessening the incentive for deforestation." They believe that public agencies who manage complex policy networks with a range of stakeholder interests must find out to what extent these interests are compatible or conflicting; if compatible, foster energy and optimize use of natural resources; if conflicting, find out what complementary measures or compensations may reduce or neutralize negative policy effects.

The Economics of Ecosystems and Biodiversity (TEEB) study is an international initiative on the global economic benefits of biodiversity, to highlight the growing costs of biodiversity loss and ecosystem degradation. It states that including forests in mitigation is a cost-effective way of removing CO₂. Forests provide co-benefits in the form of other ecosystem services. Rewarding these benefits will facilitate a greener global economy.

2.3 Illegal Timber

The Transparency International Corruption Perceptions Index (2005) estimated that nearly half of the world's forestry is in nations with rampant corruption. Corruption bleeds off revenue to predatory elements of society, makes long term investment irrational and facilitates high cash turnover. Irland (2008:190) argues that, "Addressing the challenges of weak governance, corruption, and warfare is the essential precondition for successful forest policy". Information on resource corruption and illegal logging was put on the record by research conducted by NGOs, including Greenpeace, Global Witness, Forest Monitor, and the Environmental Investigation Agency. Irland sees this as an indictment on international agencies and research organisations.

The EU protects forests through Forest Law Enforcement Governance and Trade (FLEGT) Action Plans. Illegal logging and deforestation cause damage, biodiversity-loss and impacts on climate change. Those who manage forests sustainably cannot compete with illegally-produced timber. After almost a decade of campaigning by environmentalists, the sale of illegal timber is to be banned in the EU from 2012: "...the world's largest market is about to shut its gates to companies profiting from illegal trafficking and forest destruction." (Phillips: 2010).

2.4 The Role of the European Union

The European Directives (Birds/Habitats) offer a potentially strong level of protection to the environment, e.g. Appropriate Assessment⁶, which covers designated sites.

The role of the European Union is to add value to the national forest policies of member states, as per the subsidiarity principle, to anticipate global trends; to call attention to emerging challenges; to propose and coordinate options. The current Green paper, launched in March 2010 is a public consultation about the future of forestry policy. It identifies the global relevance of forests, characteristics of EU forests, challenges and tools for safeguarding multi-functionality of the most bio-diverse terrestrial ecosystems - forests.

Forest Europe⁷ produced a document in February 2010 as part of its preliminary work for a potentially legally binding agreement on forests in advance of the 2011 Ministerial Conference in Oslo. The document (or non-paper) decides neither content nor form of a possible legal arrangement on forests in Europe. Each element listed is exemplary and has optional character only.

2.5 Payments for Ecological Services

Rebello recommends fungible conservation schemes and payments for environmental services (PES) as a tool for internalising the negative costs or externalities of human growth and development. It encompasses carbon credits, watershed protection, soil conservation, tax credits and ecotourism.

Payments for environmental services (PES) support positive environmental externalities through the transfer of financial resources from beneficiaries of environmental services to those who provide them. Existing services cover four categories:

- water services
- carbon sequestration
- bio-diversity conservation and

⁶ Appropriate Assessment is a legal requirement under Article 6(3) and 6(4) of the EU Habitats Directive, which applies to Natura 2000 sites, i.e. Special Protection Areas (SPAs) and Special Areas of Conservation (SACs).

⁷ previously known as the Ministerial Conference on the Protection of Forests in Europe (MCFPE)

- landscape beauty.

According to Mayrand and Paquin, (2004) on whose study⁸ of PES schemes, this section is based, they work best when they are based on consensual scientific evidence linking land uses to the provision of services and;

- they define the environmental services to be provided;
- their payments are flexible, ongoing and transaction costs do not exceed potential benefits;
- they rely on multiple sources of revenues sustainable delivering money flows;
- their compliance, land use changes, and the provision of services are closely monitored; and
- they are flexible and adaptable to changing conditions.

PES schemes, they conclude, have the potential to become valuable transfer mechanisms to internalize positive environmental externalities, and to generate new revenues for sustainable development. Forest conservation, reforestation, sustainable forestry, agro-forestry or silvo-pastoral practices are examples of environmental services.

⁸ Their report surveyed PES schemes in the Western Hemisphere, analyzed differences and similarities between models and their strengths and limitations.

3.0 RESEARCH DESIGN AND METHODOLOGY

The objects of analysis are the 43 written submissions to the Irish Government's forestry policy review, 2010, (listed in Appendix 1). The methodology employed is content analysis.

3.1 Content Analysis

Content analysis, according to May (2001) comprises three stages;

- stating the research problem,
- retrieving the text, and
- employing sampling methods, interpretation and analysis.

He is critical of quantitative analysis as it deals with information, which can be measured, simplified into categories, and which reproduces meanings intended by author without necessarily, critically analysing the social, political, economic context. Qualitative content analysis starts with social context, the self-conscious author addressing an audience under particular circumstances.

Weber argues (1990) that the best content analysis uses both qualitative and quantitative operations to reveal the focus of individual or institutional attention. The analysis must be both reliable and valid. Reliability consists of stability, reproductibility and accuracy. Validity comprises correspondence between two concepts and generalisability. There is a step by step process. The first of which is to define the recording unit, i.e. sentence, paragraph or whole text and then define the categories. The coding of samples of text is necessary to assess reliability i.e. accuracy or correctly coded text and may necessitate a revision of coding rules. If so, the coding must be retested.

The following section draws heavily on Krippendorff, who says, that content analysis "seeks to understand data not as a collection of physical events but as symbolic phenomena and to approach their analysis unobtrusively" (1980:1). He says that if researchers use their own categories of analyses, and apply them to data, which have never been analysed, results are neither comparable with each other nor cumulatively contributory to theory. So he commends the use of existing conceptualizations.

The definition of properties of categories must be exhaustive, inclusive, and mutually exclusive. The difficulty is that there is too much information in texts; thus necessitating data reduction. The key is

choosing a strategy for information loss that yields interesting and theoretically useful generalisations while reducing the amount of information analysed. Procedures for analysing human-coded text include classification of words into content categories.

Good coding instructions describe the characteristics of observers employed in process, their training, a definition of recording units and a description of how data sheets are administered, which detailed instructions enable a reproduction of the analysis. Collaboration is required to test reliability of recording instructions. High reliability is a requirement for high validity but does not assure it. There is no point in doing validity tests if reliability is low.

Published content analyses with similar aims are a good source of ideas for coding instructions. The use of existing recording instruments offers two advantages over new ones;

- it provides the possibility of comparing results, and
- it shortcuts the efforts of making instructions reliable.

So Krippendorff (1980:174) advises that "...categories used in other endeavours should be relied upon where possible."

3.2 Previous Forestry Research using Content Analysis

Bengston and Xu (1995 & 2009) conducted a content analysis of changing forest values in the USA. They created four value dictionaries. The first category was economic, including words like plantation, economic analysis, processed timber, price and profits. The second category was ecological with words like ecosystem complexity, photosynthesis, riparian, habitat and landscape. The third category was aesthetic with words like awe, beauty, evocative, glorious and panoramic. The fourth category spiritual, included words like ancient, cherish, environmental ethics, sacred and transcendent.

They then tracked changes in forest values from 1982 to 1993, for three population groups, the general public, forest professionals, and environmentalists. They discovered a gradual decline in the frequency of expression of economic value and concomitant increase in life support value among forestry professionals and environmentalists. This was significant because the philosophical basis of traditional forestry in the US was so heavily influenced by economic concepts of value.

