

## **The Energy Performance of Buildings Directive**

A comparative analysis of implementation in the Netherlands,  
Poland and Spain

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*Voor Papa*

\* 01-09-1946 † 07-11-2011

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## Introduction

In the past thirty years environmental policy and awareness have gained influence in the European Union. Whereas in the treaty of Rome of 1957 'the environment' was not mentioned at all, today environmental interests in the EU are considered as important as economic ones. The treaty of Lisbon, which entered into force in 2009, states that EU member states are

Determined to promote economic and social progress for their peoples, taking into account the principle of sustainable development and within the context of the accomplishment of the internal market and of reinforced cohesion and environmental protection.<sup>1</sup>

With more than 80% of environmental policies currently made at European level<sup>2</sup>, it is one of the most developed areas within the EU policy-making system.<sup>3</sup> It is argued that environmental problems will turn out to be "the most important group of social problems of the first half of the twenty-first century".<sup>4</sup>

Although EU environmental policy is very ambitious on paper, in practice it often leaves much to be desired. An important cause for this is that different EU member states have different views on EU environmental policy. Advocates ('leaders') plead for an ambitious EU environmental policy for all member states to prevent unlawful competition. Opponents ('laggards') point out the risk that stringent environmental legislation could have to the economy, and point out the costs of environmental initiatives.

The two camps were in relative balance until the accession of twelve new member states to the EU. In 2004 and 2007 twelve new countries, mostly from Central and Eastern Europe, entered the European Union. Before joining, every new member state had to accept the *Acquis Communautaire* consisting of 31 chapters, including a chapter on environmental protection and legislation. The accession of these countries severely affected the future of environmental policy in the EU, as the state of the environment in

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<sup>1</sup> European Commission. 'Consolidated versions of the Treaty on the European Union and of the Treaty establishing the European Community'. *Journal of the European Union*. C321, 29-12-2006. p. E/9

<sup>2</sup> Börzel, T.A. & Risse, T. 'When Europe hits home: Europeanization and domestic change'. *European Integration online papers*. 4(15) (2000). p.3

<sup>3</sup> Börzel, T.A. 2007. *Europeanization*. In *Europeanization: New Research Agendas*. eds. P. Graziano & M.P.Vink. Houndmills: Palgrave Macmillan. p.227

<sup>4</sup> Van der Heijden, H. 2010. *Social Movements, Public Spheres and the European Politics of the Environment: Green Power Europe?* Basingstoke: Palgrave Macmillan. p.2

the Central and Eastern European Countries (CEECs) was one of severe deterioration, and environmental policy was not high on the political agenda. Adding to this was that the countries lacked the financial and administrative resources to deal with the problems.<sup>5</sup> The new member states were mostly former Warsaw pact members, and decades of centrally planned economies and heavy industry caused the energy consumption in these countries to be much higher than the EU15 average.<sup>6</sup> The new member states, therefore, were not so excited about ambitious environmental policy, as it would mean major expensive adjustments to their political system and society. As a result the 'laggard' camp gained power.

This thesis will look at the positions of three member states regarding EU environmental policy. It will analyse a green, a grey, and a new member state, and explore the countries' behaviour in the EU environmental policy implementation process. By looking closely into a case study I want to find out to what extent these member states have implemented EU environmental policy, and see if their reputation (green or grey) is justified. The case study will be focussing on the implementation process of the European Performance of Buildings Directive (EPBD). This thesis will attempt to answer the following question: *In what way / to what extent do EU member states' preferences towards the environment influence its implementation behaviour of European environmental legislation?*

The three countries that will be analysed are the Netherlands, Poland and Spain. The Netherlands is traditionally a 'green' member state, together with Denmark and Germany. As Germany was split up in two until 1989, I argued that environmental politics in the 1990s might be tainted with reunification motives. For the choice between Denmark and the Netherlands, the Netherlands was the most obvious option for the availability of resources as I could also look for literature in Dutch.

For a 'grey' and Southern member state I am looking into Spain. Spain is known for its laggard environmental behaviour and being one of the bigger member states in the EU, it will be interesting to see whether their laggard reputation also affects their implementation behaviour. Finally I will discuss Poland, a new member state, and the biggest country of the ten new countries that accessed the EU in 2004. Poland is an

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<sup>5</sup> Christiansen, A.C. & Tangen, K. 'The Shadow of the Past: Environmental Issues and Institutional Learning in EU Enlargement Processes'. *Journal of Environmental Policy & Planning*. no.4 (2002). p.68

<sup>6</sup> Krech, S. et al. 2004. *Encyclopedia of World Environmental History*. New York: Routledge. p.1007

interesting country for environmental policy as it is a major coal producer and exporter. When Poland joined the EU in 2004 the share of coal in electricity generation was 92%, the highest among EU member states.<sup>7</sup>

Part one of this thesis consists of three introductory chapters. The first chapter will provide an overview of the history of EU environmental policy, how it works, and how it is shaped. Chapter two gives an introduction into the environmental history and policy of the three countries to be analysed; the Netherlands, Poland, and Spain. Chapter three consists of several theories concerning environmental behaviour and implementation. Looking at history and several other factors, such as geography, wealth, economic and political system, it attempts to provide an explanation for the countries' green or grey behaviour. It will also discuss a number of implementation theories that can be used to explain countries' behaviour towards implementation.

The second part of this thesis consists of a case study. In this case study I will look at the European Performance of Buildings Directive (EPBD) and its national implementation, in order to get a better understanding of the three countries' behaviour in the environmental legislation implementation process. The EPBD was adopted in 2002, but recently recasted in 2010, adding more ambitious targets to the directive. The buildings directive is an interesting one to look into, as buildings in the EU have a huge energy savings potential. Buildings in the EU account for around 40% of the total primary energy consumption.

The case study will look at several aspects of the buildings directive. First of all it looks whether all three countries have implemented the directive into national legislation. Secondly it will analyze in what way energy performance is measured. Next it will study the Energy Performance Certificate (EPC), a certificate that states the energy performance of a building. Finally it takes a closer look at the inspection of boilers and air conditioners and qualified experts and their education.

The thesis will conclude by looking at both the case study and the theory discussed in chapter three, and see whether the implementation behaviour of the three countries regarding the EPBD can be explained by any of the theories discussed in the third chapter. The aim is to analyse in what way the countries behave towards implementation of the

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<sup>7</sup> European Commission. *Poland Energy Mix Fact Sheet*. January 2007.p.2

abovementioned directive and whether there really is a strict difference between leader and laggard states or that the lines have become more blurred.

**PART I**

## Chapter 1: The history of (EU) Environmental policy

This chapter is an introductory chapter to environmental policy. First it will start with a short summary of global environmental history, in order to get a better understanding of the next paragraph, EU environmental history. After EU environmental history this chapter will discuss several issues often associated with environmental policy. Paragraph 1.3 discusses the North-South divide, which is often said to exist between the Northern and the Southern countries of the European Union, 1.4 discusses the implementation deficit that often casts a shadow over EU policy, including environmental policy, and 1.5 looks at NGOs, more specific environmental NGOs (ENGOS) and their role and impact in EU policymaking.

### 1.1 Global environmental history

There is not one clear or specific event that marks the beginning of global or EU environmental policy, but several occurrences together can be marked as the beginning of a growing awareness of environmental issues in the 1970s. First of all there was an explosive growth of the worldwide population in the 1960s/1970s (see appendix 1). Between 1950 and 2000 the world population grew from 2,5 billion to six billion people. The world economy expanded with factor six, and trade with factor fifteen. Combined with a massive growth of industry, these changes caused a significant thinning of the limited natural resources the world had to offer.<sup>8</sup> Another important cause for growing awareness was the growing awareness that environmental pollution was trans-boundary. In Europe, for example, Sweden suffered from air pollution coming from the United Kingdom.<sup>9</sup> Other contributing factors were the 1970s oil crisis and pictures of the beauty of the earth from space.

An important milestone in worldwide environmental policy was the publication of the report *'Our Common Future'* by the Brundtland Commission in 1987. The Brundtland Commission was assigned by the UN in 1983 to formulate an action plan in order to improve the compatibility of economic progress and nature conservation.<sup>10</sup> In this report the phrase 'sustainable development' was mentioned for the first time: "Sustainable

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<sup>8</sup> Axelrod, R., Downie, D. et al. 2005. *The Global Environment: Institutions, Law, and Policy*. Washington: CQ Press. p.21

<sup>9</sup> idem. p.24

<sup>10</sup> Krech. 2004. *Encyclopedia*. p.172

development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".<sup>11</sup> For the first time sustainability was mentioned *in combination with economy*, instead of as a *restriction to economic growth*.

Since 1972 the UN has been organising climate conferences, the first one in Stockholm. The most important one for us today was the one in Kyoto, Japan in 1992. At this conference the Kyoto protocol was signed, in which it was agreed that developed countries had the responsibility to cut their emissions, especially CO<sub>2</sub>. It was furthermore agreed that greenhouse emissions should be cut back 5.2% before 2012, with 1990 as a base year.<sup>12</sup> Although it seemed like a successful conference, the US, led by President Bush jr., withdrew its support shortly after, which meant a great loss of legitimacy for the Kyoto protocol.<sup>13</sup> The protocol did not enter into force until 2005, when there were finally enough countries that had ratified it.

### *1.2 EU Environmental policy*

As described above, environmental policy was not mentioned in the original treaty of Rome establishing the EU in 1957. The focus of the Rome treaty was on economic recovery and political reconciliation after the war. The Stockholm conference, organised by the UN in 1972, caused minds in the EU to change. The Stockholm conference was the first ever worldwide conference on the environment. The emphasis of the conference was on the transnational character of environmental problems. The conference led the EEC to believe that it needed to hold a conference of its own, which resulted in the Paris conference in 1972. At the Paris conference European leaders agreed to add an environmental agenda to the treaty of Rome. This resulted in the first Environmental Action Programme (EAP), from 1973 to 1976.<sup>14</sup>

Although this Action Plan was merely a recommendation and not a real plan, it functioned as a lead for future environmental treaties.<sup>15</sup> One of the main elements of the first EAP was the harmonisation of product standards in the different member states. Up

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<sup>11</sup> World Commission on Environment and Development (WCED). *Our Common Future*. 1987. p.43

<sup>12</sup> Axelrod. 2005. *The Global Environment*. p.114

<sup>13</sup> Krech. 2004. *Encyclopedia*. p.44

<sup>14</sup> Gerhards, J.& Lengfeld, H. 'Support for European Union Environmental Policy by Citizens of EU-member and Accession States'. *Hagener Arbeitsberichte zur Soziologischen Gegenwartsdiagnose, No. 4 (2008)*. p.6

<sup>15</sup> ibidem

to then, all EU countries had different environmental standards for products, which caused a barrier to the internal market, as it created difficulties for trade between member states. Another motivation for standardisation was a strong increase in big international companies, for which it was easier and more efficient to have the same standards.<sup>16</sup>

Environmental policy did not have its own field from the start, but it started out as part of Trade. The reason for this was that the main motivation to introduce environmental standards was to remove the trade barrier, as described above. As the main purpose of the single market was to simplify trade between EU countries, and national environmental standards were harmonised in order to prevent trade barriers, it seems a logical step that the first EAP was part of Trade.<sup>17</sup> In the next twelve years two more EAPs were published. Although neither had any legal basis, both have had a significant influence on EU environmental policy.<sup>18</sup> After the third EAP the European Community shifted its focus from dealing with the effects of environmental problems to focussing on prevention of environmental problems.

The late 1980s were characterised by a renewed interest for environmental problems, due to several major disasters. There was the 1985 Chernobyl nuclear disaster, several oil tanker accidents and toxic waste dumping, among others. What also contributed was a series of new publications on ozone layer depletion, deforestation and global warming, the 'greenhouse effect'.<sup>19</sup>

Due to this renewed interest in environmental problems, the Single European Act (SEA) of 1987 dedicated a separate section to environmental issues (articles 130r-130t)<sup>20</sup>, and environmental policy gained a legal base in the Treaty of Rome (articles 174-176).<sup>21</sup> It was also decided that environmental policy had to be integrated into all existing sectors of Community policy. The SEA also established the introduction of Qualified Majority Voting (QMV) for all environmental regulations concerning the Single Market. For all other environmental decisions unanimity was still in place.<sup>22</sup> This unanimity principle

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<sup>16</sup> Weale et al. 2000. *Environmental Governance in Europe*. Oxford: Oxford University Press. p.3

<sup>17</sup> idem p. 42

<sup>18</sup> Axelrod. 2005. *The Global Environment*. p.207

<sup>19</sup> Kanie, N. 2008. *Middle Power Leadership in the Climate Change Negotiations: foreign policy of the Netherlands*. In *Europe and Global Climate Change*, eds. Paul G. Harris. Cheltenham: Edward Elgar Publishing Limited. p. 92

<sup>20</sup> Wurzel, Rüdiger K.W. 2008. *Environmental Policy: EU Actors, Leader and Laggard States*. in *Leaderless Europe*, eds Jack Hayward. Oxford: Oxford University Press. pp.66-67

<sup>21</sup> Axelrod. 2005. *The Global Environment*. p.202

<sup>22</sup> Marsden, S. 2008. *Strategic Environmental Assessment in International and European Law*. London: Earthscan. p.163

caused many potential ambitious directives to water down, as every Member State had to agree with it.

The Maastricht treaty of 1992 extended the use of QMV to almost all areas of environmental policy, which meant that ambitious initiatives could not be rejected anymore if one member state did not agree. The introduction of QMV was related to the entrance of Greece, Portugal and Spain the year before. QMV accelerated the decision making process, it made it impossible for the new 'environmental laggard' states to veto environmental directives, and it increased the power of the Parliament and Commission. The Maastricht treaty also introduced the pillar structure. Environmental policy was put in the first pillar, which had an emphasis on supranationality. The Commission furthermore became an important player in environmental policy with the introduction of DG Environment. The Parliament gained influence with the introduction of the *co-decision* procedure, reaching the same level of influence as the Council had on new legislation.<sup>23</sup> The Maastricht treaty also put an emphasis on subsidiarity, which significantly declined the number of EU regulations compared to the 1980s. This was to meet certain member states that feared they had to give up too much sovereignty.<sup>24</sup>

With the Amsterdam treaty of 1997, ratified in 1999, the co-decision procedure became the standard procedure for environmental decisions.<sup>25</sup> The Amsterdam treaty also states that environmental protection, with an emphasis on sustainable development, should be an integral part of all policymaking in the EU.<sup>26</sup> The Amsterdam treaty made sustainable development a fundamental objective of the European Union.<sup>27</sup>

In 2007 the European Council took a major decision concerning environmental policy. It introduced ambitious targets to the member states, also known as the 20-20-20 targets. The goal is to reduce emissions with 20% compared to 1990, increase energy efficiency with 20%, and extract at least 20% of energy from renewable energy sources, all before 2020. The first target is not binding, but the other two are. These targets are mandatory for all member states, and they have to be implemented into national legislation. It is up to the member states in what way they choose to achieve the targets, but if member

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<sup>23</sup> Selin, H. 'Coalition Politics and Chemicals Management in a Regulatory Ambitious Europe'. *Global Environmental Politics* 7, no.3 (August 2007). p.69

<sup>24</sup> Axelrod. 2005. *The Global Environment*. p.208

<sup>25</sup> Weale. 2000. *Environmental Governance*. p.5

<sup>26</sup> Gehring, M. 2005. *Sustainable Development in World Trade Law*. Den Haag: Kluwer law international. p.423

<sup>27</sup> Van der Heijden. 2010. *Social Movements*. p.43

states do not comply, the European Court of Justice (ECJ) can impose a penalty or a fine.<sup>28</sup>

Currently there are more than three hundred environmental policy directives in the EU.<sup>29</sup> Keeping in mind that EU environmental policy only emerged in the 1970s, a lot has happened in the past few decades.<sup>30</sup> What started out as harmonising standards for trade purposes, nowadays has grown into its own policy field, making environmental policy one of the most integrated areas of EU policymaking, with over 80% of existing policies made at the European level.<sup>31 32</sup> At the moment the EU is in its sixth EAP, which started in 2002, and is titled: "Environment 2010, Our Future, Our Choice". The sixth programmes' focus is on the integration of sustainability into all areas of the EU, and to promote sustainability in the new member states. It focuses, for example, on whether the new member states comply with the environmental *Acquis*.<sup>33</sup>

### *1.3 Content and shifts in Environmental policy*

Since the start of environmental policy in the European Union there have been gradual shifts in the focus of the policies. As mentioned above environmental policy in the European Union emerged in the 1970s. At the beginning environmental policy was mostly reactive to specific environmental problems. Most directives emerged by responding to environmental problems that popped up, and these directives had very specific targets. An example of such legislation is the Water pollution directive (76/464/EEC) of 1976. In this directive a list of dangerous substances is included which polluted European waters in the 1970s. This measure emerged as a reaction to the increasing amount of agricultural pesticides that polluted the waters of the EU.<sup>34</sup> There was also a focus on harmonising products standards. As described above different national standards caused difficulties to trade.