One of the issues they raised about the use of the dictionaries was that the method counted the number of references under each category but it did not account for the way a word was used. For example, environmentalists were sceptical about economic values. The transition rules they developed to pick up negative comments on economic values could not capture nuanced expressions, so they conducted a human-coded content analysis on a representative sample and discovered that only 25% of references to economic values by environmentalists were positive.

3.3 Forest Value Dictionaries

Following Bengston and Xu (1995 & 2009), I use their value dictionaries, but with some amendments. Three dictionaries (Appendix 2) will suffice to reflect the public interest in Coillte, life support/ecological, utilitarian/economic, and socio-cultural. These are also the three pillars of sustainable forest management. My analysis then considers the stakeholders' primary value and their attitude, positive or negative toward other values.

3.4 Reliability Test

The analytic steps are provided to show the process was not biased in favour of any one finding. The data - the publically available submissions - were obtained from the Department of Agriculture website. I recorded the 43 submissions alphabetically by author. Every 7th submission was selected for testing the code. Feedback from testers required a confirmation of inter-coder reliability of 85%. Four people agreed to code documents. There was no discussion beyond explaining that it was for my Masters dissertation and that the reason for the request was to establish reliability of my coding. I described the coding process as follows:

The task is to identify the themes in the documents. Please scan the value dictionaries: A. Economic B. Ecology. C. Socio-cultural.

1. Write page/paragraph numbers in the first column of the record sheet. (Appendix 3)
2. Read the document(s) paragraph by paragraph. Place a tick (✓) under whichever of the data categories it refers to, i.e. ecological or economic or socio-cultural.
3. Indicate whether comment is positive, neutral or negative towards the theme by marking +/0/- in the next column. Thank you.

The six documents were divided randomly between four volunteer code testers. Three coders returned five documents within a week. One was not returned.

3.5 Results of Reliability Test

The following table compares results by the test coders against my own.

Table 2 Comparison of Results of Test Coding

Coder	Submission	No	Ecology	+/0/-	Economy	+/0/-	Socio-cultural	+/0/-	Total
1	Crann	07	24	+	23	+/0	3	+/0	50
Ur	Crann	07	29	+	16	+	5	+	50
2	Impact	21			1	0			01
Ur	Impact	21			5	+			05
2	Keep Ireland Open	28			1	0	1	+	01
Ur	Keep Ireland Open	28			1	0	4	+	05
2	TEAK 21	35	1	+	1	+			02
Ur	TEAK 21	35	3	+	2	+			05
3	Woodlands of Ireland	43	15	+/0	26	+/0			41
Ur	Woodlands of Ireland	43	10	+	18	+	5	+	33

Note: See Appendix 1.1 for description of organisations above.

Coder one is a lecturer with a PhD in mathematics. He scored the **Crann** submission (No. 7) in 50 paragraphs, almost 50% of which he categorised under ecological, with only 3 items categorised as socio-cultural. He missed a word ‘recreation’ from the socio-cultural dictionary “The impact of forest recreation on the health and well being of society.” (page 3: paragraph 44). I scored the entire Crann submission as positive towards each category. He scored 8 items as neutral.

Coder two is a member of the Green Party Forest Review Group, now retired and contemplating the purchase of a forest. He scored the **Impact** document (No. 21) under the data category utilitarian/economic - neutral. I scored it under the same category, but positive. He scored the **Keep Ireland Open** document (No. 28) under two data categories, socio cultural/recreation – positive and utilitarian/economic – neutral. He also scored the **TEAK 21** document (No. 35) under two data

categories, ecological – positive and economic – positive. This matched my own scoring, except that he scored the documents as a whole rather than by paragraph.

Coder three is a lecturer in computing and has a PhD in physics. He coded the *Woodlands of Ireland*⁹ document (No. 43) document in 41 paragraphs of which 26 were under the utilitarian/economic data category and the remaining 15 under the life support/ecology data category. I coded the same document in 33 paragraphs as I excluded those in bold type, which were simply a restatement of the terms of reference of the review. I scored 18 paragraphs under utilitarian/economic, 10 under life support ecology and five under socio-economic/recreation.

The coders were more likely than the researcher to categorise some statements as neutral as opposed to positive or negative. However, since there was no disagreement about the primary or secondary value in any case, it was not necessary to redo the test coding. The test coders in this case were highly qualified and therefore needed little or no instruction.

The main change from the test coding to the actual coding was from paper to a computerised spreadsheet, as per appendix 3.2. The spreadsheet would not accept +/-/o as labels, so it was necessary to use letters, **p** for positive (paragraphs - positive towards the theme), **a** for anti (paragraphs - hostile towards the theme) and **n** for neutral (paragraphs - neutral towards the theme).

I realised that it was necessary to augment the last value dictionary to include words that describe processes underpinning sustainability, so that socio-cultural values would not be under-represented. The following are examples of words added reflecting those values: Agreement, Consensus, Consultation, Governance and Integration. The full list appears on Appendix 2.

⁹ The Woodland League document, omitted in error from the original list, became the 42nd document after the distribution of the test documents.

4.0 FINDINGS

Contributors to the review fall into four categories:

1. Environmental non-governmental organisations (ENGOS), e.g.
2. Public service, i.e. County Councils and Regional Fisheries Boards.
3. Commercial interests, e.g. the Forestry Assessment Companies. Three submissions were made under this heading. The submission on Coillte, stated that it was from Forestry Assessment Companies, excluding Coillte. This implies that Coillte was one of the contributors to their other two submissions. There is no indication as to who the other contributors are.
4. Others, which includes a trade union and individuals.

The full list of contributors in Appendix 1 is followed by a brief description of each in Appendix 1.1.

All of the submissions were coded according to the value dictionaries, ecology, economy and socio-economic (Appendix 2). Environmental and public service organisations focused on the public goods aspects. Commercial organisations focused on business development.

Tables 3, 4, 5, and 6 refer to Coillte. The commentator is named in the left hand column, followed by quotes from their submission. The attitude towards Coillte, positive (+), neutral (o) or negative (-) is shown in the right hand column.

Despite some negative attitudes towards Coillte, most of the statements scored as positive. This may be because the submissions are public and in a political context. Writers may have preferred to present a positive view. For example, both the test coder and I scored Keep Ireland Open as positive towards the socio-cultural theme. However, Keep Ireland Open does not perceive Coillte as protective of that value. Its submission calls for the removal of forests in Dublin and North Wicklow from ownership and control of Coillte because catering for recreational use of these forests is not compatible with its commercial remit, so by default their attitude towards Coillte is negative.

The terms of reference for the review of Coillte as outlined in the introduction (Section 1.4) are business areas, public goods and corporate development.

4.1 Environmental NGO Submissions

Table 3 References to Coillte by Environmental Non-governmental Organisations

NGO	Commentary on Coillte	+	o	-
An Taisce	<i>"Coillte is continuing with unsustainable forestry". Forests... planted in areas of poorly-drained soil, sloping topography, high rainfall... when clear-felled in wet conditions cause potentially irreparable damage; over-fertilisation... caused eutrophication in water; forests...planted on peat soils destroying their natural carbon sink... releasing greenhouse gases. Coillte... alienating the integrity of its land bank by selling off sites on a random basis.</i>			7
CEF	<i>"...some improvements "... within the Coillte district ... still a large number of issues within...Coillte policy need addressing... the privatization of Coillte and its asset stripping short term profit...advocates a 'Right to Roam' Act and a proactive stance on illegal dumping.</i>	3		
Crann	<i>"Strongly supports the...commitments to...review the role of Coillte". "...recommends Forest Service fund amenity, recreation & outdoor forest pursuits aspects of Coillte's activities".</i>		1	1
Heritage Council	<i>"...that the planting of broadleaved species becomes a strategic policy target for Coillte".</i>		1	
IPCC	<i>"...recommend that the company publish specific information on the sites they are managing for biodiversity with each FMU (Forest Management Unit)". "...anxious that undesignated Peatland sites owned by Coillte not be afforested in the future". "Without an inventory of their land holding and its status how can their activities be screened?" "...need for proper regulation of alternative commercial projects are being undertaken by Coillte."</i>		7	
Keep Ireland Open	<i>"... forests in Dublin & Wicklow removed from Coillte's control, as its recreational role is incompatible with its commercial remit. Coillte's policy of maximising value of properties has resulted in the sale of sensitive sites and closing off of traditional routes." "...Coillte has not demonstrated its competence in managing forests -clear felling produces a world-war one landscape of desolation - sitka spruce... boring to walk through... absence of flora... lack of sunlight/ views...replanting same. Car parking unsatisfactory".</i>			5
MDEG	<i>"Coillte is guardian of some of our most precious resources. The principles of SFM offer an appropriate model...but this will necessitate an improvement upon the draft FSC standard by which Coillte is...operating...public access to information... participation. A confidence among Irish people that Coillte is honouring its guardianship of forest land.</i>	1		24
Sustainability Institute	<i>"There is a major concern that Coillte land will be quietly sold off in a bid to conceal rising operating losses or to help balance other burgeoning State deficits. From both a public and sustainability perspective, this outcome is extremely undesirable".</i>		2	3
VOICE	<i>"Coillte is a state company whose assets were funded by the Irish taxpayer. It should be retained in public ownership. The principal objects with which Coillte was formed should be reviewed. The 1988 Forestry Act must be amended to broaden the principal objects of Coillte beyond the purely commercial. "Coillte is a significant landowner, and so is in a position to make a contribution with regard to enhancing connectivity of habitats in the landscape".</i>		3	2
Walkers Assoc of Ireland	<i>"It is difficult to access National Park territory next to Coillte forests." "... overuse of prohibitive signs and unsightly geometric blocks of forestry, dense single species planting, loss of visual amenity due to large scale felling and contractor's litter.</i>			9
Woodlands League	<i>"Coillte's estate comprises...old land commission sites...trusts and conveyances of land gifted to the Irish people in perpetuity...There is an urgent need for public access to this information". "In 2009 a bill was passed in the Dáil to extend Coillte's loan facility to €400 million...Coillte's profits over 20 years... from land sales €300 million, where is this money?"</i>			
Woodlands of Ireland	<i>"...there is...scope for Coillte to produce quality hardwoods". "Wol is a partner with Coillte in the People's Millennium Forests Project...Memorandum of Understanding should be ratified to confer management of biodiversity goals outside Coillte's commercial business". "Rather than a dividend for the exchequer...reinvesting profits back into forestry management" "Coillte find it difficult to fund (biodiversity) measures...as there are other priorities.""Difficult to envisage meeting public goods objectives...if Coillte were to be privatised."</i>	2	4	

The table above excludes ENGOs who did not comment on Coillte, nor are all references quoted in full. The following paragraphs elaborate on the ENGO positions on forestry.

The Irish Peatland Conservation Council (IPCC) claims forestry accounts for the loss of 1.2 million hectares.¹⁰ Twenty-eight of 196 partially afforested peat lands have been restored with EU Life funding. Coillte's commercial interests such as wind farms have caused bog bursts¹¹ on blanket bogs in Co Leitrim. Coillte, the largest landowner in the country¹², is responsible for managing over 58% of forests. IPCC expresses concern that without an inventory of its land-holding then its status cannot be monitored nor the protection of undesignated peat lands guaranteed.

Macroom and District Environmental Group (MDEG) welcomes Coillte's donation of 150,000 trees for community woodland but argues that its current role excludes social and environmental considerations and that the Draft Forest Stewardship Council (FSC) standard needs improvement, including public access to forest lands and public access to information. Coillte's refusal, in 2003 to provide information under Freedom of Information Act was the subject of a complaint to the Ombudsman. In her response, quoted by MDEG in their submission, Ms Emily O'Reilly wrote:

"I consider Coillte's conduct...to be particularly egregious...Notwithstanding my powers under section 37 of the FOI Act, Coillte has provided me with an incomplete description of its legal status. Coillte's submission makes no mention whatsoever of the binding judgement of the European Court of Justice in which Coillte's view of its status as a private company was rejected...The Court made the following findings 'Ireland itself has stated that Coillte Teoranta is and always has been a public undertaking wholly owned by the State...It follows that Coillte Teoranta is not a private-law legal person for the purposes of Article 2(2)(b) of Regulation No 2080/92.' Accordingly, I consider that Coillte's land transactions should be subject to public scrutiny."

Coillte's use and disposal of land has been questionable and not in accordance with the common good. In 2004, Coillte sold land to Shell to build a Gas Refinery Terminal and granted 'way leave' for 3km of pipeline through adjacent land. Coillte refused to engage in consultation with the local community. MDEG insist that,

"...the attitude ... towards the Irish people must change. Coillte...the steward of the Irish State Forestry estate...must either embrace the principles of SFM, conducting its activities with proper regard to the economic, social and environmental needs of truly sustainable development in Ireland, or it must be disbanded."

¹⁰ 19% of peat lands.

¹¹ A bog burst occurs when a mass of bog or peat moves.

¹² The estate is over 445,000 hectares or 6% of land area of Ireland.

The most damning indictment of Coillte is contained in the appendices of the Woodland League submission, which detail breaches of FSC principles, wherein they cite cases of the Commission of European Communities versus Ireland. For example, the European Court found that Coillte did not conduct an Environmental Impact Assessment prior to its deforestation of 263 hectares, precipitating the Derrybrien¹³ landslide. Coillte and the ESB were found guilty of causing a landslide in Co Leitrim.

Coillte, the Woodland League continues, has sold public forests against the wishes of local people, for example, 400 acres to facilitate the Shell gas refinery in Co Mayo. Coillte made no attempt to protect the lands at Tara¹⁴, in Co. Meath, which were compulsorily purchased to facilitate the M3 motorway.

It challenges the validity of the economic argument for industrial plantation, as opposed to sustainable forestry described in Section 4.5, when Coillte is operating at a loss and has been importing cheaper pulpwood from Scotland.

Coillte, according to the Woodland League has leased public forests to investment companies e.g. the Irish Forestry Unit Trust. Syndicates of investors have bought public forests with 100% forestry grants.

Coillte was not included in the Freedom of Information Act and its staff is sworn to uphold the official secrets act. What is now required, they argue, is an investigation of Coillte through a Dáil Public Accounts Committee and not privatization as recommended by the McCarthy Report (2009).

4.2 Commercial Forestry Submissions

Again, not all of the submissions refer to Coillte. The Irish Forestry and Forest Products Association highlights the threat to the processing and products sector and loss of opportunities due to inadequate afforestation.

The Irish Timber Growers Association sees as an opportunity for “policy and funding priorities to reflect forestry’s growing economic, social and environmental potential to Ireland.” Although they also wish to avoid “excessive regulatory and legislative barriers to forestry management and the afforestation programme.”