In the 1990s an important shift occurred. An approach emerged that was focused on market based mechanisms. The focus was on development, but in a sustainable way, and the term 'sustainable development' became a popular one. In the consumption

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<sup>28</sup> Gerhards. 2008. 'Support for EU Environmental Policy'. p.216

<sup>29</sup> Selin. 2007. 'Coalition Politics'. p.63

<sup>30</sup> Weale. 2000. *Environmental Governance*. p.2

<sup>31</sup> Börzel. 2000. 'When Europe Hits Home'. p.3

<sup>32</sup> Selin. 2007. 'Coalition Politics'. p.64

<sup>33</sup> Axelrod. 2005. *The Global Environment*. p.208

<sup>34</sup> Hester, R.E. & Harrison, R.M. 2006. *Chemicals in the Environment*. Cambridge: the Royal Society of Chemistry.p.2

society of Western Europe in the 1990s, a focus on sustainability without the compromise of any decrease in development was very welcome. What contributed to the attention for sustainable development was the entry of the Nordic countries to the EU and the active Swedish presidency that followed.<sup>35</sup> There was also a shift regarding the subject of environmental issues. In June 1990, the European Council for the first time added climate change to its environmental agenda, and called for targets and strategies for limiting greenhouse gas (GHG) emissions. That same year the Community decided to take measures in order to stabilise GHG emissions by 2000 with 1990 as a base year.<sup>36</sup>

The Lisbon treaty, that was signed in 2007 and entered into force in 2009, clearly addresses the fight against global warming and climate change with its 20-20-20 targets. Throughout the years the emphasis of EU environmental policy has gradually shifted from a reactive approach to a more preventive approach, with currently the prevention of climate change as its biggest goal. In order to prevent the earth from warming up the European Union has many directives that are meant to prevent this. The Energy Performance of Buildings Directive is one such example.

#### *1.4 The North-South divide*

With currently 27 member states in the EU, it can be agreed that not all countries have the same ambition level where it concerns environmental policy. It has been argued, therefore, that EU environmental policy suffers from a North-South divide. This divide has been acknowledged by the European Commission in the early 1990s:

There is friction between those who demand strict Community norms to control pollution and those who believe in the setting of less severe quality objectives [...] especially since the enlargement of the Mediterranean bloc in the Community in the mid-1980s.<sup>37</sup>

Although it is very general, and certainly not true for all aspects of environmental policy, it could be argued that there is some truth to it. In general, the North-South divide theory states that the Northern (rich) countries, like Denmark, Germany, and the Netherlands (and from 1995 on Austria, Finland and Sweden)<sup>38</sup> prefer a more ambitious

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<sup>35</sup> Lafferty, W.M. 2004. *Governance for Sustainable Development*. Cheltenham: Edward Elgar Publishing Limited. p.90

<sup>36</sup> Oberthur, S. & Pallemarts, M. 2010. *The New Climate Policies of the European Union*. Brussels: Vubpress Brussels University Press. p.29

<sup>37</sup> Commission of the European Communities. 'Environmental Policy in the European Community'. *Office for Publications of the European Communities*. Luxembourg, 1990. p.17

<sup>38</sup> Axelrod. 2005. *The Global Environment*. p.205

environmental policy based on the most stringent directives and technologies available. The Southern (poor) states on the other hand, consisting of Greece, Portugal and Spain (but also Ireland)<sup>39</sup> want an EU environmental policy as flexible as possible.

These preferences have everything to do with the existing standards in the countries, which are due to all sort of contextual factors. First of all, EU environmental policy originated in the North before the Southern countries joined the European Union, so the Northern countries have a more stringent environmental policy, simply because environmental policy has had more time to develop. The Southern countries were only introduced to environmental legislation in the 1980s and therefore, in general, already struggled keeping up with European environmental legislation as it was. Secondly the Northern and Southern states encounter different environmental problems. Whereas the South has more issues with Mediterranean Sea pollution and a dry climate, the Northern problem's emphasis is more on acid rain and population density (in Britain and the Netherlands).<sup>40</sup>

The Northern leaders have good reason to push ambitious EU environmental legislation, because it saves them money. As they already have strict environmental legislation, having it implemented EU-wide means they do not have the financial disadvantages of being an environmental leader anymore. They would not have the extra costs of environmental protection<sup>41</sup>, and they would not have to invest extra in implementation.<sup>42</sup> The Northern leaders also seem to be more successful in the strategy of 'uploading' national legislation to European level. This is due to the fact that the Northern countries have the resources (money, staff, expertise etc.) to do so, contrary to many of the Southern states.<sup>43</sup>

The Southern states prefer an environmental policy based on the lowest common denominator.<sup>44</sup> They point out the negative consequences stringent environmental policy has for the economy, and they see ambitious policy mostly as a barrier for trade. With the EU enlargement of 2004 and 2007 the laggard camp increased in size. Decades of Communism and central planning had taken their toll on the state of the environment in

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<sup>39</sup> *ibidem*

<sup>40</sup> Weale. 2000. *Environmental Governance*. p.469

<sup>41</sup> *idem*. p.207

<sup>42</sup> Selin. 2007. 'Coalition Politics'. p. 70

<sup>43</sup> Börzel, T. 2008. *Environmental Policy in Europeanization: New Research Agendas*, eds. Graziano, P. & Vink, M. Basingstoke: Palgrave Macmillan. p.232

<sup>44</sup> Wurzel. 2008. *Environmental Policy*. p.68

the Central and East European Countries (CEEC). These countries had less experience with environmental policy, and lacked financial resources to meet the environmental requirements of the *Acquis Communautaire*.<sup>45</sup> As mentioned before, this divide is very general and in reality it is much more complex than described above.

### 1.5 Implementation

A big obstacle for environmental policy in the EU, is the implementation deficit. About 1/3 of all cases concerning EU law violations at the European Court of Justice (ECJ) are cases concerning environmental law.<sup>46</sup> In 1992 MEP Ken Collins said: "If we do not tackle implementation and enforcement properly, there seems very little point in producing new environmental law".<sup>47</sup> The main problem is that implementation and compliance is the responsibility of the member states themselves, and not of the EU. There is the Impel-network, Implementation and Enforcement of EU Environmental Law, but this network does not have a supranational organ that regulates implementation and compliance.<sup>48</sup>

Because of this lack of implementation, the EU in the late 1980s enforced a series of mechanisms and legal proceedings to ensure that countries implement environmental legislation.<sup>49</sup> In 1991, member states agreed that the European Court had the right to impose financial penalties on countries that failed to comply with EU legislation. The decision, however, to refer cases to the Court and the appropriate penalty level is to be decided by the Commission.<sup>50</sup> Another procedure is the withholding of EU Structural Funds, which is an important source of income for CEE countries.<sup>51</sup> Although there are several mechanisms that encourage enforcement and compliance with EU legislation, the backing of member states' governments is needed for implementation.

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<sup>45</sup> idem. p.205

<sup>46</sup> Axelrod. 2005. *The Global Environment*. p.214

<sup>47</sup> idem. p.163

<sup>48</sup> idem. p.215

<sup>49</sup> Fig, N. & Faure, M. 2004. *Green Giants? Environmental Policies of the United States and the European Union*. Massachusetts: MIT Press. p.137

<sup>50</sup> Christiansen. 2002. 'The shadow of the past'. p.72

<sup>51</sup> Börzel, T. & Buzogány, A. 'Environmental Organisations and the Europeanisation of Public Policy in Central and Eastern Europe: the Case of Biodiversity Governance'. *Environmental Politics*, vol. 19 no. 5 (September 2010). p.714

### 1.6 The Role of NGOs

Not only member states and EU institutions play a role in the process of forming EU environmental policy. NGOs can also play an important role in the policy process. They can, for example, pressure reluctant member states to implement and enforce certain environmental policies by lobbying, mobilising the public and influencing public attitudes and the media, or by acting as a 'watchdog' of non-compliance. In this 'watchdog' position NGOs are an important source of information for the European Commission, which often lacks capacity to monitor member states closely. Other tactics NGOs use to pressure member states are public campaigns and lawsuits.<sup>52</sup>

Over the years the NGOs in the EU have increased their political legitimacy. By creating awareness, mobilising the people, increasing membership, running campaigns, providing expertise, and stirring up public debate, NGOs in Brussels have gained influence on the European stage. In a 2001 White Paper the Commission acknowledges the position and importance of NGOs for European policy making: "Non governmental organisations play an important role at global level in development policy. They often act as an early warning system for the direction of political debate".<sup>53</sup> To get an idea of the importance the Commission attaches to NGOs, annually over 1 billion euro is allocated to NGOs and their projects.<sup>54</sup>

National governments also increasingly appreciate the work of NGOs. NGOs often have very specific expertise on environmental issues, and with this expertise they can offer advice to the government on environmental issues. The government then does not have to consult external experts, which means a considerable cost reduction. Not all member states, however, appreciate the role of NGOs as partners yet. This increasing role of NGOs in government issues is part of an overall (Western) worldwide phenomenon.<sup>55</sup> Governance defines a broader spectrum, in which also non-state actors participate in the policy process.<sup>56</sup> "In general, 'governance' is regarded as the successor of 'government'".<sup>57</sup> An explanation for this shift could be that there emerged more and

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<sup>52</sup> Börzel. 2010. 'Environmental Organisations'. pp.712-13

<sup>53</sup> Commission of the European Communities. 2001. *European Governance: A White Paper*. Brussels. P.14

<sup>54</sup> CASIN. *Comparing NGO influence in the EU and the US*. September 2006. p.4

<sup>55</sup> Weber, M. et al. 'Drivers of and Barriers to Shifts in Governance: Analysing Noise Policy in the Netherlands'. *Journal of Environmental Policy & Planning*, Vol. 13, No.2, (June 2011). p.120

<sup>56</sup> Weber. 2011. 'Drivers of and Barriers to Shifts in Governance'. p.121

<sup>57</sup> idem. p.121

more actors in the field, and this made it harder for the state to keep a monopoly on the decision-making process. As many ENGOs work together, they represent a large group of European citizens that cannot be ignored by the governments.<sup>58</sup>

In Brussels the core of the environmental NGOs consists of the G10, the ten most important NGOs in Brussels that work together on environmental policy. The G10 is not a formal organisation, but is rather an informal agreement between ENGOs to coordinate their activities. The European Environmental Bureau (EEB, EU's first ENGO, 1974), WWF and Greenpeace are among the members of the G10. The G10 works with the Commission, the Council and the Parliament to "ensure that the environment is placed at the heart of policy-making".<sup>59</sup> The G10 also issues joint position papers, they work on raising public awareness, and they ensure that environmental issues get media attention.<sup>60</sup>

The EEB is probably the most influential environmental NGO in Brussels. The EEB functions as an umbrella organisation for 143 environmental groups from different EU countries. Its influence ranges from raising public awareness to chairing expert panels on certain EU legislation. EEB for example encourages its member to check compliance, and publishes statements and reports to monitor the Commissions progress on certain legislation. Currently the EEB runs a campaign called 'Coolproducts', lobbying for stricter Ecodesign regulations around appliances. The Ecodesign directive attaches an energy label to household appliances in order to inform the consumer of the most energy efficient option. In 2011 the Coolproducts campaign successfully lobbied for the implementation of energy labels for air-conditioners and water pumps under the Ecodesign directive, and for 2012 it expects to push the implementation of boilers and water heaters, which can save an enormous amount of energy across the EU.<sup>61</sup>

Without this external push from NGOs the Commission would likely be much slower with implementation of directives like these. NGOs lobby activities are, however, often overshadowed by the powerful business organisations in the EU, who have much more power, money and resources for their activities. When green groups had almost

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<sup>58</sup> Wurzel, R.K.W. & Connelly, J. *Environmental NGOs; taking a lead?* In *The European Union as a Leader in International Climate Change Politics*. eds. Wurzel. Abingdon: Routledge. P.215

<sup>59</sup> Van der Heijden. 2010. *Social Movements*. p.2

<sup>60</sup> idem. p.2

<sup>61</sup> 'Leap in ecodesign rules predicted for 2012'. *ENDS Europe*. 20 december 2011

successfully lobbied for a 30% emission reduction target, business lobby groups effectively played the Commission to cut it back to 25%.<sup>62</sup>

Since the treaty of Rome environmental policy has come a long way. What started out as a method to support trade harmonisation, environmental policy in 40 years went from a reactive policy approach to a full-grown policy sector integrated in all policy fields of the European Union. Although not all member states are equally supportive of ambitious environmental policy, it is one of the policy fields that gained the most influence in recent years. With currently over three hundred directives concerning climate and environmental control, and more on the way, environmental policy is a 'force to be reckoned with'. Implementation, however, remains a weak spot, and this is something that has to be dealt with. Throughout the years more policy actors have entered the field, and especially NGOs gained influence on the European stage. Still, however, NGOs do not seem to be powerful enough to compete with the very strong business lobby in Brussels.

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<sup>62</sup> 'Too much or too little? Reaction to EU carbon and energy plans'. *ENDS Europe*. 9 March 2011

## **Chapter 2: The Netherlands, Poland and Spain: country profiles**

Between the member states of the European Union there is quite some division on what is the appropriate level of ambition for European environmental policy. As mentioned in the previous chapter, there are some member states that prefer to have a strict environmental policy, some that prefer not to, and others that take a position in the middle. There are many different theories on why certain states have a preference for stringent environmental policy and others do not. Several factors play a role, such as history, socio-economic factors, and geographical location. First of all the history of a country plays an important role in its current policy behaviour. The different post-war histories of the three countries, one free, one with a dictatorship until 1975, and one under the Communist sphere of influence until 1989, cause the countries to have a different approach to environmental problems. This chapter will provide a short history of the environmental policy of the Netherlands, Poland and Spain. Chapter three will then put the three countries to a test of several theories that exist on the level of environmental policy and awareness a country has.

In this chapter the history and development of three member states with different attitudes towards environment policy will be discussed: The Netherlands ('green'), Spain ('grey') and Poland (new). It will look at the countries' history, specifically its environmental policy history, and current policies in order to get a better understanding of the background of the environmental policy and attitude of the countries. Next chapter will discuss several theories and test these theories on the three countries to be able to explain a country's behaviour, position and motivation towards environmental policy. It can explain, for example, why Dutch environmental policy developed earlier than Spain's or Poland's, and whether Poland and Spain can 'catch up' to the 'Northern level' of environmental policy.