¹³ In October 2003 a landslide at Derrybrien dislodged 450,000 cubic metres of peat over a 32km area, polluting a river and killing 50,000 fish. RTE.ie 03/07/2008.

¹⁴ The Hill of Tara is a potential candidate for a UNESCO World Heritage Site inscription. Irish Independent 02/11/2009.

Irish Wind Energy’s objection to the publication, without prior key stakeholder consultation, of the “Tree Felling Policy for Wind-farm Development”, remains unanswered.

Table 4 References to Coillte by Commercial Forestry Organisations

Organisation	Commentary on Coillte	+	0	-
Forestry Assessment Companies	<i>“it’s (sic) legal remit should be reviewed to determine it’s (sic) role in environmental matters...” “...Coillte be subjected to the financial discipline associated with a dividend policy and to reflect the usage of state assets.</i>		6	6
IFS Asset Managers	<i>“...the need to provide ancillary amenity services weakens its (Coillte’s) ability to perform on behalf of the Irish taxpayer.” “...the breaking up of Coillte into stand alone businesses with the aim of returning such operations to private enterprise with the resultant payback to the state from such asset sales.” “The creation of regional businesses would avoid the politically sensitive concept of privatising over 6% of the country’s landmass in one operation.” “The sector has suffered from “damaging and ill-informed outside influences that have...removed the sector’s ability to deliver the originally targeted afforestation levels.”</i>		3	5

The submission to Coillte Review Group from Forestry Assessment Companies, excluding Coillte, is neutral in tone. It states that the competitive forces of a strong, vibrant State sector and a strong vibrant private forestry sector would drive innovation, efficiencies and market development. The Forestry Assessment Companies make only a few points in the expectation of further consultation. They refer a re-balancing between the roles of private and publicly owned forests...an assessment of strategic direction. They say a suggested but non detailed, radical change is an excellent way to lose jobs and market opportunities. They say carbon offset and penalties may provide leveraging but private sector investment needs a commercial rate of return. They contrast Coillte’s commercial remit with the requirement on private sector woodlands to deliver public good services without monetisation/reward mechanisms. Further the submission alludes to *“commercially sensitive issues”* (my italics) which will be raised with the Chairman of the Review Group. There are no references to environmental costs of afforestation.

IFS wants grant schemes but not the accompanying bureaucracy. On environmental policies IFS refer to “ill-informed pressure groups”, “mistruths” “well meant but misinformed views”. Its comments on bio-diversity are to the effect that it must not undermine the necessary commercial approach to forestry. While it acknowledges the need to plant for non-commercial reasons to the ultimate benefit of Irish society, it suggests that timber be produced to offset the costs of running them.

The Donegal Woodland Owners want the environmental, recreational and carbon values of their forests to be returned to them, i.e. to be “paid the true value of the goods and services they deliver”.

4.3 Public Service Submissions

Table 5 References to Coillte by Public Service Organisations

Name	Commentary on Coillte	+	0	-
Community, Rural & Gaeltacht Affairs	<i>"The expertise, support, design and maintenance services provided by Coillte would be impossible to replicate through any alternative structure."</i>	9		
Faillte Ireland	<i>"Coillte - key partner in delivering authentic and rewarding holiday experiences and in the future to develop a unique, sustainable natural heritage experience for consumers, which bring life to Ireland's biodiversity and which strengthens both the agriculture and tourism agendas".</i>	3		
South Tipperary County Council	<i>"In its own County Development Plan... seeks forest design at the earliest stage of afforestation, a mix of species and avoidance of artificial edges". "... review of Coillte should be mindful of the requirements of; Environmental Impact Assessment, under Planning & Development Regulations, Appropriate Assessment under the Habitats Directive and the Water Directive Framework". "... that National Forest Policy explicitly state the intention of Coillte to maintain, protect and... restore the conservation value of Special Protection Areas, (SPAs)...Natural Heritage Areas (NHAs).</i>		1	
Tourism, Culture & Sports	<i>"welcomed the commitment 'to review State forestry - including the role of Coillte and its functions and operations - in relation the Climate Change and its importance to... biodiversity, and its potential to deliver long-term employment in other downstream industries, including eco-tourism". "...requests the opportunity to comment further".</i>		3	
Western Regional Fisheries Board	<i>"...three areas relevant to their and Coillte's public goods responsibility, management of angling waters, riparian zone management and water quality". "... in the past Coillte has sold off valuable fishing rights to private sector interests without consultation with the Fisheries Service." "... fisheries be transferred to... Inland Fisheries Ireland".</i>		1	1

The Minister is unequivocal almost effusive in his comments. He refers to its participation with Failte Ireland... in delivering the 2006 National Countryside Recreation Strategy. He states that rural recreation initiatives can create the impetus for other life-enhancing and employment initiatives which aspect is particularly relevant to the *"public good"*.

Failte Ireland's submission is more muted but still, a testimonial. The comments from water, tourism and fisheries public service bodies are neutral.

Clare County Council, Water Services state "The...rate of growth proposed for forestry must support a healthy catchment and...without negative consequence to water quality..." And referring to the Water Framework Directive "cannot compromise agreed objectives that Ireland has already signed up to."

The Eastern Regional Fisheries Board highlights damage salmon spawning grounds from clear felling of upland sites, expresses concern at risks to Freshwater Pear Mussel populations and suggests incentivizing buffer zones along watercourses through grant aiding.

The Department of Environment, Heritage and Local Government proposes allowing a change of land use from forestry for (e.g. "public good" infrastructure projects). It also highlights the issue of proposed forestry in acid sensitive areas where grant aid is not sought.

The North Western Regional Fisheries Board recommends grants for riparian woodlands, rescinding of the replanting obligation on acid sensitive catchments, the banning of aerial fertilisation in salmonid catchments to avoid eutrophication, expresses concern about the impact of large scale forestry on the hydrology of rivers and lakes.

Teagasc recommends afforestation of agricultural land "to secure the future of the timber processing sector, bio-energy targets, climate change mitigation and other public good benefits." And further a "premium payment...as an appropriate mechanism to compensate the owner for these public benefits." That value-for-money assessment not be confined to a narrow financial interpretation but include "public goods – CO₂ sequestration, renewable energy targets, amenity, recreation and landscape values." It commends consideration of identifying a mechanism whereby other sectors of the economy pay for afforestation.

The history of Irish forestry has militated against strong, coherent policy formation. The MDEG quote Deputy Michael D Higgins' letter to them in 2005, wherein he states that national forest policy has been "everywhere, tossed from Department to Department" in 1904 with the Forestry Commission, in 1928 with the Land Commission, 1946 the Department of Lands, in 1982 the Department of Tourism and Fisheries, in 1988 the Department of Energy, presently with the Department of Agriculture, Fisheries and Food but likely to be transferred to the Department of Natural Resources.

4.5 Alternative Visions for Future of Irish Forestry

The environmental NGOs offer an alternative vision. The Woodland League criticises the current policy favouring non native softwood monocultures, clear-felled by heavy machinery and presents biodiversity information, supporting their advocacy of the phasing out of non-native monoculture plantations in favour of native woodlands.

Table 7 Sustainable Woodland Management v Current Practice in Ireland

Sustainable Woodland Management	Current Forestry Practice
Trees are integral to diverse ecosystem	Trees are timber
Small-scale machinery	Industrial machinery
Selective felling	Clear felling
Long rotation	Short rotation
Diverse (age & species) stands	Monoculture
Forest work includes crafts, herbs and permaculture	Forest work is timber harvesting
Forest offers non-timber products	Forest product is timber
Timber and other products sold locally	Timber transported long distances
Management plans based on seasonal observation	Management plans based on brief visit
Economics of sustainability and multi-functionality	Economics based on short term monetary model
Labour intensive	High capital investment
Recreation and sacred space	

Adaptation of an extract from Ben Law's "The Woodland Way - A guide to sustainable woodland management in the 21st century," cited The Woodland League's Submission On Overall Irish Forest Policy 2010.

The attitudes of ecologists is diametrically opposed the attitude of commercial timber producers. The former prioritises life support, but does not exclude economic value. This is a different kind of economics focused on livelihood. The latter prioritises profit and excludes life support.

Bio-diversity is supported by native tree species, not by exotic imports as the table below shows. Bio-diversity provides ecosystems services, i.e. provisioning, support, regulatory, and cultural. Another reason for the inadvisability of importing species is the risk of the introduction of new pests.

Table 8 The number of insect species, which thrive in native versus non-native trees.

Native Trees	Oak	284	Willow	266	Hawthorn	149	Alder	90
Non-native Trees	Sycamore	15	Horse Chestnut	4				

Figures quoted in Woodland League's Submission - On Overall Irish Forest Policy 2010.

The Irish Farmers' Association (IFA) Farm Forestry Section supports targets for afforestation. On public goods and services, it states that

“Healthy forest ecosystems are ecological life-support systems. Forests provide a full suite of goods and services that are vital to human health and livelihood. Many of these goods and services are traditionally viewed as free benefits to society, public goods, for example, wildlife habitat and diversity and watershed services, carbon storage and scenic landscapes.”

Given the absence of these natural assets from society's balance sheet and so that their critical contributions not be overlooked in decision-making, the IFA propose the introduction of “an Ecosystem Services Payment to encourage broader thinking and collaboration to stimulate market-based conservation and stewardship.”

The Sustainability Institute says that as global oil production has peaked, we face an energy shortfall and will be in the “unenviable position of scavenging for scraps on world markets.” It offers three options; the land remains in State ownership but is leased to sustainable forestry cooperatives representing local and environmental interests; the land is sold to cooperatives; it remains within Coillte but, with major management reform, representation of local and environmental interests under the terms of the Aarhus¹⁶ Convention. It suggests availing of unused development lands in the NAMA portfolio through legislation modelled on derelict sites, empowering local authorities.

MDEG point out that Ireland did not apply for the 80% grant aid from the EU Rural Development Fund, which would have necessitated improvements in environmental management of forestry, but instead provided 100% funding from the exchequer.

Pro Silva advocates a shift to continuous cover forests through a Close-to-Nature silvicultural system.

¹⁶ United Nations Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998.

5.0 DISCUSSION

5.1 Terms of Reference

The Aarhus Convention referred to earlier (Section 1.2) does not appear to figure in the thinking behind the drafting of the terms of reference of the review. The timescale for receipt of submissions was only three weeks. The terms of reference were criticised by The Woodland League for splitting objectives into three narrowly defined areas instead of an integrated and coherent review process.

My analysis shows that two of three terms of reference for Coillte come within the economic/utilitarian values dictionary and one area comprises two values, life-support/ecological and socio-cultural/recreational. This suggests that the main interest in forestry is still largely economic. Public goods in terms of forestry have been defined as much by what is excluded as what is included; for example: the assumption seems to be that the public interest is restricted to recreation, e.g. walking. However, most NGOs argue that the assets of Coillte are a public good and a matter of public interest.

Inevitably, organisations devoted to the environment scored high on ecology issues whereas commercial organisations scored higher on economic issues. However, a small number of each also scored high on the socio-cultural values. This is important in relation to sustainable forestry management because it depends on collaboration, cooperation and participation of all stakeholders.

This is where the weakness of the terms of reference shows; if it had be presented differently commercial organisations might have been prompted to think about externalities. A key conflict resolution method is to ask one group to see what the options are available for the other side. So if commercial organisations had been required to include biodiversity measures and environmental costs the results could have been very different. Similarly, NGOs could have been asked to contribute more to the economic development aspects.

5.2 Environmental NGO Values

Sustainable forestry management is a public good, whereas unsustainable practices are a public bad. Environmental Organisations are aware of negative externalities e.g. Friends of the Irish Environment “the tax payer is supporting the polluter and in turn paying the price to eliminate the pollution¹⁷.”

¹⁷ This refers to degradation of peat soils which cause the release of historic heavy metals and water borne pollutants, e.g. dissolved organic carbons which in chlorinated potable water supplies results in the formation of carcinogenic trihalomethanes.

There is hostility towards the current utilitarian/economic model in Ireland from environmentalists but also a clear vision of how sustainable forestry management might be achieved and also include economic benefits. However, this is a very different kind of economy than the super economic profits envisaged by the corporate sector. It is about enabling livelihoods in a future green economy.

Several submissions question whether Ireland is meeting UN and EU requirements under Forest Law Enforcement, Governance and Trade (FLEGHT). The Draft Forestry Bill, (2001) updating the Forestry Acts, 1946, 1956 and 1988 and providing for the enactment of Sustainable Forestry Management has still not been passed into law.

Ireland believes that the fact that NGOs raised the alarm on illegal logging is an indictment of the professional agencies, international research and consulting groups. One may ask if it is not also, a vindication of the unique role of NGOs? It seems NGOs are holders of public interest in the environment.

5.3 Commercial Forestry Values

The spectre raised in the McCarthy report of the sale of Coillte has brought the vultures circling and raised alarm bells with environmental groups. The IFS refers to "*returning*" (my italics) forests to the private sector! Whereas, of course, Coillte was entirely funded through the public purse.

Funding is the driver for investment. Policy is only as good as the funding that enables it. To date forestry grants have been 100% exchequer funded, despite that fact the EU would fund up to 80% of cost of the afforestation programme, if it were conducted in accordance with the principles of sustainable forestry management, as MDEG pointed out in its submission. Current budgetary constraints and the costs of failing to comply with international obligations may make this inevitable.

Decisions with far reaching implications are being made. It is clear that some people have better access to that process than others do. Some contributors to the submission were fully confident of further consultation, for example, the Forestry Assessment Companies, whose document, as published on the Department of Agriculture website, does not state who it is representing. A google search of the term Forest Assessment Companies on 24/09/2010, displayed Green Belt Limited, a private, professional management company catering for investors in natural resources, set up in 1982 on foot of EU forestry funding. It may or may not be one of the Forest Assessment Companies, but it would be extraordinary if the largest private forestry company had made no submission to the review. Nurseries are also missing from the submissions.

Public interest per se does not feature highly in the commercial submissions, most of which are narrow in focus reflecting the views of the interest they represent.

5.4 Public Service Values

Public Service Organisations submissions dutifully advise the Government of its responsibilities but ultimately implementation depends on political will. Public awareness campaigns, e.g. “*reduce, reuse, recycle*” focus on the individual. Decisions made at the macro level do not reflect this imperative.

The Water Framework Directive is clearly uppermost in the minds of County Councils. They are very aware of the impact of forestry on water.

Coillte is criticised by the Fisheries Boards for the sale of fishing rights but lauded by Failte Ireland for its contribution to tourism. So while it may be effective in some areas, there are issues, which need to be addressed.

Teagasc is aware of potential of payments for ecological services.