### *2.1 The Netherlands*

The Netherlands is traditionally seen as a 'green' member state. The Netherlands is among the first wave of countries that started to care for environmental problems in the 1960s. Among a wide public there was a growing consciousness of the negative impacts of industrial society, with a special focus on the issue of water pollution. Although other

countries struggled with the same problems, the urgency in the Netherlands was higher. The country had experienced a rapid industrialisation, and the density of the population in the Netherlands was higher than in most other Western European countries.<sup>63</sup> With the existing concerns, early publications on environmental problems gained great popularity in the Netherlands. The *Limits to Growth* report that was published by the Club of Rome in 1972, for example, sold half of its copies world-wide in the Netherlands.<sup>64</sup>

The Netherlands was also an early country to establish a ministry for Environmental hygiene in 1971, combined with the ministry of Health. This new ministry of VoMil, derived from the terms health and environmental hygiene (Volksgezondheid-Milieuhygiene),<sup>65</sup> marked the beginning of Dutch environmental policy. In comparison, it was not until 1996 that an Environmental ministry was established in Spain. Another important event in the early stages of Dutch environmental policy was the publication of the 'Urgentienota Milieuhygiene' (Priority Memorandum on the Environment) in 1972. This priority memorandum stated the environmental problems in the Netherlands and its possible solutions. From this memorandum it becomes clear the environmental problems in the early period were above all considered as a hygiene problem and a threat to public health. Furthermore, environmental problems were thought of as comprehensible and able to technically solve.<sup>66</sup>

In the 1970s Dutch environmental policy took shape with laws that set limits for water and air pollution, noise, and dangerous hazards. This legislation had some similarities with today's ETS system, with permits for pollution, allowing no one to pollute the environment without a permit.<sup>67</sup> In the 1980s environmental policy in the Netherlands changed somewhat. It seemed that the environmental problems could not as easily be solved as was previously thought. It also became evident that environmental problems had a global character, and therefore less clear and uncomplicated as was imagined. Next to that the scope of environmental policy widened to not only include

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<sup>63</sup> Andersen, M.S. & Liefverink, D. 1997. *European Environmental Policy: The Pioneers*. Manchester: Manchester University Press. p.213

<sup>64</sup> Leroy, P. 'Milieubesef als Erfgoed'. *Ons Erfdeel*. Nr.1 (2001). p.23

<sup>65</sup> Van der Heijden, H.A. 2000. *Tussen aanpassing en verzet*. Baarn: Ambo. p.57

<sup>66</sup> Leroy, P. 2005. *Milieubeleid: Sturing door de Overheid?* in *Milieuproblemen en Duurzame Ontwikkeling*, eds. R. Cörvers e.a. Open Universiteit, deel 3. p.14

<sup>67</sup> Weale. 2000. *Environmental Governance*. p.171

public health, but also to put an emphasis on ecological quality.<sup>68</sup> A widened scope asked for a different approach, and in the late 1980s a new approach presented itself.

The first Nationaal Milieubeleidsplan (National Environmental policy plan, NMP) of 1989 had as its focus the protection of the environment and sustainable development.<sup>69</sup> The plan promoted a multi-sector and multi-level approach, based on the intention to include civil society in the policy process. It was partly based on the Brundtland report of 1987, including “emphasis upon long-term planning, wide stakeholder engagement and positive-sum relationships between environment and the economy”.<sup>70</sup> The big difference compared to earlier environmental policy was the emphasis on a holistic approach. As an example of the Dutch frontrunner position, the Netherlands was the first country in the world to set CO<sub>2</sub> reduction goals.<sup>71</sup>

In the second Nationaal Milieubeleidsplan, published in 1993, the responsibility for environmental problems shifted even more from the government to the private sector and civil society. The government tried to get the market involved in solving environmental issues, without restricting too much of the free market principle. The government and several industrial sectors agreed through a memorandum of understanding (MOU) to improve energy efficiency in these sectors. The second NMP also mentioned flexible mechanisms such as the emission trading system (ETS) and carbon capture and storage (CCS), issues that the EU only picked up years later.<sup>72</sup>

From the early 1990s the Netherlands has showed an interest in an EU-wide environmental policy, and because the Netherlands was one of the first EU countries to have an environmental policy, its policy has had a significant influence on EU environmental policy. The Netherlands was clearly an environmental frontrunner in the 1980s, and thus had a clear advantage when EU environmental policy was formed. The Northern European countries managed to form an EU environmental policy based on the national policies of the countries. This way the Netherlands barely had to adjust to the new policy as it already had most of it in place. The EU’s fifth Environmental Action Plan (EAP), for example, was based on the Dutch NMP of 1989. The emphasis in the fifth EAP

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<sup>68</sup> Leroy, 2005. *Milieubeleid*. p.18

<sup>69</sup> idem. p.25

<sup>70</sup> Jordan, A. & Lenschow, A. ‘Greening’ the European Union: What Can Be Learned from the Leaders of EU Environmental Policy? *European Environment*, 10 (2000). p.114

<sup>71</sup> Wurzel, R.K.W. & Connelly, J. 2011. *The European Union as a Leader in International Climate Change Politics*. Abingdon: Routledge. p.148

<sup>72</sup> idem. p.149

was on the holistic character of environmental problems, something that was also pointed out in the Dutch NMP.<sup>73</sup>

In the 1990s the Netherlands seemed to lose its frontrunner position. The Dutch lost their interest for environmental issues, causing plans for environmental policy and sustainability to be put on hold. Also in Europe the Netherlands did not try to push for stringent environmental policy anymore. Both the Ministry of Economic affairs and an influential advisory committee had expressed their concerns of the negative consequences ambitious environmental measures would have on the competitive position of Dutch industry.<sup>74</sup> This change of heart was also reflected in the third NMP in 1998. The emphasis of this NMP was on national interest, competition, and Dutch industry.<sup>75</sup> This new position of the Netherlands towards environmental policy can also be seen in the coalition agreement of 1998, which states the ratification of the Kyoto protocol is dependent on other industrialised nations' ratification.<sup>76</sup>

In 2002 the Algemene Rekenkamer (Court of Audit) issued a critical report on Dutch environmental policy. Its main objection was the lack of organization and clarity on goals and direction:

Present policy is characterized by a lack of coherence and deficiencies in policy preparation. Measures are also being taken which are not properly enforceable and which lack sanctions, and from which large-scale energy users are partly spared. The Minister of VROM, responsible for coordinating policy, has few instruments or powers to impose emission reduction measures on other ministries. Policy also depends on external factors such as economic growth, international energy prices and other policy such as the liberalization of energy markets. This can create uncertainty for industry, which may diminish investment in energy conservation.<sup>77</sup>

The Court of Audit especially emphasized this lack of emission reduction measures. This meant that even *if* there would be any emissions reduction in 2008-2012, there was no way to measure whether this was a result of the actions taken. Although minister Pronk of the Environment promised improvements, the Dutch government kept cutting costs on environmental measures.<sup>78</sup>

It was not until 2006 that the Dutch attitude towards the environment changed again. This was partly because of Al Gore's movie, *an Inconvenient Truth*, that had an

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<sup>73</sup> Weale. 2000. *Environmental Governance*. p.61

<sup>74</sup> Wurzel & Connelly. 2011. *The EU as a leader*. p.150

<sup>75</sup> idem. p.150

<sup>76</sup> idem. p.151

<sup>77</sup> Court of Audit. *Abatement of Greenhouse Gasses report summary*. 2002

<sup>78</sup> Wurzel & Connelly. 2011. *The EU as a leader*. p.152

enormous impact in both the US and Europe. Another important factor was that the new government in the Netherlands, consisting of CDA (centre-right Christian), PVDA (Labour), and Christen Unie (centre Christian), showed a renewed interest and awareness for environmental problems.

The report *Schoon en Zuinig* (Clean and Efficient) of 2007 changed the environmental policy approach of the Netherlands for the following years. With the ambitious goals in this report (30% reduction of GHG in 2020 compared to 1990, 20% renewable energy in 2020, and annual energy savings of 2%) the Netherlands was once again a leading country in international climate politics. The Netherlands regained its active role of the 1980s and did not wait for other countries or the EU to form their environmental policy, but acted independent.<sup>79</sup>

The worldwide financial crisis, which started in 2007, did not change this approach straight away in the Netherlands. It was first and foremost seen as an opportunity to reform the financial system in a sustainable way. The Dutch government again played an important role pointing this out to the EU. When countries in the Union wanted to cut on climate policy due to the crisis, it was the Netherlands that pointed out that especially in times of crisis, sustainability could be the answer.<sup>80</sup>

### 2.1.1 Current Policy

With the current Dutch government, under the leadership of Prime Minister Mark Rutte (liberal party), environmental policy moved to the background, and does not seem to have any priority. The PVV, a party that supports the government but is not part of it, seems to even doubt whether humanity is responsible for global warming.<sup>81</sup> The current government has lowered the sustainable energy goal from 20% to 14%, and the CO<sub>2</sub> reduction goal from thirty to 20% compared to the previous government, Balkenende IV.<sup>82</sup>

This has caused big frustration among left wing parties, who accuse the current government of not complying with European environmental legislation.<sup>83</sup> The government prefers to focus on getting the economy back on track after the economic

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<sup>79</sup> idem. p.152

<sup>80</sup> idem. p.153

<sup>81</sup> Langelaar, J. 'Grote frustratie bij links over milieubeleid kabinet Rutte'. *Elsevier* (di. 30 Nov. 2010)

<sup>82</sup> Van Elburg, A. 'Kabinet Rutte: meer kernenergie, 14% duurzaam in 2020'. *Energie Overheid* (30 Sept. 2010)

<sup>83</sup> Langelaar. 2010. 'Grote frustratie bij links'

crisis and on large investments in infrastructure. Although the crisis had a temporary positive effect on the environment in the Netherlands, the government is now cutting in the environmental budget to cover the costs of the economic crisis. One of the goals that were expressed in the 2007 report *Schoon en Zuinig*, for example, of 30% GHG reduction, cannot be achieved anymore.<sup>84</sup>

Furthermore there are still new coal plants being built in the Netherlands, despite cries of environmental movements to ban out coal plants altogether. The earthquake in Japan and the following nuclear disaster also did not seem to have any effect on the nuclear plans of the Dutch government, who plans to build a new nuclear plant before 2020. This is a strong contrast with Germany, which is planning a complete nuclear phase out after the Japan disaster.

The current government also prefers to stay far away from any binding or mandatory goals. In its National Reform Programme of 2011 the Netherlands states once more that it is not seeking to introduce too clear targets regarding energy efficiency, for example: "The Netherlands will vigorously seek to increase energy efficiency without attaching a quantitative target".<sup>85</sup> Furthermore the Netherlands has a set of non-binding targets in the buildings sector, industry and the government. In industry, for example, there is a non-binding target of 30% efficiency improvements by 2020 compared to 2005. Currently this target is on track. But at the moment the Netherlands is reluctant to set any more mandatory goals.<sup>86</sup>

## 2.2 Poland

Polish environmental history generally starts after World War Two. The country was one of the most heavily damaged by the destruction of the Second World War, and up to 40% of its industry was destroyed. The years after the war were therefore completely focussed on reconstruction. Events after the war had caused Poland to fall under the Soviet sphere of influence, and as a result the economy and management of the country was restructured. Rapid industrialization became the number one priority, and with the act of

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<sup>84</sup> Planbureau voor de leefomgeving. *Balans van de leefomgeving*. 2010. p.14

<sup>85</sup> Ministry of Economic Affairs, Agriculture and Innovation. *National Reform Programme 2011: the Netherlands*. The Hague. April 2011. p.14

<sup>86</sup> European Council for an Energy Efficiency Economy. *National energy efficiency and energy savings targets*. 24 May 2011. p.33

nationalisation on 3 January 1946, all large factories and companies became state property.<sup>87</sup>

The Cold War, which started shortly after WW2, caused the Soviet block, including Poland, to invest heavily in dense industry for the production of weapons. Large-scale industrial regions emerged, consisting of huge factories that were controlled through a central authority. This system had disastrous results for the state of the environment in Poland. The centrally planned economies of the Communist era were often inefficient, especially in energy use. To compare, the primary energy consumption in Poland in 1987-88 was 0.73 kg per US dollar, while it was (on average) only 0.35 kg in the European Community countries. At the same time, 79% of Poland's energy needs came from coal, compared to 25% in the European Community.<sup>88</sup>

The Soviet leaders assumed they could copy the USSR system to all smaller countries in the region, but they did not realize that a country such as Poland was much smaller than the USSR, and dense industry therefore occupied relatively a much bigger area of the country than in Soviet Russia. The exploitation of raw materials and heavy industry went on without taking into account any environmental consequences,<sup>89</sup> and the system counted on the assumption that natural resources had an unlimited availability.<sup>90</sup>

In the 1960s and 1970s technology caught up with the Soviet world and its military sector, and the dense industry sector lost its main market. Stalin solved this problem by turning the Polish economy into a self-driven system, which worked as follows: The steel industry provided the coal industry and power plants with steel supplies, the power plants provided energy for the coal and steel industry, and both the power plants and steel industry used coal. This circular system led Poland into an economic crisis.<sup>91</sup>

The early 1970s indicated a change in Poland's environmental policy. The Stockholm conference of 1972 ignited ecological debate in Poland and this led the Polish government to create a 15-year environmental protection program in 1975. This programme, however, was not based on the actual state of the environment, but on the

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<sup>87</sup> Bokwa, A. 2007. *Climatic Issues in Polish Foreign Policy*. In *Europe and Global Climate Change*. eds. Paul G. Harris. Cheltenham: Edward Elgar Publishing Limited. p.114

<sup>88</sup> Krech. 2004. *Encyclopedia*. pp.1007-08

<sup>89</sup> Bokwa. 2007. *Climatic Issues*. p.115

<sup>90</sup> idem. p.116

<sup>91</sup> ibidem

environment based on the Communist party propaganda. The environmental programme was therefore merely symbolic rather than an actual programme.<sup>92</sup>

A small breakthrough occurred when a group of Polish scientists submitted a report to the government in 1979, suggesting a new approach to natural resources, and stating that current propaganda created a false image on the state of the environment in Poland. More reports followed in the years to come, and the government had no choice but to officially recognize certain areas of severe environmental degradation. This led to the establishment of the first environmental NGO of Poland in 1980, the Polish Ecological Club. This democratic upheaval, however, was short-lived, as General Wojciech Jaruzelski introduced Martial law in December 1981, in order to repress the democratic movement that was rising in Poland.<sup>93</sup>

### *2.2.1 Post-Communism & EU accession*

When Communism fell Poland had its first free elections in forty years. In the elections of 1991 three green parties participated, which together obtained 2.26% of the votes, but due to the lack of organisation within the parties, and the links many candidates had with the former socialist party, they barely had any influence.<sup>94</sup> From 1990 on, membership of the European Union was the main and primary foreign policy objective. This objective shaped Poland's post-Communist identity and also its environmental policy. The first and biggest environmental improvements, however, had to do with the scaling back of the centrally planned industry, which caused energy consumption and GHG emissions to reduce significantly. Active environmental measures cut 51% of sulphur dioxide (SO<sub>2</sub>) emissions and 36% of carbon dioxide (CO<sub>2</sub>) emissions between 1989 and 1998.<sup>95</sup> Taking into account that Poland was the third largest SO<sub>2</sub> emitter in 1988, emitting 4 million tons annually, cutting back by 51% is quite an achievement.<sup>96</sup>

In order to be able to implement the *Acquis*, the EU developed community programmes, which helped the future member states with the financial burden and implementation. The PHARE-programme, for example, was originally developed to assist Poland and Hungary with economic reconstruction after Communism ("Pologne, Hongrie

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<sup>92</sup> idem. p.118

<sup>93</sup> idem. p.117

<sup>94</sup> idem. p.122

<sup>95</sup> Krech. 2004. *Encyclopedia*. p.1008

<sup>96</sup> Bokwa. 2007. *Climatic Issues*. p.120

Assistance á la Reconstruction Economique”), but turned into a wider pre-accession instrument after the membership applications of the CEECs in 1993.<sup>97</sup>

A very important document for Polish environmental policy was the *Climate Policy of Poland* of 2003, published by the Ministry of Environment. Different from the Netherlands, environmental policy in Poland is shaped solely by the Environment ministry, and not by the government as a whole. It does, however, have to be approved by parliament. *The Climate Policy of Poland* lays out Poland’s preferred strategy to tackle climate change, which has a strong emphasis on market-based instruments such as emission trading (ETS) and green certificate.

These market-based instruments are probably the most effective for Poland for three reasons. First of all they can be achieved with a relatively low budget, which is attractive for a developing economy like Poland’s. Secondly, as ETS and green certificates are market-based instruments, they are focussed on industry rather than on regulation. In general, Polish people still have a strong distrust of the government due to Poland’s Communist past, and too much regulations concerning reductions, would give the impression of taking away peoples’ freedom. Thirdly the market-based instruments are focused on the economic profitability of achieving reductions, which gives a positive spin to reducing emissions or energy. This *Climate Policy of Poland* was also an important instrument for getting in line with EU environmental policy before accession.<sup>98</sup>

When Poland entered the European Union it was still in a heavy transition from the Soviet-style planned system to a free market economy.<sup>99</sup> Poland had to integrate around three hundred environmental laws into its national legislation before it could enter the EU. Next to the fact that it meant an enormous financial burden for the country (it was estimated that implementing the full environmental *Acquis Communautaire* in Poland would cost €42.8 billion<sup>100</sup>), it also meant implementation of regulations that were alien to the existing political and economic system from the socialist period. There was also lack of administrative capacity and lack of personnel to monitor compliance. (This,

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<sup>97</sup> PHARE programme. EUROPA: summaries of legislation. 2007.