5.5 Ecology and Economics

There are two very different models of forestry presented. Current Irish forestry practice is criticised for short rotation, monoculture and clear felling. There a conflict of interest between the commercial activity and the public good, witnessed by Coillte’s numerous conflicts with local environmental groups. It is in fact, inherent in its legal mandate to prioritise economic over all else.

International law sets the scene for subsequent EU policy and directives and even if painstaking slow, change in national law may be inevitable. Forest Europe promotes sustainable forestry management.

The IFA believes that and ecosystem services payment would encourage market-based conservation. To the extent that commercial organisations do recognise the importance of ecological services, they want to be recompensed for them. This means that the concept of payments for ecological services is familiar.

Commercial organisations make vague criticisms of environmental concerns, want access to Government funding and assets i.e. Coillte, while expecting environmental services to be self-financing.

6.0 Conclusion and Recommendations

6.1 The Forestry Review

It was an achievement of the Green Party in Government to have a forestry review and to have targets for planting. However, this process is parallel to, rather than feeding directly into, the drafting of the long awaited Forestry legislation. It remains to be seen whether Irish National Forestry Policy will uphold the public goods aspect of forestry to serve the public interest through sustainable forest management or facilitate the siphoning off of national assets to bail out the developers and bankers who have at worst bankrupted the country and at best mortgaged the future of its children.

NGOs are very strong on ecology, less so on economics, but they need to be strong on both, if they are to challenge the commercial focus.

Commercial organisations have a limited awareness of ecology and hide behind a veil of anonymity, with clear expectation of having the ear of the government.

Public service organisations stick to their brief. The attitudes towards Coillte are variable.

6.2 Socio-Cultural Values

Environmental issues are marginalised by political systems, which prioritise economic over social development.

What is needed is broader and more public thinking on forestry. The Aarhus Convention provides a framework for this to happen.

Payments for ecological services may be the meeting point where diverse interests can come together in a democratic forum and agree a way to value negative and positive externalities, with a view to minimising the former and rewarding the latter.

6.3 Significance of the Study

One of the strength's of this report is the content analysis method, which has been used before in relation to forest values.

It is timely. Draft legislation on forestry is imminent. Local plans for Coillte districts are now available for public consultation. However, the biggest single issue facing Irish forestry is whether it will be sold off.

6.4 Limitations of the Study

My prior lack of knowledge of forestry presented a challenge, but as Clark (2009) suggests what is missing from decision-making is a fully informed perspective and what is needed is for environmental science and social science to combine to create the knowledge for optimal outcomes.

The interdisciplinary approach suggested by writers (Andersson and Mårell, 2007) and (Rebelo, 2009) on the disconnection between environmental and social sciences may have strengthened the report with inclusion of writers on poverty and globalisation.

The Content Analysis method, which necessitated the perusal of 43 documents, provided a lot of material on Irish forestry and somewhat inhibited extensive further reading. I may have veered towards a grounded theory approach focusing on the data to see what themes emerged, and then selected from the literature review papers on sustainable forestry and payments for ecological services, rather than starting with a literature review to provide a framework for the analysis.

6.5 Recommendations for Further Research

There is a need for more research into the politics of forestry; who has benefitted from the funding of forestry to date? Who would benefit from a redistribution of Coillte's assets? It will be interesting to see what emerges from the review of Coillte. It would be instructive to find out more about the private forestry industry. Private investment in forestry needs scrutiny.

The efficacy of environmental NGOs, who have significant knowledge but limited ability to communicate it to the public, may benefit from an analysis of their current role and future potential.

The implementation of sustainable forestry management, specifically with reference to inclusive stakeholder participation and conflict resolution of the diverse interests is another area, which needs to be addressed.

Payments for ecological Services may be the key to protection of the environment in the future. This is both important and urgent and certainly an area worthy of further research.

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Appendix 1 List of Submissions to Irish Forestry Policy Review

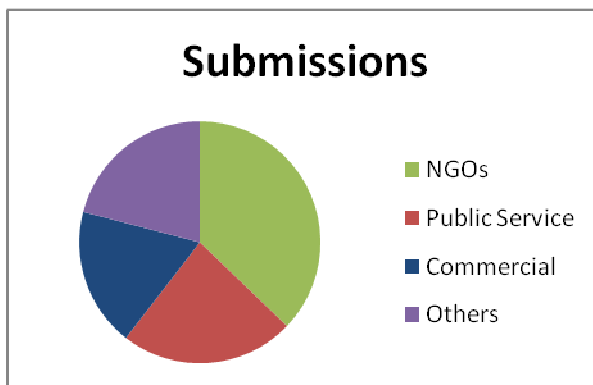
1. An Taisce
2. Association of Irish Forestry Consultants
3. Clare County Council, Environment and Water Services
4. Community, Rural and Gaeltacht Affairs, Dept of
5. Cork Environmental Forum
6. Cook, T.
7. Crann
8. Donegal Woodland Owners Society Limited
9. Eastern Regional Fisheries Board
10. Environment, Heritage and Local Government, Dept of
11. Failte Ireland
12. Farrelly Bros.
13. Forestry Assessment Companies
14. Friends of the Irish Environment
15. Gallagher, G.
16. Gilligan, S.
17. Gowran, J.
18. Heritage Council, The
19. Hussey, B.
20. IFS Asset Managers Limited
21. Impact
22. Irish Environmental Pillar
23. Irish Farmers Association
24. Irish Forestry and Forest Products Association
25. Irish Peatland Conservation Council
26. Irish Timber Growers Association
27. Irish Wind Energy
28. Keep Ireland Open
29. Macroom District Environmental Group
30. North Western Regional Fisheries Board
31. Pro Silva Ireland
32. South Tipperary County Council
33. Sustainability Institute
34. Teagasc
35. Teak 21
36. Tong, A.
37. Tourism, Culture and Sport, Dept of
38. University College Cork, Archaeology Department
39. Voice of Irish Concern for the Environment
40. Walkers Association of Ireland, The
41. Western Regional Fisheries Board
42. Woodland League, The
43. Woodlands of Ireland

Appendix 1.1 Description of Authors of Submissions

1. **An Taisce** is a registered charity whose objective is to protect “*the environment and heritage of Ireland for the benefit of the people of Ireland and future generations and for the ‘Common Good’.*”
2. The Association of Irish Forestry Consultants represents the forest consultancy profession in Ireland.
3. **Clare County Council, Environment and Water Services** draws attention to the local authority’s legal responsibilities in relation to water quality.
4. The Minister for Community, Rural and Gaeltacht Affairs supports Coillte’s role in the National Countryside Recreation Strategy.
5. **Cork Environmental Forum** is an umbrella organisation of 650 groups and individuals fostering sustainable development.
6. Cook, T. A member of MDEG (see no 29 below).
7. **Crann** is a membership NGO, whose 800 members who ‘*stand up for trees*’ by promoting a sustainable, bio-diverse woodland culture.
8. **Donegal Woodland Owners Society Limited** is a wood fuel supply co-operative, which supports and promotes sustainable forest management and timber marketing.
9. **Eastern Regional Fisheries Board** Public Service with responsibility for inland fisheries.
10. The **Water Quality Section of the Department of the Environment, Heritage and Local Government** is concerned about the EPA (Environmental Protection Agency) report 2010 highlighting the dramatic decline in sensitive high status rivers.
11. Failte Ireland is the Tourist Development Board of Ireland.
12. **Farrelly Bros.** is a consumer, processor and supplier of biomass for heat and electrical power.
13. **The Forestry Assessment Companies** are anonymous.
14. **Friends of the Irish Environment** is a network of conservationists and environmentalists committed to protecting Ireland's environment.
15. Gallagher, G. B. Agr. Sc (For) Ph.D.
16. Gilligan, S. completed a forestry scheme on his own farm.
17. Gowran, J. is a professional forester.
18. **The Heritage Council** has a statutory responsibility for preservation of the national heritage, re-submitted its 1999 response to the 1996 *Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland*, because of its continuing relevance, over ten years later, to the 2010 review.
19. Hussey, B. has a general interest in forestry.
20. **IFS Asset Managers Limited** manages the Irish Forestry Funds, which owns over 20,000 acres of forestry on behalf over 18,000 shareholders.
21. Impact is the trade union representing management grades in Coillte.
22. The **Irish Environmental Pillar** is a member of Social Partnership.
23. The Irish Farmers Association has a membership over 87,000 farmers.
24. The **Irish Forestry and Forest Products Association** aims to achieve a vibrant, sustainable, and competitive forestry and forest products industry for Ireland. It is part of IBEC (Irish Business and Employers Confederation).
25. The **Irish Peatland Conservation Council** purchases bog lands to protect the unique ecosystems they support and some of which were ill-advisedly afforested in the 1980s.
26. The **Irish Timber Growers Association** is the national representative body of private woodland owners in Ireland.
27. **Irish Wind Energy** is the national association for the wind industry in Ireland, promoting the use of a sustainable energy.
28. **Keep Ireland Open** is a national voluntary organisation campaigning for the right of recreational users to responsible access to the Irish countryside.