<sup>98</sup> Jankowska, K. 2011. *Poland’s Climate Change Policy Struggle*. In *The European Union as a Leader in International Climate Change Politics*. eds. Wurzel. Abingdon: Routledge. p.166

<sup>99</sup> Christiansen. 2002. ‘The Shadow of the Past’. p.69

<sup>100</sup> Based on data from DANCEE (2001)

however, was not just the case for the environmental *Acquis*, but for the implementation of the *Acquis* in general).<sup>101</sup>

The accession to the European Union, however, also meant many advantages and changes for Poland. One major change for the evolution of environmental awareness in Poland is the changed relation between government and civil society actors. EU legislation required for Poland to harmonise with EU law, and this was positive for civil society actors. New legislation on public participation, access to information and transparency meant more freedom and influence for NGOs. The accession of Poland to the EU offered a bridge for Polish NGOs with NGOs in the old member states and like-minded organisations active on the EU-level.

Over the past years there has been a tremendous increase in environmental NGOs (ENGOS) in Poland, which currently has about eight hundred NGOs.<sup>102</sup> Most of these NGOs, however, are completely dependent on foreign resources for knowledge and funding. The NGOs realise that without political representation the environmental movement stands little chance. In 2004 several Polish NGOs founded a Green political party *Zieloni 2004* (Greens 2004). *Zieloni's* main campaign elements are climate protection and global environmental problems.<sup>103</sup> *Zieloni* has not managed yet to achieve any seats in the national parliament, but it is represented in regional parliaments and local councils with five seats. Although there is now an environmental political party and lobby group in place, it is nowhere near as strong as the powerful coal lobby.<sup>104</sup>

### 2.2.2 Environmental awareness

The isolated state of the Soviet imperium had as a result that environmental awareness remained low in Poland and only started rising after the collapse of Communism in 1989. After the collapse of Communism environmental awareness started to increase. It is, however, still not at the same level of environmental awareness in the Western countries.<sup>105</sup>

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<sup>101</sup> Börzel, T. & Buzogány, A. 'Governing EU accession in transition countries: the role of non-state actors'. *Acta Politica*, vol. 45, ½. (2010). p.166

<sup>102</sup> Börzel. 2010. 'Environmental Organisations'. p.709

<sup>103</sup> Jankowska. 2011. *Poland's Climate Change Policy Struggle*. p.164

<sup>104</sup> Idem. p.173

<sup>105</sup> Bokwa. 2007. *Climatic Issues*. p.121-122

With a government not concerned with environmental issues, public awareness of the state of the environment remains low. Whereas in Western Europe environmental awareness emerged in the 1970s, in Poland the emphasis was on industrialization to achieve social and economic goals. The Communist party had propaganda material that led to believe that environmental degradation was not really going on. If there were any papers at all on the dramatic state of the natural environment in Poland, they would be held from the Polish public by the Soviet leaders, as these papers blamed the environmental problems on the dense industry that the Soviets had so promoted. Acknowledging that there was environmental degradation going on was like acknowledging that there were downsides to the system. The knowledge about the real environmental situation was therefore limited to a handful of intellectual elites.<sup>106</sup>

### *2.2.3 Current Policy*

Poland's current environmental policy is quite uncomplicated. Every environmental measure that risks harming the Polish economy will not be supported by political parties, as it risks the loss of votes. The CO<sub>2</sub> emission limit proposed by the EU, for example, were seen as a cost burden for the economy, and therefore not supported. Environmental issues still do not really have any priority on the political agenda, nor is there any large-scale public debate on its impacts, urgency or possible solutions. Environmental policy is often seen as imposed by forces outside of the country (the EU), and as a threat to the development of Poland.

Poland has a very strong coal industry, as coal is an important domestic resource. This strong coal industry causes Poland to be one of the biggest CO<sub>2</sub> emitters in the EU.<sup>107</sup> 93% of its electricity and 86% of its primary energy in 2008 was produced from lignite and coal. You can imagine that Poland therefore must have a strong coal lobby, which is supported by the trade unions. They fear that strict environmental policy will cause mines to close, which will have mass unemployment as a result.<sup>108</sup> The coal industry, however, needs to be somewhat modernised and transformed in the coming years, as the majority of the coal fired plants is ageing and the mines are slowly depleted. Next to the existing

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<sup>106</sup> Bokwa. 2007. *Climatic Issues*. p.117

<sup>107</sup> Wurzel & Connelly. 2011. *The EU as a leader*. p.166

<sup>108</sup> Jankowska. 2011. *Poland's Climate Change Policy Struggle*. p.169

coal plants, Poland is planning to build three new nuclear plants in the following years<sup>109</sup>, and another thirteen coal plants.<sup>110</sup> Not only the coal plants are ageing, many of Poland's factories and buildings were built in the Soviet era (or even before) and are not efficient in any way. But as most of Poland's enterprises have a low profitability, it makes it difficult for the companies to spend money on technological modernisation.<sup>111</sup>

Both the Polish government and the opposition consist mainly of climate sceptics, although there is some positive sound coming from the current minister of economy and vice-prime minister, Waldemar Pawlak, who is a strong supporter of renewables and efficiency. The lack of environmental awareness and limited funding, however, represent an important barrier to environmental policy. There is also a lack of domestic analyses on climate change in the country and a shortage of progressive economists who are willing to engage in the matter.

In June 2011 Poland published its green agenda for the presidency of the Council, which it holds until December 31, 2011. The agenda shows quite a tough stance on environmental issues. There is only limited space for environmental measures, although there is a big focus on energy, but this has mainly to do with energy security. With the UN Climate Change Summit in Durban coming up in November, the EU's position at this summit becomes questionable without clear and ambitious targets.<sup>112</sup>

### 2.3 Spain

Spain, together with the other southern member states, traditionally has the reputation of being a 'laggard' when it comes to environmental policy. In general, Spain is slow with the implementation of environmental directives, and when it comes to making new environmental legislation Spain often opposes ambitious plans.<sup>113</sup> Until 1975 Spain was under the influence of Dictator General Francisco Franco. Under Franco's rule environmental policy had no priority at all, and it was only after Franco's death in 1975 that the environment started to gain a more prominent place in Spanish society. After Franco died, free elections were held and a new constitution was adopted in 1978. King

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<sup>109</sup> 'Poland begins work on low carbon plan for 2050'. *Ends Europe*. 17 August 2011

<sup>110</sup> Mitey, L. 'Poland: A 'green' EU presidency?' *New Europe Online*. 8 July 2011

<sup>111</sup> Ministry of the Environment. *Poland's Climate Policy: the strategies for greenhouse gas emission reductions in Poland until 2020*. Warsaw: 2003. p.12

<sup>112</sup> idem

<sup>113</sup> Christiansen. 2002. 'The Shadow of the Past'. p.73

Juan Carlos I accessed the throne, turning Spain into a parliamentary monarchy. The regained democracy opened the way for new actors to enter the field, and soon environmental issues were on the agenda in Spain.<sup>114</sup>

As a result of the reforms, responsibility for environmental issues was transferred to the autonomous communities. A big difference between Spain on the one hand and the Netherlands and Poland on the other, is that Spain is a highly decentralised state composed of seventeen autonomous regions/communities, all with their own political arrangements.<sup>115</sup> These autonomous regions have their own regional governments, which were from then on responsible for environmental policy in their region. This caused Spain's environmental policy to be very fragmented and decentralised. By the time Spain finally got a central ministry of Environment in 1996, there were already 61 regional sub-ministries and agencies in place.<sup>116</sup>

Spain joined the EU in 1986 and this meant an enormous economic growth for the country. One condition for joining the EU was that Spain had to embrace a series of neoliberal reforms that would increase its competitiveness, which would later become a general accession criterion laid out in the Copenhagen criteria of 1993.<sup>117</sup> Another general criterion was that Spain had to adopt all existing EU legislation up to date of accession. For Spain this meant implementing a wide number of directives, including environmental directives. It is argued, however, that environmental issues played a minor role in the accession discussions, and that they were certainly no condition for barring Spain from membership.<sup>118</sup>

This was fortunate for Spain, as the country had never prioritised environmental policy, and therefore "had only vaguely formulated environmental legislation at the time of accession".<sup>119</sup> Environmental awareness was low, there was no ministry of Environment, and experience with environmental management was very limited. This all became clear only after accession, when Spain could not comply with the required EU environmental legislation. By then the country argued that implementing costly

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<sup>114</sup> Krech. 2004. *Encyclopedia*. p.1149

<sup>115</sup> Tabara, J.D. 2007. *A New Climate for Spain: Accommodating Environmental Foreign Policy in a Federal State*. In *Europe and Global Climate Change*, eds. Paul G. Harris. Cheltenham: Edward Elgar Publishing Limited. p.161

<sup>116</sup> Tabara. 2007. *A New Climate for Spain*. p.180

<sup>117</sup> Krech. 2004. *Encyclopedia*, p.1149

<sup>118</sup> Christiansen. 2002. 'The Shadow of the Past'. p.71

<sup>119</sup> idem. p.71

environmental measures would hinder industrial development and economic growth. The EU developed several programmes in order for the new Southern member states to catch up with existing EU environmental policy<sup>120</sup>, and as a result Spain received €10.3 billion (about 55% of the total budget) of the Community's Structural and Cohesion Funds between 1993 and 1999.<sup>121</sup> Throughout the 1990s and the early 2000s Spain kept emphasizing its role as a country that needed special treatment and this way received generous support from the EU concerning climate policies, and even managed to make some deals on environmental targets. For the EU's 2020 emission reduction target, for example, Spain managed to negotiate that it could take 2005 as a base year while the other EU member states were tied to 1990 as a base year.<sup>122</sup>

In the late 1980s and early 1990s Spain received a large number of reasoned opinions and warning letters from the European Court of Justice, in comparison with most other EU member states. In 1990 and 1991 Spain was even the country with the highest number of breaches in the whole EU.<sup>123</sup> When entering the EU, Spain's main goal was to catch up with economic standards of the EU, and environmental legislation was mainly seen as a burden on economic growth.<sup>124</sup> As a result Spain's Greenhouse Gas (GHG) emissions increased almost 41% between 1990 and 2002, the highest increase in the whole of Europe. In comparison, the Netherlands had an increase of 1,1%, and Poland even had a decrease of 31%, due to the scaling back of centrally planned industry. The total primary energy supply in Spain also grew with almost 45% in the same years.<sup>125</sup>

Since the late 1990s Spain has recognised its potential for renewable energy sources, such as wind and solar energy. By 2005, Spain even became the second largest wind energy producer in the world (currently Spain is the 4<sup>th</sup> largest wind energy producer, after the US, Germany and China), and wind energy currently covers around 16% of the energy demand in the country.<sup>126</sup> Spain is, therefore, more than on track with the renewables target of 20% by 2020. An explanation for this high share of renewables has to do with the fact that Spain has a relatively high energy dependency compared to

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<sup>120</sup> Van der Heijden. 2010. *Social Movements*. p.44

<sup>121</sup> Christiansen. 2002. 'The Shadow of the Past'.p.72

<sup>122</sup> Costa, O. 2011. *Spanish, EU and International Climate Change Policies*. In *The European Union as a Leader in International Climate Change Politics*. Eds. Wurzel, R.K.W. & Connelly, J. Abingdon: Routledge. p.179-180

<sup>123</sup> idem. p.72

<sup>124</sup> Tabara. 2007. *A New Climate for Spain*. p.161

<sup>125</sup> idem. p.164-166

<sup>126</sup> idem. p.168

the other EU member states, of about 75%.<sup>127</sup> According to Spain this high dependency has to do with the “low level of electric and gas interconnections, especially with France, with the result that Spain is currently an energy island”.<sup>128</sup>

Partly because of EU pressure, Spain has made some institutional arrangements and created a National Commission for Climate Change (Comisión Nacional del Clima) in 1992. This body, however, was mainly developed for the UN conference in Rio in 1992, and remained largely inoperative until it was replaced by the National Council on Climate Change (Consejo Nacional del Clima) in 1998.<sup>129</sup> This Council includes representatives from all autonomous communities, but also NGOs, trade unions, and industry.<sup>130</sup> Finally, under severe pressure of the introduction of the EU ETS system in 2005, Spain began to take a new position towards the environment.<sup>131</sup> As a consequence, however, of the neglect of the previous two decades, Spain has had to work hard to reach its Kyoto and EU goals. For now it seems that Spain's emissions will still be 33% higher than its Kyoto goal for 2008-2012.<sup>132</sup>

As Spain's environmental policy emerged in coherence with membership of the EU and the rise of worldwide conventions on climate change issues, Spain did not really develop a domestic environmental policy that was solely applicable to Spain. Because the country had been so focussed on the difficulties of complying with EU policy, and the consequences for Spanish industry, the government never really focused on formulating its own policy, specifically for Spain. This concern led to the establishment of the Oficina Española de Cambio Climático (Spanish office on Climate Change, OECC) in 2001 within the ministry of Environment. The OECC has the responsibility of creating Spanish environmental policy, and furthermore functions as an advisory body to the government.<sup>133</sup> This office also addressed the compliance of EU environmental measures that have to be implemented into national legislation. Starting out with ten employees in 2001, OECC has considerably grown to a staff of over forty, and has even been upgraded to a DG.<sup>134</sup>

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<sup>127</sup> Spain, National Reform Programme 2011. p.25

<sup>128</sup> idem. p.25

<sup>129</sup> Tabara. 2007. *A New Climate for Spain*. p.169

<sup>130</sup> Costa. 2011. *Spanish Climate Change Policies*. p.185

<sup>131</sup> idem. p.174

<sup>132</sup> idem. p.177

<sup>133</sup> Costa. 2011. *Spanish Climate Change Policies*. p.183

<sup>134</sup> idem. p.185

The Conservative government that ruled Spain from 1996 to 2004 treated climate change and environmental problems as a non-issue. They were seen as a threat to economic growth. MP Josep Sánchez i Llibre mentioned in 2004 that the Kyoto agreement of 1997 was a “missile against the competitiveness of the Spanish industry”<sup>135</sup>, and newspaper *El País* portrayed the Kyoto deal as a “time bomb”.<sup>136</sup>

### 2.3.1 Current Policy

2004 seemed to be a transition year for Spanish environmental policy. Spain changed governments in 2004 from a conservative to a socialist government, and José Luis Rodríguez Zapatero became prime minister and remained in this position until November 2011. The new socialist government broke with the environmental policy neglect of the former government, and in the same year published the Allocation Plan (AP), which put a limit on emission permits for several key economic sectors.<sup>137</sup>

Since 2004 Spain is sometimes seen as an ‘improving laggard’. It has been trying to adjust to EU and international targets and commitments, and has published National Allocation Plans to stabilise its emissions. Still, however, the country is negotiating at EU level to lower its commitments and to prevent any post-2012 binding targets.<sup>138</sup> According to the Energy Savings and Efficiency Strategy the current budget for energy efficiency 2008-2012 in Spain is 450 million euro per year. This 2008-2012 Action Plan has a goal of reducing energy consumption with the equivalent of 10% of Spain’s yearly oil imports.