29. **Macroom District Environmental Group (MDEG)** is a not-for-profit organisation, which conserves local nature and heritage for the common good.
30. The **North Western Regional Fisheries Board** is one seven boards with responsibility for the conservation of inland fisheries.
31. **Pro Silva Ireland** is a member of the European umbrella organisation Pro Silva Europe, which promotes Pro Silva (close to nature) Principles as an alternative to clear felling.
32. **South Tipperary County Council, Planning Department.**
33. **The Sustainability Institute** provides a forum for working towards a sustainable future through research, consultancy and training.
34. Teagasc is the agriculture and food development authority in Ireland. Its mission is to support science-based innovation in the agri-food sector and the broader bio-economy that will underpin profitability, competitiveness and sustainability.
35. **Teak 21** promotes sustainable management of hardwood plantations by communities in developing countries to enhance living conditions and relieve pressure on tropical forests.
36. Tong, A. interested in plantations in the midlands.
37. The role of the **Tourism Impact Assessment Unit of the Department of Tourism, Culture and Sport** is to contribute to the formulation, implementation and review of Government policy as it impacts on tourism.
38. Professor W O'Brien of the Archaeology Department, University College Cork is concerned about the archaeological heritage.
39. **Voice of Irish Concern for the Environment** promotes a respectful relationship with the Earth and positive solutions to environmental destruction.
40. The **Walkers Association of Ireland** is an interest group for hill walkers and ramblers.
41. The **Western Regional Fisheries Board** is charged with ensuring the observance of the Fishery Acts, Bye-Laws and Orders. Its purpose is to ensure the protection and conservation of the Irish fishery resource.
42. **The Woodland League** is dedicated to restoring the relationship between people and their native woodlands and refers to the Brehon law heritage¹⁸ and the Ogham (Gaelic tree) alphabet, used at a time when Ireland was known as *Inis na Bhfeodhadha*, or 'the Island of Sacred Trees'.
43. **Woodlands of Ireland** highlights the importance of native woodlands and aims to secure their long-term sustainability.

Chart 1 Submissions by Type of Organisation



NGOs represent the largest category of submitters to the Review.

¹⁸ The Brehon laws are the second oldest written laws, after Sanskrit.

Appendix 2 Forest Value Dictionaries, adapted from Bengston and Xu's abridged dictionaries.

2.1 Life Support/Ecology Forest Value Dictionary

Absorption of pollutants. Air purifying, quality. Aquatic life, zone. Acid drainage, rain, precipitation
 Biodiversity. Biological systems. Buffer zone.
 Carbon cycle, sink, storage, sequestration. CO2 sink, storage, sequestration. Climate amelioration
 Downstream habitat.
 Ecological integrity, services, health, processes, values, diversity, benefits. Ecosystem complexity,
 resilience, maintenance, functions, restoration, structure. Ecosystem maintenance. Energy value,
 Endangered. Environmental cost, concern, degradation, impact, quality. Environmentally sensitive,
 beneficial. Erosion. Eutrophication. Extinction.
 Flood control/mitigation. Food chain. Forest health.
 Global climate. Greenhouse gases. Groundwater contamination.
 Habitat loss, protection.
 Landscape. Life-cycle, sustaining, support.
 Nitrogen. Nutrient.
 Ozone layer, depletion.
 Pollution. Photosynthesis.
 Radiation. Restoration. Riparian.
 Self-replicating, maintenance, sustaining .Soil-binding Soil conservation, erosion, structure,
 formation, nutrients. Solar. Species loss.
 Tropic flow, level, interactions, level, web.
 Water quality, purification. Watershed stabiliser. Wetland restoration. Wildlife habitat.

2.2 Utilitarian/Economic Forest Value Dictionary

Commercial, commodity, crop of timber. Economic analysis, growth, development. Exploit.
 Goods. Harvest trees. Industrial forest, land. Intensive forestry management
 Log or lumber price, export. Market value, system. Plantation. Processed timber. Products. Profits.
 Raw materials. Scarcity, supply and demand. Timber management, industry, operation, plantation,
 production, sale, shortage, value. Utilise, underutilised. Wage, workforce.

2.3 Socio-cultural Forest Value Dictionary

Aesthetic. Ancient. Beautiful. Cherish. Divine. Evocative. Ethic. Fragrant. Glory. Grandeur. Harmony.
 Heritage. Holy. Inspire. Intrinsic value. Inherent value. Magnificent. Meditate. Mythic. Natural.
 National treasure. Panoramic. Paradise. Posterity. Reverence. Rights. Rustic. Sacred. Sanctuary.
 Spiritual. Sublime. Stewardship. Transcendence. Unspoiled. Visual. Wilderness.

2.4 Additional Words for Socio-Cultural Forest Value Dictionary

Agreement, Consensus, Consultation, Cooperation, Coordination, Debate, Democratic, Enabling,
 Enforcement, Evaluate, Functions, Governance, Holistic, Institutions, Integration, Legislation,
 Monitor, Multi-functional, Participation, Policy, Process, Precautionary, Preserve, Protective,
 Research, Risk, Services, Socio-cultural, Socio-economic, Stakeholder, Subsidiarity, Sustainable,
 Training.

Appendix 3 Record Sheets

3.1 Test Record Sheet

Recorder Identification
Document Identification

Date
No

Data Source: Submissions to Irish Forestry Policy Review 2010

Category Source: Value Dictionaries

Data Categories: Life-Support (ecology), Utilitarian (economic) or Socio-cultural (recreation) Identified by: **v**

Unit of Analysis: Paragraph. Reference: Positive = +, Neutral = o, Negative = -.