The Spanish press still portrays environmental problems as an international problem rather than a domestic issue. It seems that there are few newspapers or public persons that are willing to make a stand against climate change, and so the only ones who do this are the generally weak ENGOs, the environment ministry, small political parties, and MPs who are specialised on climate change or environmental issues.<sup>139</sup>

Spain’s new centre-right government, which was elected in November 2011, contains few climate commitments. The conservative Popular Party (PP), which won an absolute majority in the elections, questions the extent to which climate change is caused

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<sup>135</sup> idem. p.180

<sup>136</sup> idem. p.181

<sup>137</sup> Tabara. 2007. *A New Climate for Spain*.p.161

<sup>138</sup> Costa. 2011. *Spanish Climate Change Policies*. p.184

<sup>139</sup> Costa. 2011. *Spanish Climate Change Policies*. p.181

by greenhouse gasses (GHG). It also plans to analyse all climate measures, and make sure they do not prevent economic growth. Furthermore it opposes the more ambitious emission reduction target of 30% (as does Poland), and plans to eliminate the Environment ministry all together.<sup>140</sup>

The Netherlands, Poland and Spain have had fairly different post-war histories, and in a large amount this determinates their position towards environmental policy. I can be simply concluded from the above that the Netherlands holds the longest EU membership, and therefore was in a large way able to form European environmental policy in a way that it was similar to existing Dutch national environmental policy. Spain and Poland did not have this privilege. Especially Poland has mostly been a policy taker. When it entered the EU in 2004 it had to implement the *acquis communautaire* consisting of all existing EU legislation up to that point. Next chapter will discuss several theories concerning environmental preferences and implementation and test these theories on the three countries.

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<sup>140</sup> 'Spain elects new centre-right government'. *Ends Europe*. 21 November 2011

### Chapter 3: The 'Green' factor

In order to get a better understanding of the behaviour, position and motivation of the Netherlands, Spain, and Poland towards environmental policy, I will take a closer look at the several theories that exist on environmental policy and awareness, and see whether the countries fit the profile discussed in these theories. Also a theory on implementation will be discussed.

#### *3.1 Gerhards & Lengfeld*

First there is a theory of sociologists Jürgen Gerhards and Holger Lengfeld the wealth of a country influences its attitude towards the environment. It states that countries with a high GDP will show more support for environmental policy.<sup>141</sup> In their article 'support for European Union environmental policy by citizens of EU-member and accession states' Gerhards and Lengfeld conclude that the higher the GDP and individual welfare of a specific country and its citizens, the more support its citizens will show for environmental protection.<sup>142</sup> Environmental measures are often associated with increased costs. It therefore stands in the way of peoples' material interest. When people have less budgetary constraints, they are more willing to engage in environmental protection. This also works on state level; when a country has a strong and healthy economy, people will show more support for state expenditures towards environmental policy. In general this means that richer countries and its citizens are expected to show more support for environmental policy.<sup>143</sup>

This theory seems to make sense, as the country with the highest awareness and most stringent environmental policy is the Netherlands, which also happens to have the highest GDP. Spain and Poland have a significant lower GDP and also show a lower environmental interest than the Netherlands. When you look at the GDP of Poland, for example, and its unemployment and poverty rate, Poland has a structural high unemployment rate of about 18%, and a GDP far below the average of the Western European countries, about \$4,600 per capita in 2001. A nationwide survey carried out in 1992 pointed out that only 1% of the Poles considered environmental issues as the

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<sup>141</sup> Gerhards & Lengfeld. 2008. 'Support for EU environmental policy'. p. 14

<sup>142</sup> idem. p.8

<sup>143</sup> idem. p. 14

country's most serious problem.<sup>144</sup> The Polish people are more concerned about their basic needs and improving their living conditions than about ecological damage. This behaviour of the population makes it hard for the government to introduce long-term measures, which are often costly, and as a result the government often prioritises cheap and immediate policy measures.<sup>145</sup>

After the Communist period Poland has been trying to catch up to the West by buying Western style consumer goods, which were not available during the Soviet era. Consumerism had the highest priority, and cutting down on this consumerism for the sake of the environment was out of the question. The country had just regained its freedom and independence, and the consumer goods became the symbol of these liberties.<sup>146</sup>

The same could be said for Spain. Although Spain's GDP is a little higher than Poland's, it is still below EU-15 average. The economic crisis hit hard in Spain, with GDP rate dropping almost 8% between 2007 and 2009. Unemployment is also high in Spain, with rates of about 20%. This also shows in its interest for environmental issues, which is completely dependent on the economy of the country. Only if it benefits the economy, environmental measures are supported. The same could be said for Poland. Spain has often blamed the EU that certain EU environmental directives harm the country's economy and industry.

### 3.2 Jänicke

Political scientist Martin Jänicke states a similar theory in his article 'Trend-setters in environmental policy: the character and role of pioneer countries'. He argues that there are certain conditions that environmental pioneers have in common, such as an open and competitive economy, a strong government, an open political system, a culture of consensus, and finally EU membership.<sup>147</sup> Could it be argued, that once countries have Jänicke's 'optimal' conditions, that environmental policy will automatically follow?

Applying Jänicke's conditions to the Netherlands, it shows that the Netherlands, when environmental policy came up in the end of the 1960s, had all of the optimal conditions for developing environmental policy. Spain and Poland, on the other hand,

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<sup>144</sup> US Library of Congress. *Poland: A Country Study*. Washington. 1992

<sup>145</sup> *Poland's Climate Policy* 2003. p.12

<sup>146</sup> Bokwa. 2007. *Climatic Issues*. pp.121-122

<sup>147</sup> Jänicke, M. 'Trend-setters in environmental policy: the character and role of pioneer countries'. *European Environment*, 15 (2005). pp.134, 137

were not EU members, and certainly did not have strong and competitive economies, or an open political system.<sup>148</sup> When Spain's dictatorship ended in 1975, and Poland was freed from Communism, both countries started to develop most of the criteria above. This could be an explanation why both Spain and Poland developed environmental policy and awareness much later than the North-Western European countries.

This theory could explain why Spain still has difficulty getting rid of the laggard reputation. Because the autonomous communities in Spain are so strong, Spain lacks a strong central government, and according to Jänicke this is a condition for becoming an environmental pioneer. It should be mentioned, however, that strong regional authorities do not necessarily mean a weak national government, there are several examples of countries that have a federal structure but still a strong government, like Germany. A step in the good direction is the establishment of the National Council on Climate Change, in which all the autonomous communities were seated together.

Poland is also still struggling with its government. Although Poland has had free elections every few years since the fall of the Communist regime, it still cannot be said that Poland has a strong government. In general there is low trust in the government and governmental institutions, and this has caused that governments changed every term for the past 22 years. There seems, however, to be a change on the way, because the current government, led by Prime-Minister Donald Tusk, has managed to win a second term in office for the first time in 22 years.<sup>149</sup>

As discussed earlier, there is also a theory that the division between environmental 'leaders' and 'laggards' in environmental policy seems to follow a North-South division. Northern countries such as Sweden, Denmark and the Netherlands have more stringent environmental policy than countries in the South, such as Spain and Portugal do. It also seems that the citizens of Northern EU member states are more environmentally conscious than citizens of Southern member states or new member states.<sup>150</sup> The North-South divide in environmental policy seems merely a logical consequence of the two theories above. According to the theories of Gerhards & Lengfeld and Jänicke, this is

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<sup>148</sup> Liefferink, D. et al. 'Leaders and laggards in environmental policy: a quantitative analysis of domestic policy outputs'. *Journal of European public policy*. 16, (5 august 2009). p.679

<sup>149</sup> Traynor, I. 'Polish PM accuses European Leaders of Hypocrisy'. *The Guardian*

<sup>150</sup> Weale. 2000. *Environmental Governance*. p.468

because the Northern member states have a higher GDP, wealthier citizens, and all the right conditions for environmental awareness that lead to environmental policy.

### 3.3 *Liefferink*

Researcher Duncan Liefferink argues in his article 'Leaders and laggards in environmental policy: a quantitative analysis of domestic policy outputs' of 2009 that there are certain motivations for countries to act as a pioneer in environmental policy issues. First motivation is a 'high domestic problem pressure', such as severe environmental problems. Second, 'creating a competitive advantage for domestic industry', and third, 'influencing future international legislation'.<sup>151</sup> This could be used to explain *why* countries act as leaders or laggards.

For the Netherlands motivation one is certainly applicable, as environmental problems in the country have a direct impact to the quality of life. Several big transnational rivers flow into the North Sea through the Netherlands. This means that it has to deal with a lot more waste than just its own. All dangerous hazards that are dumped in the rivers, end up in the Netherlands.<sup>152</sup> The Netherlands is furthermore partly located under sea level, with great risk of flooding. Global warming and melting icecaps is therefore extra risky, as a rising sea could increase the risk of flooding.<sup>153</sup> Although this risk has been there for centuries, it is a very recent development that it was so clearly linked to climate change. Finally the Netherlands is a very densely populated country, and with that more pollution than the EU average. It could well be that the Netherlands is an environmental frontrunner because environmental problems have a bigger impact on this country than on some other countries.<sup>154</sup> The European Environmental Agency in 2006 even named the Netherlands as one of the most vulnerable countries for climate change impact in Europe.<sup>155</sup>

This situation is somewhat different in Poland and Spain. Both Poland and Spain are not as densely populated as the Netherlands. Both countries, however, do have their own particular domestic problem pressure. Spain suffers mostly from Sea pollution

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<sup>151</sup> Liefferink. 2009. 'Leaders and laggards' pp.678-79

<sup>152</sup> Krech. 2004. *Encyclopedia*. p.891

<sup>153</sup> idem. p. 891

<sup>154</sup> Liefferink. 2009. 'Leaders and laggards'. p.678

<sup>155</sup> European Environment Agency. 2006. *Vulnerability and adaptation to climate change in Europe*. Copenhagen: European Environment Agency.

caused by offshore gas and oil production and from the illegal waste dumping of carriers passing by. Also drought and wildfires in Spain are most likely caused by a changing climate. The domestic problem pressure, however, is considered not that high that stringent environmental policy should immediately follow.

Poland still suffers from the ecological neglect of the Soviet era. Years of central planning had neglected the environment, and a 1990 inspection of former Soviet military bases revealed many more serious environmental issues, like uncontrolled fuel leakage. After Communism Poland designated several problem areas of severe environmental degradation, of which Upper Silesia was designated the most severely polluted. In this area the infant mortality rate was almost five times higher than in some countries in Western Europe. Furthermore the life expectancy was on average four years lower in this region than in the rest of the country.

But not only Upper Silesia suffered from pollution. In 1990 about 95% of Poland's river water was considered undrinkable, and acid rain had damaged around half of Poland's lakes.<sup>156</sup> As described above, Poland does also have a severe domestic problem pressure, but this domestic problem pressure was ignored by the Soviet leaders, and was only acknowledged by the government after the fall of Communism. By this time, however, Poland had so many other issues to resolve, that it would take several more years before the problems were addressed with any significant importance. The domestic problem pressure of these issues was higher than the environmental problems.

Liefferink's second point of creating advantage for industry is also applicable to the Netherlands. As environmental policy gained terrain in the Netherlands in the 1970s, it set environmental standards for certain products. These standards caused domestic companies to have a competitive advantage compared to international companies, as they did not have to comply with these standards. These companies could not export their products to the Dutch market anymore, as it was not profitable for them to adjust their whole production system on the national standard of one small country. For the Dutch companies, however, this meant that they had less competition from international companies.<sup>157</sup> When European environmental policy was formed, the Netherlands

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<sup>156</sup> *Poland: A Country Study*.

<sup>157</sup> Liefferink. 2009. 'Leaders and laggards'. p.678

managed to 'upload' large parts of its existing policy to EU policy, again creating advantage for its industry, because it did not have to adjust to new legislation.

In the case of Poland, during the Communist period there was no trade with the Western countries, only with the other Communist ones. And as there was no open economy, the whole idea of competition did not really exist. All that was produced was state-owned. Only after Communism did Poland enter the competitive capitalist economy, and because it struggled so hard to keep up with that, it did not have the luxurious position to create advantages for domestic industry. As Poland's main objective was to enter the European Union, it had to comply with the legislation that was already in place. Although there were fewer regulations when Spain entered, more or less the same applied to them. Spain did not have the position to demand any advantages for industry, as it wanted to enter the EU, and there was already legislation in place.

Also the third point of Liefferink, concerning international legislation, can be applied to the Netherlands. The Netherlands has significantly influenced European environmental policy from the start. As it already had an environmental policy in place by the time the EU wanted to form one, it would mean a costly affair to adjust the Dutch environmental policy to the new European legislation. The environmental frontrunner countries, therefore, had a strong motivation for have EU environmental policy formed after their own ambitious policy. They decided to lobby for stringent environmental regulations, and they were successful. The environmental leading countries played a significant and decisive role in forming EU environmental policy.<sup>158</sup> An example of the Dutch influence can be seen in the fifth EAP, which was formed after existing Dutch policy. The Netherlands can be considered as a policy maker in the environmental field.

For Spain and Poland this caused considerable obstacles when entering the European Union, as there was already an environmental policy place, which was not catered to their personal needs and problems. A senior official of the Ministry of Public Works, Luis Mas, recalls:

The problems that we countries of the south have are not the problems of the countries of the north. For the problems of acid rain, that has been one of the central issues of the Community in its environmental legislation, affect us very little. [...] And this is not always contemplated at the moment of planning a Community directive or Community legislation on environmental matters.<sup>159</sup>

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<sup>158</sup> Wurzel. 2008. *Environmental Policy*. p.73

<sup>159</sup> Weale. 2000. *Environmental Governance*.p.478

Spain and Poland are considered 'policy takers' in the environmental policy field, as they both had to comply with existing legislation and had no way of influencing it.

Concerning Liefferink's second and third point it seemed that Poland and Spain were simply too late to influence any international legislation, as it was already in place by the time they entered the EU policy stage. In the first years of their membership they were 'policy takers' rather than 'policy makers', but the situation is changing and both countries slowly gain more influence and learn how the EU policy machine works.

The final conclusion of Liefferink and many other authors in this area, is that membership of the EU is the ultimate motivator for a country to work on its environmental policy. This is not just because countries *have* to implement the environmental *Acquis*, but membership also increases internal communication between countries, which leads to the exchange of policies.<sup>160</sup>

### 3.4 Implementation

As mentioned earlier environmental policy in the European Union suffers from a great implementation deficit. Many authors in the history of the European Union have acknowledged this deficit and written theories on its causes. A classic study on implementation, although based on a United States situation, is *Implementation* by Jeffrey Pressman and Aaron Wildavsky from 1973. Pressman and Wildavsky argued that for implementation to be successful a large number of actors were needed, that all have good connections to each other.<sup>161</sup>

Gunn in his article *why is implementation so difficult?* from 1978 also presents a number for conditions for the 'perfect implementation'.<sup>162</sup> One is that adequate time and resources are (made) available to support implementation. This condition seems fairly similar to the condition of Gerhards and Lengfeld for environmental preference. The more resources a country has, the more likely it will implement EU directives. Difference here is that this condition is not only about the resources that *are* available, but Gunn also refers to resources that are *made* available.<sup>163</sup> According to Gunn, therefore, success

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<sup>160</sup> Liefferink. 2009. 'Leaders and laggards'. p.680

<sup>161</sup> Dimitrakopoulos, D. & Richardson, J. 2001. *Implementing EU Public Policy*. In *European Union: Power and Policy-Making*. 2nd ed. London: Routledge

<sup>162</sup> Gunn, L. (1978) 'Why Is Implementation So Difficult?', *Management Services in Government* 33, 4.

<sup>163</sup> Dimitrakopoulos, D. & Richardson, J. 2001.

of implementation is not only dependent on resources available, but also on the resources a country makes available to the specific implementation, and thus the priority a country gives to specific implementation. For environmental implementation in general this means that the Netherlands would logically have a higher degree of implementation, as it attaches a higher priority to the environment than Spain and Poland do. In recent years, however, the Netherlands is slightly changing its preferences more towards economic recovery in the crisis, and environmental implementation is a little sidetracked.

Another condition of Gunn is that there must be full understanding and agreement of the legislation during the implementation process.<sup>164</sup> EU directives sometimes steer clear from specific targets and are filled with vague language<sup>165</sup>, such as 'nearly-zero energy buildings', while no one can really specify how near to zero 'nearly-zero' exactly is. As many member states are reluctant to set binding targets concerning environmental issues, environmental directives in the EU are filled with these vague terms. This makes it both harder and easier for states to implement directives. It makes it harder as member states often have difficulty understanding what it exactly is they have to implement. It makes it in some cases also easier for member states, as terms like 'nearly-zero' leave very large room for interpretation.

Dimitrakopoulos and Richardson in their chapter *Implementing EU Public Policy* furthermore argue that the presence of a civil society, and therefore NGOs, is of crucial importance for implementation. They emphasize a threefold role of civil society. First of all, individuals, NGOs and society are the ones that directly implement EU policy by carrying it out. If they do not comply with legislation, implementation fails. Secondly both individuals and NGOs have the power to take public authorities to court when they fail to implement policies. They therefore serve as a watchdog of compliance. Thirdly, NGOs can hold informal ties with the Commission, and inform the Commission when public authorities lack implementation, or when their interests are being harmed by national authorities.<sup>166</sup>

Dimitrakopoulos and Richardson also state that implementation is harder in a state with a federal structure. They argue that the federal structure of the European Union, although not a state, is "a recipe for implementation problems". According to the

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<sup>164</sup> Gunn. 1978. 'Why Is Implementation So Difficult?'

<sup>165</sup> Dimitrakopoulos & Richardson. 2011. *Implementing EU Public Policy*.

<sup>166</sup> Dimitrakopoulos & Richardson. 2011. *Implementing EU Public Policy*.

authors it has to do with the different levels of decision making: “In a federal state many actors participate in the implementation of federal programmes at the federal, state and local levels, thus increasing the number of decision points and the likelihood of ineffective implementation”.<sup>167</sup> Spain also has a federal structure, and the theory above could easily be applied to Spain. Because the country is divided into seventeen autonomous communities, implementation is often ineffective and fragmented as there is no central government overseeing the process.<sup>168</sup>

Another well-known implementation theory is a study done by Paul Sabatier in 1980: *The Implementation of Public Policy*. Sabatier in his study distinguishes three categories of independent variables that can all affect each other. The first category is the tractability of the problem, i.e. how well the ‘problem’ (the legislation) is addressed by the authorities, or that some directives are easier to implement than others. Some countries, for example, need to make more adjustments to implement certain legislation than others do. In this first category Sabatier also includes the technical availability to implement the measure, and the costs versus the benefits of the legislation.<sup>169</sup>

All three countries in general have the technical capacity to implement environmental legislation. The cost benefit analysis, however, is a tricky one in environmental policy. The benefit of environmental policy, namely, is a very long-term one, and although there is sufficient scientific proof that the earth is indeed warming up, there is still uncertainty about whether this is caused by humanity. A country like Poland, that is still very much catching up to Western standards, is, according to this theory, not expected to have a high degree of environmental implementation. For Poland the costs of implementing environmental policy are currently too high for its benefits, which are very unclear and long-term. Poland prefers to focus on short-term goals that have direct benefits. Poland furthermore still has a great amount of climate sceptics, even within its government.<sup>170</sup> The idea of investing in implementing legislation for something that might not even be happening is not widely supported among them.

The second category is the capacity of the authorities to address the problem, and the unambiguity of the legislation. This is a point that is also addressed by Gunn. When a

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<sup>167</sup> Dimitrakopoulos & Richardson. 2011. *Implementing EU Public Policy*.

<sup>168</sup> Dimitrakopoulos & Richardson. 2011. *Implementing EU Public Policy*.

<sup>169</sup> Sabatier, P. ‘The implementation of public policy: a framework of analysis’. *Policy Studies Journal*. 8:4 Special Number 2 (1980). pp.541-543.

<sup>170</sup> ‘Poland’s EU Commissioner in surprise climate denial move’. Euractiv. 23 June 2011

policy is unclear, vague or ambiguous, as EU environmental can be, implementation will be ineffective. Sabatier also in his second category covers the availability of financial resources. Implementation and compliance of legislation costs money, and the country with the most financial resources is therefore expected to have the highest degree of implementation and compliance.<sup>171</sup> Obviously, based on this feature, the Netherlands will have the best implementation level, and Poland the least.

Sabatier's third category covers the non-legal variables, such as socio-economic conditions and media attention. Sabatier emphasizes the importance of socio-economic factors for implementation of certain legislation.<sup>172</sup> Poland, Spain and the Netherlands will all give different priorities to different legislation. Currently, in Spain and the Netherlands for example, legislation and implementation concerning the Euro crisis have priority over all other measures. In Poland, as discussed before, implementation of economic measures, will always have priority over environmental measures.

Sabatier in his third category also attaches importance to the media, NGOs and the public. The more media attention certain legislation or directive gets, the more likely it will be successfully implemented.<sup>173</sup> This same can be said for the public and NGOs. The media, NGOs and the public furthermore have the power to affect the political agenda. Sabatier already came to this conclusion in 1980, and also Dimitrakopoulos and Richardson in 2011 confirm the importance of civil society for the implementation of legislation. The Netherlands acknowledged the importance of civil society for the success of environmental legislation in its first Nationaal Milieubeleidsplan of 1989, by emphasizing a multi-level and multi-sector approach.

### 3.5 NGOs

Until the 1980s policymaking in the Netherlands was a government matter. During the 1980s, however, there was a gradual shift to a more consensual policy between government, industry, and NGOs. This shift did not only occur in the Netherlands, it was a world wide phenomenon, and was mainly caused by the democratic revolutions in Central and Eastern Europe: "the democratic revolutions in Central and Eastern Europe urged all

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<sup>171</sup> Sabatier. 1980. 'The implementation'. pp.544-546

<sup>172</sup> Sabatier. 1980. 'The implementation'. pp.549

<sup>173</sup> Sabatier. 1980. 'The implementation'. pp.550

kinds of political actors to think about ways to revitalize the intermediate level between the state and individual citizens".<sup>174</sup>

The shift, however, took longer in Spain and Poland than it did in the Netherlands. In the Netherlands, the environmental movement and the relevant industry sectors were being involved in the formation of environmental policy and in advisory committees. This is a big contrast with Poland and Spain, where the legitimacy of NGOs was not acknowledged at this early stage. The Dutch situation is an example of its traditional approach to politics, a consensual politics with an emphasis on avoiding conflict.<sup>175</sup> This approach of the Netherlands, where NGOs and governmental organisations negotiate and cooperate closely on environmental issues, is sometimes referred to as the 'Green polder model'.<sup>176</sup>

The NGO community is quite strong in the Netherlands. Whereas the attitude towards the government at first was mostly confrontational, from the 1980s on the relationship between the NGOs and the government improved. They were consulted for their expertise in environmental issues, and the government became an important source for subsidies to these organizations.<sup>177</sup> The role of NGOs changed, from 'opponent' to 'ally', not only in the Netherlands, but also in the EU: "the EU certainly has a tendency to 'instrumentalise' NGOs as service providers [...] by providing information and expertise 'on demand' to EU and domestic policy makers".<sup>178</sup>

The situation in Poland is somewhat different. The influence and scope of Polish NGOs is limited. First of all there is not much trust between state actors and NGOs. State actors are reluctant to cooperate with NGOs as they suspect them of representing private interests. Non-state actors, on the other hand, are afraid of state actors' scepticism towards them, as NGOs so far have mainly been watchdogs of the government rather than partners.<sup>179</sup>

The accession of Poland to the EU did not mean a direct improvement in the financial situation of the Environmental NGOs (ENGOS). The EU Structural Funds, which are meant to reduce the national and regional differences in wealth and income between

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<sup>174</sup> Van der Heijden. 2010. *Social Movements*. p.31

<sup>175</sup> Van der Heijden. 2000. *Tussen aanpassing en verzet*. p.57

<sup>176</sup> Kanie, N. 2008. *Middle Power Leadership*. p. 94

<sup>177</sup> Weale. 2000. *Environmental Governance*. pp.262-63

<sup>178</sup> Börzel. 2010. 'Environmental Organisations'. p.729

<sup>179</sup> Börzel. 2010. 'Governing EU accession in transition countries'. p.160

EU member states, were mainly allocated to large infrastructural projects, which led to a decrease in ENGO funding from the EU side.<sup>180</sup> Furthermore, lack of experience within NGOs and the top-down approach of European integration made it hard for Polish environmental NGOs to really make a difference in Polish environmental policy.<sup>181</sup>

In order to have any influence ENGOs had to professionalize, and their main tasks turned from protesting to advocacy, lobbying, and research, shifting their role from opponents into partners. Encouraged by membership of big transnational ENGOs like WWF and Greenpeace, many Polish ENGOs started to imitate the 'Western' organisation models of these organisations.<sup>182</sup> Although they have come a long way, the position of Polish ENGOs is not up to West-European standards yet. As Tanja Börzel states in her article: "while EU accession empowered ENGOs, it has not yet resulted in the emergence of sustainable cooperative state-society relations similar to those we find in most of the old member states".<sup>183</sup>

Although Spain is an environmental latecomer, several polls have shown that environmental awareness in Spain is quite high. Environmental issues are perceived as one of the three most important threats to the country, together with international terrorism and the economic crisis. Polls, however, also show that although awareness is high, the Spanish are not too fond on actual measures, but instead prefer the option of information to increase awareness.<sup>184</sup>

The modern environmental movement came up with the formation of the Asociación Española para la Ordenación y el Medio Ambiente (AEORMA) in 1970. This Spanish association for planning and environment issued the Benidorm Manifesto in 1974, in which they stated environmental problems in Spain and how to solve them. For the first time attention was drawn towards environmental problems, and in the following years there was an enormous boom of environmental NGOs, which counted up to 761 in the year 2002.<sup>185</sup>

It seems that in Spain NGOs have not yet reached that level of becoming a source of expertise to the government, and the relationship between government and NGOs is

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<sup>180</sup> Börzel. 2010. 'Environmental Organisations'. p.718

<sup>181</sup> idem. p.709

<sup>182</sup> idem. p.719

<sup>183</sup> idem. p.728

<sup>184</sup> Costa. 2011. *Spanish Climate Change Policies*. p.180

<sup>185</sup> Krech. 2004. *Encyclopedia*. p.1151

mostly one of conflict and protest. NGOs are often kept in the dark, and are often only informed of future legislation in the advanced phases of the decision-making process. The government tries to keep NGOs and other public participation far from the decisive initial phases of the legislative process.<sup>186</sup> If NGOs are involved, it is often because EU legislative requirements stimulate the process of transparency and pro-active governance.<sup>187</sup> When Spain entered the European Union, environmental policy was its embryonic stage, and dominated by a command and control approach. The concept of including NGOs in making policy was completely unfamiliar to Spain. The relationship between the authorities and NGOs therefore, is still in its developing stage.<sup>188</sup>

This chapter describes several theories when it comes to environmental preferences, behaviour and implementation. From the above it can be expected that the Netherlands would have the best record on implementation, as the country fits the best into the profile of conditions needed for implementation. Spain and Poland both have the potential of becoming an environmental frontrunner, but it seems that their societies are still in the stage of development from former modes of government. Next chapter will look at a case study, the Energy Performance of Buildings Directive, and see whether these theories are right in pointing out the Netherlands as the country that has the best environmental implementation behaviour of the three.

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<sup>186</sup> Todt, O. 'Social Decision-making on Technology and the Environment in Spain'. *Technology in Society*. 21 (1999). p.205

<sup>187</sup> Koutalakis, C. & Font, N. 'Coping with accession. The application of new modes of governance in the adoption of and adaptation to EU environmental policies in Greece, Spain and Portugal'. *Paper prepared for the ECPR Standing Group on EU Politics Third Pan-European Conference Bilgi University, Istanbul, 21-23 September 2006*. p.2

<sup>188</sup> Koutalakis & Font. 2006. 'Coping with accession'. p.11

**PART II**

## Introduction

This chapter will analyse the Energy Performance of Buildings directive and its implementation. It will look at the three countries discussed in the first part of this thesis, the Netherlands, Poland and Spain, and will analyse to what extent these countries comply with the European buildings directive. There are several methods of looking at implementation level, but this case study mainly follows the five themes of the EPBD mentioned earlier, combined with a number of additional themes from an analysis done by Antonio Andaloro et al in their article 'Energy certification of buildings' of 2010. This article analyses the implementation of the buildings directive according to several points, of which a few will come back in detail below.<sup>189</sup> This chapter will conclude with a discussion in which certain aspects of the theories discussed. The conclusion will then look back on the theories of chapter three and see whether they explain the implementation behaviour of the countries concerning the EPBD.

The four themes this thesis will analyse are: Implementation of the EPBD into national legislation of the relevant country, the Energy Performance Certificate (EPC), calculation methodology, and inspection and experts, with an emphasis on the first two topics mentioned. When looking into the subject of EPBD implementation, it turned out that literature on the first two topics was much more extensive than on the last two, and literature on the last two topics was not easy to find. By looking at these aspects of implementation, this case study attempts to give some insights into the implementation of the Netherlands Poland and Spain concerning the EPBD, and to see whether the prejudice on their green or grey position is justified.

What complicates the comparative analysis is the fact that countries have such freedom in implementing the directive. Implementation differs per country, and sometimes even per region. Existing building regulations, traditions, and climate are also factors of influence. Next to that do calculation methods differ per country, making it harder to make a simple comparison.<sup>190</sup> Furthermore resources, economic wealth, culture, history and climate should be taken into account when looking at the implementation level of the EPBD.

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<sup>189</sup> Andaloro, A. et al. 'Energy certification of buildings: a comparative analysis of progress towards implementation in European countries'. *Energy Policy* 38 (2010). p.5841

<sup>190</sup> Concerted Action EPBD. *Recast of the EPBD: The proposed changes regarding minimum energy performance requirements*. 2008. p.2

### **The history of the EPBD**

The buildings of the EU consist of 25 billion m<sup>2</sup> of useful floor space, Switzerland and Norway included. This floor space is divided into 75% residential buildings and 25% non-residential. Of all the buildings in the EU, around 40% were built before the 1960s, when regulations regarding energy consumption were very limited. There is thus a huge energy savings potential in the existing building stock of the EU. The increase in greenhouse gas emissions together with the fact that over 50% of the total energy supply of the EU is supplied by volatile and unstable countries in the Middle East, made the EU decide to draw up a common energy policy.

In this common energy policy it is stated that the EU should reach 20% energy savings by 2020, which is mainly to be reached by energy efficiency. With buildings responsible for around 40% of the total primary energy consumption in the EU, the Commission in 2002 developed a directive to make new and existing buildings in the EU more efficient, the Energy Performance of Buildings Directive (EPBD). In its new Energy Efficiency Directive of 2011, the Commission once more states that the buildings sector has a great energy savings potential: “determined action is required to tap the considerable potential for higher energy savings in buildings”.<sup>191</sup>

The idea of an EU wide legislation promoting energy efficiency dates back to 1991, when the European Community approved the SAVE programme, the Specific Actions for Vigorous Energy Efficiency. The SAVE programme aimed to reduce energy demand in the European Union by supporting standardization, create awareness amongst consumers, and by encouraging member states to implement energy efficiency programmes in different fields, including buildings.<sup>192</sup>

Following up on this directive, the Energy Performance of Buildings Directive (EPBD 2002/91/EC), which received overwhelming support from both member states and European Parliament, was the first major attempt to introduce one energy performance framework for buildings for all member states. The Directive was adopted on 16 December 2002, entered into force on 4 January 2003, and the deadline for

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<sup>191</sup> Proposal for a Directive of the European Parliament and of the Council on Energy Efficiency and Repealing Directives 2004/8/EC and 2006/32/EC. p.10

<sup>192</sup> Rodríguez González, A.B. et al. 'Towards a universal energy efficiency index for buildings'. *Energy and Buildings* 43 (2011). p.981

implementation into national legislation of member states was January 2006. The EPBD consists of five themes, that had to be implemented into national legislation of all member states:

1. Certification. All buildings in the EU, both new and existing, have to be accompanied with an Energy Performance Certificate, which states its energy use and recommendations for possible improvement of energy efficiency.
2. Regular inspection of boilers and air conditioners. All air-conditioning and heating systems in the EU have to be regularly inspected to see if they work properly and do not use excessive and unnecessary energy.
3. Qualified experts. For the inspection of heating and air-conditioning systems, and for the certification of energy performance in buildings, experts need to be trained and qualified.
4. Calculation methodology. This section is focused on the methodology of calculation of energy performance. In order to be able to compare energy performance between member states, it is preferable that all member states use the same calculation methods and units.<sup>193</sup>
5. Minimum Energy Performance standards (MEPs). The idea of this section is to encourage energy efficiency by creating a limit for energy performance. The ultimate goal is to reduce energy use in buildings and to stimulate innovation.<sup>194</sup>

The goal of the EPBD is to have all new buildings nearly-zero energy in 2020, and public buildings even in 2018, as they serve an exemplary function. To support the implementation of the EPBD there are over three hundred financial mechanisms and programmes that help with implementation, ranging from VAT reduction to grants. To encourage implementation and awareness the EU has also started an information campaign.