Page No: Paragraph No	Data Category Life Support Ecology	+/-/0	Data Category Utilitarian Economic	+/-/0	Data Category Socio-cultural Recreation	+/-/0

3.2 Computerised Record Sheet

Unit of Analysis: Paragraph. Reference: Positive = **p**, Neutral = **n**, Negative/anti = **a**

Data Categories: Life-Support (ecology), Utilitarian (economic) or Socio-cultural (recreation)

Paragraph No	Data Category Life Support Ecology	p/n/a	Data Category Utilitarian Economic	p/n/a	Data Category Socio-cultural Recreation	p/n/a

Appendix 4 Summary of Coded Submissions

No	Summary of Submissions to Forest Review	Ecology	p/a/n	Economy	p/a/n	Socio-cultural	p/a/n
1	An Taisce	18	p	9	n	24	p
2	Association of Irish Forestry Consultants			32	p		
3	Clare Co Council, Environment & Water Services	6	p				
4	Community, Rural and Gaeltacht Affairs			8	p	9	p
5	Cork Environmental Forum	18	p	5	p/a	2	p
6	Cook, T.	3	p	3	a	6	p
7	Crann	29	p	16	p	5	p
8	Donegal Woodland Owners Society Limited	6	p	12	p/a	5	p
9	Eastern Regional Fisheries Board	5	p				
10	Environment, Heritage and Local Government	7	p				
11	Failte Ireland			2	p	3	p
12	Farrelly Bros.			6	p		
13	Forestry Assessment Companies	1	p	19	p	8	p
14	Friends of the Irish Environment	24	p	5	a		
15	Gallagher, G.	3	p	4	p	5	p
16	Gilligan, S.	2	p/a	9	p	2	p/n
17	Gowran, J.	20	p	4	p	14	p
18	Heritage Council, The	27	p	13	p	25	p
19	Hussey, B.	5	p			1	p
20	IFS Asset Managers Limited	3	a/n	29	p	23	a
21	Impact			5	p		
22	Irish Environmental Pillar	28	p			28	p/a
23	Irish Farmers Association	7	p/a	31	p	14	p
24	Irish Forestry and Forest Products Association	6	p	49	p	13	p
25	Irish Peatland Conservation Council	23	p			1	p
26	Irish Timber Growers Association	5	p	18	p	7	p/a
27	Irish Wind Energy	1	p	3	p	7	p
28	Keep Ireland Open			1	n	4	p
29	Macroom District Environmental Group	17	p	6	p	22	p
30	North Western Regional Fisheries Board	5	p				
31	Pro Silva Ireland	2	p	2	p	5	p
32	South Tipperary County Council	8	p			5	p
33	Sustainability Institute	16	p	29	p/a/n	13	p/a
34	Teagasc			17	p	9	p
35	Teak 21	3	p	2	p		
36	Tong, A.			2	p		
37	Tourism, Culture and Sport, Dept of			1	p	2	p
38	UCC, Archaeology Department					8	p
39	Voice of Irish Concern for the Environment	18	p	1	a	2	p
40	Walkers Association of Ireland					19	p
41	Western Regional Fisheries Board	3	p			2	p
42	Woodland League, The	50	p	46	p/a	105	p/a
43	Woodlands of Ireland	10	p	18	p	5	p
	Total	379		407		403	

Legend

p = positive (positive reference towards theme)
a = anti (hostile reference towards theme)
n = neutral (neutral reference towards theme)

Colour Code

Green = Environmental NGOs & Ecological Values
Blue = Commercial Organisations & Economic Values
Red = Public Service Organisations & Socio-Cultural Values

Appendix 5 Agreements on forest policy to which Ireland is a signatory.

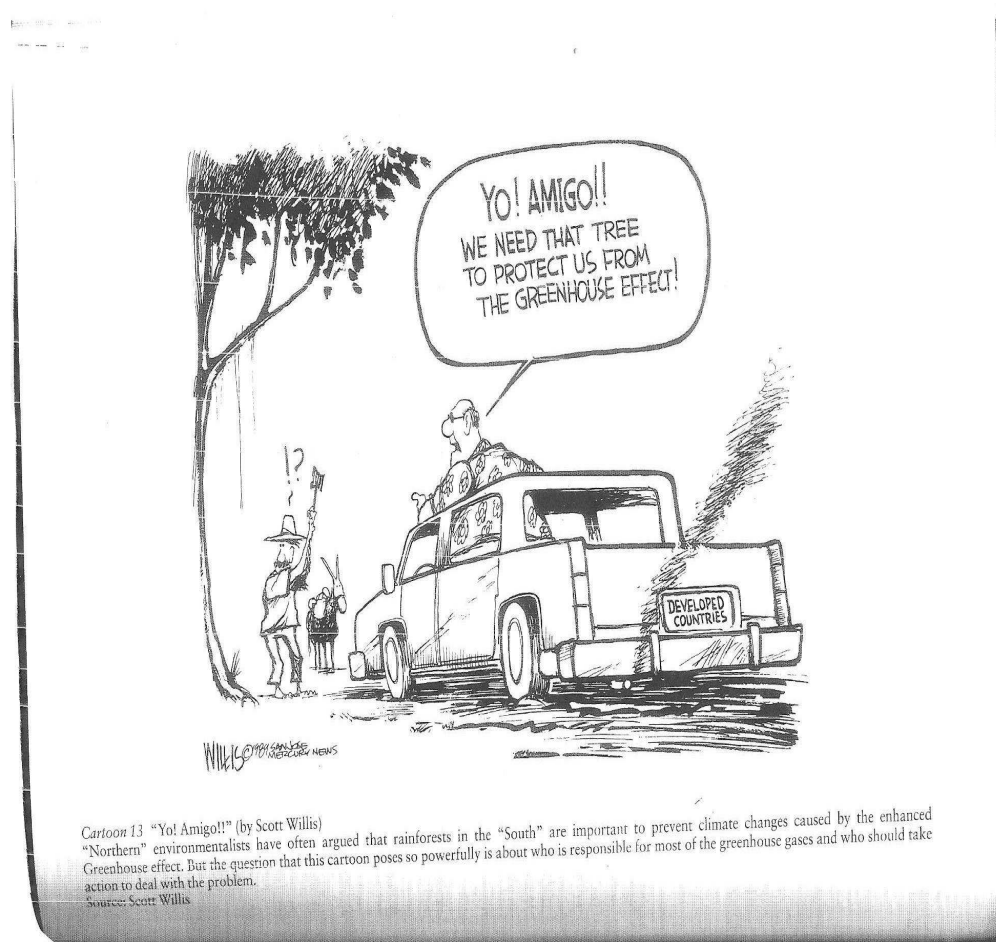
The Rio Declaration on the Environment, 1992
The Framework Convention ¹ on Climate Change, 1992, The United Nations
The Rio Convention on Biological Diversity, 1993
The Helsinki Protocols, 1994, Ministerial Conference for Protection of Forests in Europe
The Kyoto Protocol ² , 1997.
The Lisbon Protocols, 1998, Ministerial Conference for Protection of Forests in Europe
The Aarhus Convention, 1997.
The European Landscape Convention, 2000.
The Vienna Protocols, 2002, Ministerial Conference for Protection of Forests in Europe

Source: The Woodland League, (2010) Submission on Overall Irish Forestry Policy

¹The Convention encouraged industrialised countries to stabilize GHG emissions.

²The Protocol commits industrialised countries to stabilize GHG emissions.

Appendix 6 Cartoon “Yo! Amigo!!”



Source: O’Tuathail et al. (1998) *The Geopolitics Reader*. London: Routledge. P 230.

The caption below the cartoon reads:

“Northern” environmentalists have often argues that rainforests in the “South” are important to prevent climate changes caused by the enhanced Greenhouse effect. But the question that this cartoon poses so powerfully is about who is responsible for most of the greenhouse gases and who should take action to deal with the problem.

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