In 2010 the EPBD was recasted (EPBD recast, 2010/31/EU), mainly because implementation up to that point had been very slow. The main goal of the recast was to

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<sup>193</sup> Ecofys report. *Mitigation of CO2 Emissions from the Building stock*. 16 February 2004. p.8

<sup>194</sup> Beerepoot, M. 'Public energy performance and the effect on diffusion of solar thermal systems in buildings: a Dutch experience'. *Renewable Energy* 32 (2007). p.1883

make the goals of the directive more ambitious and to encourage implementation.<sup>195</sup> The recast holds on to most of the original directive, apart from a number of strengthened requirements and a renewed emphasis on the leading role of the public sector. In the recast, for example, the threshold of 1000m<sup>2</sup> for minimum energy performance requirements for existing buildings undergoing renovation is removed. It now covers all buildings undergoing renovation. The recast also states that from 2020 on all buildings have to be built 'near zero energy'. The recasted directive will repeal the old directive as of February 2012.<sup>196</sup> The new recast has to be implemented by all member states at the latest by mid-2013. It should be noted, however, that the EPBD misses out on the majority of buildings, as it only requires minimum energy performance requirements for new buildings and for existing buildings undergoing major renovations. This leaves out the vast majority of existing buildings.<sup>197</sup>

The EPBD affects a very wide audience, from real estate agencies to architects, from energy suppliers to homeowners, and more. With the EPBD the EU attempts to offer a little more transparency to the construction and real estate sector. It is also meant to create awareness of energy use in buildings. When potential buyers have a choice to buy an energy efficient house, they will be 'rewarded' with lower energy bills.<sup>198</sup>

Not all member states were eager to implement the directive into national legislation right away, and some countries still have not implemented it. As with other EU directives, the individual member states are quite flexible in the way they implement the measure. The directive, for example, mentions "minimum energy performance requirements adapted to the local climate".<sup>199</sup> A definition of 'local climate' is not given, leaving quite some room for interpretation. And this is not the only vague term in the directive. The directive also makes mention of 'near zero-energy building', which is explained as a building that has a 'very high energy performance'. Member states, however, can decide for themselves what this 'very high energy performance' should consist of.<sup>200</sup> The EPBD is filled with vague terms without clear definition, making it

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<sup>195</sup> BPIE report. *Europe's buildings under the microscope*. October 2011. p.19

<sup>196</sup> European Commission. *28<sup>th</sup> annual report on monitoring the application of EU law (2010)*. 2011. p.99

<sup>197</sup> European Council for an Energy Efficiency Economy. *Steering through the maze #4*. 2011

<sup>198</sup> van Dijk, D. et al. 'The European Directive on Energy Performance of Buildings (EPBD)- The EPBD Buildings Platform'. *ASHRAE Transactions*. Vol. 114 Issue 2 (2008). p. 338

<sup>199</sup> Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast). *Official Journal of the European Union*. L153. p.15

<sup>200</sup> Dolmans, D. 'A change is gonna come'. *Intelligent Glass Solutions* (March 2011). p.22

possible for member states to provide their own definitions. 'Very high energy performance', for example, is likely to mean something completely different in Sweden than in Italy.

## **CHAPTER 4: The Energy Performance of Buildings Directive in the Netherlands, Poland and Spain**

To check the level of implementation of the EPBD this case study will look at several aspects of the directive following mainly the themes of the directive and the guidelines of aforementioned study. This study checks the overall implementation of the buildings directive by looking at several factors in all EU states. These factors are respectively: implementation of the EPBD into national legislation, the extent to which the Energy Performance Certificate is used and to which the energy label scale (A to G) is introduced, methods in which energy performance is calculated, and the extent to which accredited experts and inspectors are active in the country, and inspections are carried out.<sup>201</sup> The outline will be as follows. Every section will be introduced shortly, followed by a per country analysis. The chapter will end with a discussion consisting of a comparative analysis of the analyses above including the theory discussed in chapter three.

### *4.1. Implementation into national legislation*

When an EU directive is adopted, it is the responsibility of each individual member state to implement it into national legislation. The way in which the directive is implemented differs per member state, and member states have a relative flexibility to choose measures that correspond best to their particular situation.<sup>202</sup> In the case of the EPBD the deadline for implementation of most articles into national legislation was 4 January 2006.<sup>203</sup> The two new member states, Bulgaria and Romania, had until January 2007 to implement the directive.<sup>204</sup>

#### *The Netherlands*

At the moment of introduction of the EPBD in 2002 the Netherlands already had a voluntary energy certification system in place, and the country had legislation regarding energy performance in buildings since 1995. In this voluntary energy certification system an advisor will calculate potential energy savings of a dwelling, and the costs of investment needed. It was also already regulated that new buildings and buildings

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<sup>201</sup> Andalaro. 2010. 'Energy certification of buildings'. p.5841

<sup>202</sup> van Dijk. 2008. 'the EPBD'. p.338

<sup>203</sup> Andalaro. 2010 'Energy certification of buildings'. p.5841

<sup>204</sup> van Dijk. 2008. 'the EPBD'. p.339

undergoing deep renovation had to meet minimum energy performance standards.<sup>205</sup> Therefore, when the EPBD came into force, the Netherlands had to make few adjustments as it had most of the legislation already in place. The biggest impact of the EPBD was the transition of the energy label from a voluntary to a mandatory basis.<sup>206</sup> Shortly after the January 2006 deadline, the Netherlands had the EPBD fully implemented into national legislation. The responsibility for the implementation of the EPBD lies with the Ministry of VROM (Volkshuisvesting, Ruimtelijke Ordening en Milieu, Ministry of Housing, Spatial Planning and the Environment). The EPBD is transposed into two directives, the Besluit Energierichtlijn Gebouwen (Decree Energy Performance of Buildings, BEG) and the Regeling Energierichtlijn Gebouwen (Regulation Energy Performance of Buildings, REG), which are both part of the Woonwet (Housing Act).<sup>207</sup>

### *Poland*

Poland has integrated the EPBD into national legislation in 2007 and 2008. The directive was implemented mostly top down, with the help of various parties, like NGOs and universities.<sup>208</sup> The NGOs and universities serve as watchdogs that inform the EU when non-compliance occurs. In order to implement the EPBD into national legislation the Construction act of 2007 was amended. The amendments focused on the introduction of energy assessments for buildings, and on the regular inspection of energy efficiency in buildings. In November 2008 three Ministerial ordinances were added, which laid out the new regulations in more detail. The ordinances included detailed information on the training and examination of qualified experts, on energy performance calculations, and on technical criteria. All these changes were accepted by parliament in August 2009. Furthermore, in January 2009 the Energy Performance Certificate was introduced, and the EPC was also added to the Construction Act. In Poland the implementation of the EPBD is the responsibility of the Ministry of Infrastructure, which is supervised by the Ministry of Economy. Poland is currently analysing how to implement the 2010 recast of the EPBD.<sup>209</sup>

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<sup>205</sup> ENPER-EXIST. 2007. *Applying the EPBD to improve the Energy Performance Requirements to Existing Buildings: Roadmap for energy efficiency measures/policies in the existing building sector*. p.89

<sup>206</sup> Concerted Action EPBD. *Implementation of the EPBD in Netherlands*. 2011. p.1

<sup>207</sup> Van Ekerschot, F. & Heinemans, H. 'Implementation of the EPBD in The Netherlands: status and planning in June 2008'. In: *Country Reports 2008, EPBD Buildings Platform*. p.1

<sup>208</sup> PRC. *Poland Country Report 2011*. p.3

<sup>209</sup> Concerted Action EPBD. *Implementation of the EPBD in Poland*. 2011. p.1

Although Poland does have the EPBD towards energy efficiency in buildings implemented into national legislation, it is very much emphasized by the government that it should not impede economic growth or competitiveness. Poland therefore is mainly interested in energy efficiency measures that either have economic benefits, or are paid for through other measures. Poland has, for example, set up financing schemes to fund the implementation of the EPBD. The government uses the money raised from the sale of emission allowances to support energy efficiency in buildings, mainly the renovation of public buildings.<sup>210</sup>

Poland could make enormous energy cuts in the residential sector with the introduction of the EPBD. The energy consumption in the Polish residential sector is much higher than in its Western counterparts with similar climates. The residential sector in Poland consumes about 40% of the total energy consumption in the country, which is incredibly high. This is not only an environmental problem, but also a social one, as families spend around 25% of their total budget on energy bills. Reason for the high energy consumption ranges from insufficient insulation to low efficiency of heaters to lack of awareness. In Polish households the majority of energy consumption is used for heating. Around 70% of energy consumption is spent on heating, and water heating comes in second with 15%.<sup>211</sup> With the introduction of the EPBD the Ministry of Regional Development and Buildings introduced a financial scheme, which covers 20% of the costs in case of thermal modernisation of a building.<sup>212</sup>

### *Spain*

In Spain the EPBD is implemented into three royal decrees: the Código Técnico de la Edificación<sup>213</sup> (Technical Code of Buildings, CTE), the Procedimiento básico para la certificación de eficiencia energética de edificios de nueva construcción<sup>214</sup> (the Decree on the Basic Procedure for Energy Performance Certification of new buildings), and the Reglamento de Instalaciones Térmicas en los edificios<sup>215</sup> (Royal Decree approving the review of the current 'Regulations for thermal installations in buildings, RITE).<sup>216</sup> The implementation of the EPBD into Spanish national legislation is the responsibility of the

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<sup>210</sup> EU Climate Policy Tracker 2011

<sup>211</sup> Odyssee. *Energy efficiency policies and measures in Poland*. September 2009. p.35

<sup>212</sup> Odyssee. *Country Report Poland*. July 2011. p.39

<sup>213</sup> Real Decreto 314/2006 of 17 March

<sup>214</sup> Real Decreto 47/2007 of 19 January

<sup>215</sup> Real Decreto 1027/2007 of 20 July

<sup>216</sup> Andaloro. 2010. 'Energy certification of buildings'. p.5858

Ministry of Housing, and of the Ministry of Industry, Tourism and Commerce. The Regional Authorities are then responsible for the inspection, registration, and compliance of the EPC.<sup>217</sup>

The Technical Code of Buildings, the CTE, was developed in parallel with the EPBD, as Spain had no energy efficiency requirements for buildings prior to the introduction of the EPBD. The CTE is to be revised every five years. The second Royal Decree, on the energy performance of new buildings, states that all new buildings must be accompanied with an EPC upon delivery, and it also gives an outline of the requirements for an EPC.<sup>218</sup> The third Royal Decree was the first legislation in almost thirty years on thermal regulation.<sup>219</sup>

Spain was planning to also implement another decree concerning the energy certification of existing buildings, after which the implementation of the EPBD into national legislation would be completed, but as Spain has not implemented any legislation on energy performance of existing buildings so far, the commission has taken Spain to the European Court of Justice (ECJ) this November. The Commission furthermore states that Spain also has not put any necessary measures in place for regular inspection of boilers, and the country will be taken to Court for this as well.<sup>220</sup>

Next to this Spain is the first country in the EU to set a mandatory renewable energy target for buildings. Depending on the type of building and the climate zone the building is in, a renovated or new building in Spain has to cover between 30% and 70% of its hot water use by solar-thermal power. Also a certain share of the power demand has to be covered by Solar PVs or solar panels.<sup>221</sup> Being one of the countries in the EU with the highest energy dependency, it is in the country's own best interest to look for alternative energy sources. Spain therefore has a considerable share of renewable energy sources.

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<sup>217</sup> Concerted Action EPBD. *Implementation of the EPBD in Spain*. 2011. p.1

<sup>218</sup> IEA. *Implementation of the Energy Performance in Buildings Directive*.

<sup>219</sup> Build UP. P172: *Spain: Impact, compliance and control of legislation*. 31 December 2009. p.1

<sup>220</sup> European Commission Press Release: *Energy performance of buildings: Commission refers Spain to Court*. 24 November 2011

<sup>221</sup> EU Climate Policy Tracker 2011

#### 4.2 Calculation Methodology

Secondly, this chapter will look at the methods of calculating energy performance that is used in the different EU countries. As stated in article 3 of both the directive and the 2010 recast there is no standard procedure on how energy performance should be calculated, and so it is up to the countries themselves to decide on a calculation methodology for energy demand. “The energy performance of buildings should be calculated on the basis of a methodology, which may be differentiated at national and regional level”.<sup>222</sup> The Commission has, however, issued a mandate (Mandate 343) asking the Comité Européen de Normalisation (CEN) to develop a common methodology valid for all member states. The new standards had to be able to estimate environmental impact and calculate energy performance. The technical committee of CEN has therefore developed a set of 40 standards, ranging from calculation to inspection procedures.<sup>223</sup> The more a country therefore uses CEN standards, the better its implementation level.<sup>224</sup> The EPBD also states certain aspects that should at least be included when calculating energy performance of a building, for example thermal characteristics, ventilations, and built-in lighting installations.<sup>225</sup>

A study by the Concerted Action EPBD, a joint initiative of the member states and the Commission to enhance information sharing, pointed out that the CEN standards are currently practically not useful, as they are not yet applicable as a package, and not consistent. Up to now, therefore, the Concerted Action recommends holding on to the national standards for calculating energy performance until the CEN standards are redeveloped.<sup>226</sup> Keeping in the back of their minds that there already is a widely used calculation system for energy performance, set by the International Organization for Standardization (ISO), the new CEN standards will probably be based on the ISO standards.

##### *The Netherlands*

After the introduction of the EPBD the Netherlands revised its calculation method in order to comply as much as possible with the CEN standards, without giving up its own

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<sup>222</sup> EPBD recast 2010. *Official Journal of the European Union*. L 153/14

<sup>223</sup> van Dijk. 2008. ‘the EPBD’. p.340

<sup>224</sup> Andaloro. 2010. ‘Energy certification of buildings’. p. 5842

<sup>225</sup> EPBD. *Official Journal of the European Union*. L1. p.71

<sup>226</sup> Concerted Action EPBD. *Cost optimal levels for energy performance requirements*. 7 April 2011. p.13

method of calculation.<sup>227</sup> The calculation method the Netherlands uses, is also based on the ISO standards, which are used and accepted world-wide. The Netherlands already had its own calculation system in place since 1995, long before the introduction of the EPBD. It is based on two different calculation methods, one for non-residential buildings, NEN standard 2916, and one for residential buildings, NEN standard 5128. The energy performance is then expressed in the Energy Performance Coefficient (EPC). Next to that there is also a distinction between new and existing buildings. For new buildings there is the Energieprestatienorm Gebouwen (EPG, Energy Performance Standard), and for existing buildings there is the Energieprestatieadvies (EPA, Energy Performance Advice).

The Energy Performance Coefficient (EPC) was introduced in 1995. Before a building was delivered, a contractor had to be able to prove that he did not cross the EPC limit. Also existing buildings ran into the EPC when they underwent deep renovations.<sup>228</sup> The lower the EPC, the more energy efficient a building functions. The Dutch ministry of economy, agriculture and innovation published a report on the progress of the second National Energy Efficiency Action plan in 2011, and below a figure is shown (figure 3) of the result and expectations of the Energy Performance Coefficient. The EPC was 0,8 in 2006, but was lowered to 0,6 in 2011. It is expected that it will be lowered to 0,4 in 2015. The goal is to have an EPC of 0 in 2020.<sup>229</sup>

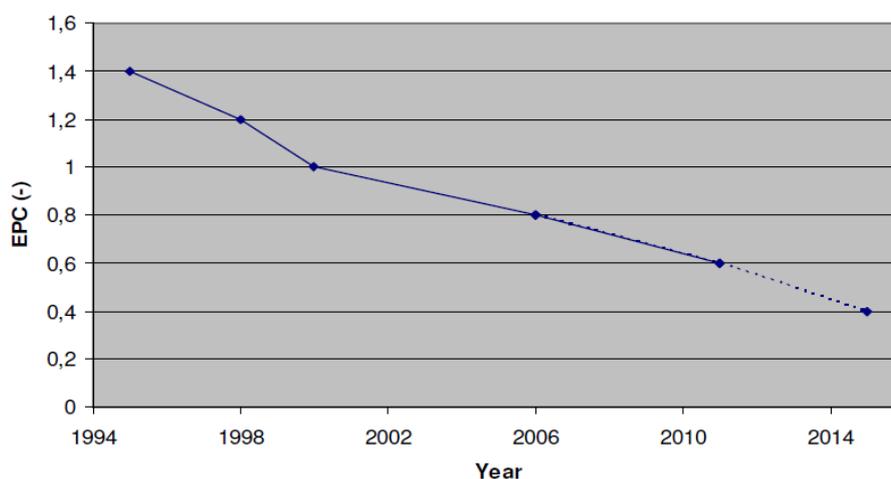


Figure 3<sup>230</sup>

<sup>227</sup> ENPER-EXIST. 2007. *Applying the EPBD*. p.89

<sup>228</sup> Ekerschot. 2008. 'Implementation EPBD in The Netherlands'. p.2

<sup>229</sup> Ministerie van Economie, Landbouw en Innovatie. *Tweede Nationale Energie Efficiëntie Actie Plan voor Nederland*. 30 Juni 2011. p. 21

<sup>230</sup> Concerted Action. 2011. *Cost optimal levels*. p.34

### *Poland*

Poland, like many other new member states, did not have any calculation methodology in place before the EPBD, and has therefore implemented the CEN standards. This is one of the few areas where a new member state like Poland was able to take a lead position compared to Spain and the Netherlands, as it did not have any existing legislation on methodology standing in the way. The Polish government decided that it was better to follow CEN standards as close as possible as it might be easier to harmonize with EU standards in the future.<sup>231</sup>

### *Spain*

Spain works with a calculation method supported by a software programme called CALENER, which is divided into two calculation versions, one for the residential sector and small tertiary sector, and one for the remaining tertiary sector. The CALENER method is largely based on the CEN method.<sup>232</sup> The CALENER tool compares the building in question with a 'standard' building in the same climatic zone and geographical area, and the same characteristics, and following that comparison assigns the building an energy scale from A to G.<sup>233</sup>

### *4.3 Energy Performance Certificate & Energy scale adopted: A-G*

This section will analyse to what extent the Energy Performance Certificate (EPC) is already used and in what way it is measured. An EPC is a certificate that states the exact energy use and energy specifications of a building in question, and it also gives recommendations for optimizing efficiency. An EPC shows the energy scale the house is in, ranging from A to G, A being the most energy efficient and G the least. Furthermore it gives information on the isolation of the floors, walls, windows and roof, on the heating and cooling installations and their efficiency, and on the average annual energy consumption (based on the average inhabitant's behaviour).<sup>234</sup>

The energy scale rates from A to G, where A corresponds with the highest energy efficiency level and G with the lowest. Here too, the Commission leaves room for

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<sup>231</sup> Panek, A. & Sowa, J. 'Energy Performance indicator and Energy Performance Requirements: a Polish approach to implementation of EPBD'. *Proceedings of Clima 2007 Wellbeing Indoors* (2007). p.1

<sup>232</sup> Jaber-López, J.T. et al. 'Are energy certification tools for buildings effective? A Spanish case study'. *Proceedings of the 2011 3rd International Youth Conference on Energetics (IYCE)*. (July 2011). p.1

<sup>233</sup> ENFORCE. *National Report implementation of the EPBD in Spain*. July 2011. p.7

<sup>234</sup> Ministerie van VROM. *Energie label voor Woningen*. 2009 p.5

interpretation. Some countries do not use the label at all, others use the A-G scale, still others added A+ and A++ for extra efficient buildings, and there are also countries that use their own scales, not based on A-G.<sup>235</sup>

It is agreed in the original EPBD directive article 7, and article 11 of the 2010 recast, that an EPC has to be made available with the construction, sale or renting out of every building in the EU. The aim of the EPC is that owners and tenants can compare and assess the energy performance of possible future living spaces. When published, an EPC has a maximum validity of ten years. Furthermore is it required that public buildings over 1000 m<sup>2</sup> have their Energy Performance Certificate visible for all visitors, as they serve an exemplary role.<sup>236</sup>

Article 7 of the EPBD directive mentions that this applies to all buildings, both new and existing, from 2006 onwards.<sup>237</sup> It is, however, stated in the text of the EPBD that member states “may [...] have an additional period of three years to apply fully the provisions of Articles 7, 8 and 9”<sup>238</sup>, which means that the actual deadline for compliance was January 2009. Different energy performance certificates are required for different types of buildings.

Member states are also required to set Minimum Energy Performance standards (MEPs). MEPs should take into account the age of a building, the general indoor climate, and the local conditions of a building. MEPs must be reviewed, and if necessary updated, every five years. Member states are allowed to distinguish between new and existing buildings, and different categories of buildings.<sup>239</sup> Before construction of a new building starts, the economic, environmental and technical feasibility of alternative energy systems has to be taken into account. This has to be documented and included in the building permit application.<sup>240</sup>

### *The Netherlands*

The Netherlands introduced the Energy Performance Certificate in 2008, one year earlier than the ultimate deadline, making the country one of the first in the EU to comply with

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<sup>235</sup> Rodríguez González. 2011. ‘Towards a universal energy efficiency index’. p.981

<sup>236</sup> Ministerie van VROM. Duurzame Nederlandse Woningvoorraad: Recente beleidsontwikkelingen. 2009. p.3

<sup>237</sup> Directive 2002/91/EC of the European Parliament and of the Council/ Directive 2010/31/EU of the European Parliament and of the Council

<sup>238</sup> Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings. *Official Journal of the European Union*. L1. p.70

<sup>239</sup> UK department for Communities and Local Government. *Recast of the Energy Performance Buildings Directive*. July 2009. p.12

<sup>240</sup> ‘Recast of the Energy Performance Buildings Directive’. 2009. p.14

the EPC legislation. In the Netherlands the EPC is known as the energy label for buildings (see appendix 2). At the time the EPBD went into force, the averaged Dutch household energy bill was €152,- per month. In the most energy efficient dwellings this would be €103,- per month, compared to €231,- per month for the least energy efficiency dwellings, which is an enormous difference.<sup>241</sup> The Netherlands has a central database where all the energy labels are stored. This database is managed by Agentschap NL (formerly Senternovem), which is an agency of the Ministry of Economic Affairs, and managed by the Ministry of VROM.

There are some cases that are excluded from the energy label in the Netherlands. Buildings built after 1999, for example, do not need to have an energy label, as it is assumed that with current technology and knowledge energy efficiency will be taken into account in any case. Also monuments are excluded from the energy label, but this is in compliance with the EU Buildings directive. At the moment the Dutch government still allows house owners to sell a house without an energy label, if the potential buyer signs an agreement that releases the owner from the obligation. In practice however, this document is rarely ever used.<sup>242</sup>

As the Dutch government has failed to set any regulations or penalties on non-compliance, the energy label is not widely used yet.<sup>243</sup> A VROM report states that in 2008 only in 19.4% of that year's transactions an energy label was present.<sup>244</sup> It seems that house owners experience the costs of a certificate too high and do not see the necessity as there is no risk of a fine, even though several studies have pointed out that consumers are willing to pay 3 to 4% more for a dwelling with an A, B or C label.<sup>245</sup> Article 21 of the EPBD recast of 2010 introduces an obligation for member states to introduce a penalty system for non-compliance, but the deadline for implementing this system is 31 January 2012.<sup>246</sup>

Although the EPBC states that the energy label of public buildings has to be placed visible for all visitors January 2009 on, a study carried out by the Ministry of VROM at the

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<sup>241</sup> Brounen, D. & Kok, N. 'On the economics of energy labels in the housing market'. *Journal of Environmental Economics and Management*. Volume 62, Issue 2 (September 2011). p.170

<sup>242</sup> ibidem

<sup>243</sup> Tambach, M. et al. 'Assessment of current Dutch energy transition policy instruments for the existing housing stock'. *Energy Policy* 38. (December 2009). P.986

<sup>244</sup> Tambach. 2009. 'Assessment of Dutch energy transition policy' p.994

<sup>245</sup> D. Brounen. 2010. p.171

<sup>246</sup> Recast of the Energy Performance Buildings Directive'. 2009. p.20

end of 2009 showed otherwise. The ministry checked 254 public buildings in the Netherlands to see whether they had their energy label clearly displayed, and it turned out that only one third of the buildings, 33%, had its energy label clearly displayed. Of this remaining 67%, 42% did not even have an energy label yet.<sup>247</sup>

The Netherlands has, just as most other EU countries, an energy scale from A to G. A report by the ministry of VROM on the Energy label of dwelling showed that, contrary to most other EU countries, the Netherlands has added a subdivision of A+ and A++ for extra efficient dwellings to its A label.<sup>248</sup> The energy scale for existing buildings in the Netherlands can be seen in figure 1. The earlier mentioned study by the ministry of VROM in the Netherlands, on the public display of the energy label in public buildings, also looked at the energy scales that the public buildings were assigned to, and it turned out that 35% of the public buildings taking part in the survey carried energy label A or B. On the other hand, 25% of the buildings carried an F or G label.<sup>249</sup>

Energy scale NL	Energy index (in MJ/m <sup>2</sup> /year)
A++	Less than or equal to 0,50
A+	0,51-0,70
A	0,71-1,05
B	1,06-1,30
C	1,31-1,60
D	1,61-2,00
E	2,01-2,40
F	2,41-2,90
G	More than 2,90

Figure 1

Another study carried out by the ministry of VROM checked the reliability of assigned energy labels for a number of dwellings by recalculating the energy-index, and found that in 25% of the cases the result of the recalculation was more than 8% different than the original calculation. In 17% of the total cases this resulted in assigning the dwelling to a different energy scale than the qualified assessor had assigned it to, mostly a lower scale after recalculation. This shows that although the Netherlands has a proper system in place for assigning the EPC, still a lot of mistakes are made when calculating the energy performance.<sup>250</sup>

<sup>247</sup> Ministerie van VROM. *Zichtbaarheid energielabels in publieke gebouwen*. Oktober 2009. p.9

<sup>248</sup> VROM. 2009. *Energielabel voor Woningen*. p.06

<sup>249</sup> VROM. 2009. *Zichtbaarheid energielabels*. p.12

<sup>250</sup> Ministerie van VROM. *Betrouwbaarheid van energielabels bij woningen*. Juni 2010. p.9

### *Poland*

In Poland the EPC is managed by the 'Ordinance on the methodology of energy performance calculations'. This ordinance distinguishes four different types of certificates; residential buildings, non-residential buildings, apartments, and building parts constituting separate technical/functional areas. An annual report on the implementation of the EPBD carried out by the Concerted Action showed that Poland implemented the measure in 2009, as late as was officially allowed.<sup>251</sup> Poland has not yet introduced the energy scale A-G, but it does have its own scale based on energy use of the building (see appendix 3). This energy scale furthermore shows the average energy performance of a similar building.<sup>252</sup>

According to Polish legislation a building has to be certified at the planning stage of a new building or deep renovation in order to receive a building permit. When the actual building or renovation starts, the EPC must be available. During construction the building site has to be visited regularly by the architect to check energy performance requirements of the new building. For existing buildings Poland has the same rules as the Netherlands; an EPC has to be made available when a building changes owners. The responsibility of supplying this EPC is in the hands of the current owner of the building. Although this is integrated into legislation in Poland, just as in the Netherlands, the EU Climate Policy tracker 2011 shows that there is no penalty for owners who do not possess certificates, making the legislation rather ineffective.<sup>253</sup>

Concerning the recommendations for improvements, in Poland there is no standardised list of recommendations as a guideline for the qualified experts. It is therefore mostly the personal opinion of the qualified expert that is expressed in the recommendations section.<sup>254</sup>

### *Spain*

In Spain, the rules and regulations concerning the EPC (see appendix 4) are stated in the Royal Decree 47/2007. This decree states that in order to get a building permit to build a new building, an EPC is needed. Whenever the building is finished, the EPC will be confirmed. This means that every new building should be accompanied by an EPC. The EU

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<sup>251</sup> Andaloro. 2010. 'Energy certification of buildings'. p.5854

<sup>252</sup> Concerted Action. 2011. *Implementation EPBD in Poland*. p.1

<sup>253</sup> EU Climate Policy Tracker 2011

<sup>254</sup> Concerted Action. 2011. *Implementation EPBD in Poland*. p.1

Climate Policy tracker shows that there is a penalty mechanism in place for when a building does not have an EPC, but it has not been properly implemented, and does not apply to existing buildings yet.<sup>255</sup>

A report of the European web portal for energy efficiency in buildings, BUILD UP, showed in Spain there is no central authority that checks compliance with the EPC regulations, but compliance is in the hands of the autonomous communities. The price for an EPC also differs per autonomous community. Not all regional authorities have yet implemented a system of checking compliance.<sup>256</sup> Next to that there is no central registry for EPCs, so it is difficult to estimate how many EPCs are issued already.<sup>257</sup> The BUILD UP report shows that as all the individual communities are responsible for quality control in their own region, there is a big quality difference between the EPCs of different regions.<sup>258</sup>

Spain does not seem to have one standardised method of calculating the energy label yet, and does not use the CEN standard. The BUILD UP report furthermore shows that Spain does have an energy scale, ranging from A to G (see figure 2). In Spain, a new building that abides to all current EPBD regulations concerning new buildings will be rated in scale C-D. This shows that Spain has relatively strict demands when it comes to the energy scale. In order for a building to be rated in scale A, it needs to have a high contribution of renewable energy (+70%) combined with a very low energy demand.<sup>259</sup>

Energy scale ES	Energy index (in MJ/m <sup>2</sup> /year)
A	Less than 0,40
B	0.41-0,65
C	0,66-1,00
D	1,01-1,30
E	1,31-1,60
F	1,61-2,00
G	More than 2,00

Figure 2<sup>260</sup>

<sup>255</sup> EU Climate Policy Tracker 2011

<sup>256</sup> *ibidem*

<sup>257</sup> ENFORCE. *Comparison of building certification and energy auditor training in Europe*. September 2010. p. 7

<sup>258</sup> Build UP. 2009. *Spain*. p.2

<sup>259</sup> *ibidem*

<sup>260</sup> *ibidem*

#### 4.4 Inspection & Experts

According to article 17 of the 2010 recast of the EPBD the EPCs, boilers and air conditioners should be assigned and checked by independent and qualified experts: “Member States shall ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts”.<sup>261</sup> The recast of the EPBD requires that member states ensure that there will be regular inspection of boilers or heating systems larger than 20KW, and that users are advised when replacing a heating system larger than 100KW.<sup>262</sup> For air-conditioning systems there is a similar article.

##### *The Netherlands*

When implementing the EPBD in the Netherlands, one of the first steps was educating qualified experts who could assign EPCs.<sup>263</sup> Energy label experts need to have higher technical education degrees, and have to pass mandatory exams before they are accredited. The qualification requirements are standardised for the whole country. Compared to other EU countries, the level of qualification for experts is quite high.<sup>264</sup>

According to the most recent official documentation from 2007, the Netherlands had a system for checking boilers, but not yet for air conditioners. According to its second NEEAP of 2011, the Netherlands had its checking system for boilers installed in October 2011. This system arranges that with every inspection an accredited expert makes a report of the performance of the system and with possible improvements concerning its energy performance. This measure complies with article 16 of the revised EPBD.<sup>265</sup>

Checking of compliance is in the hands of the regional governments and municipalities. Buildings permits are only to be given when a construction plan meets the energy efficiency requirements, and also during the building process it should be regularly checked whether the proposed actions are followed. According to ENPER-EXIST, a project in the Intelligent Energy Europe Programme of the European Commission that

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<sup>261</sup> EPBD recast 2010, *Official Journal of the European Union*. L 153/25

<sup>262</sup> ‘Recast of the Energy Performance Buildings Directive’. 2009. p.18

<sup>263</sup> Ekerschot. 2008. Implementation EPBD in The Netherlands. p. 1

<sup>264</sup> Andaloro. 2010. ‘Energy certification of buildings’. p.5865

<sup>265</sup> Ministerie EL&I. 2011. *Tweede NEEAP*. p.96

ran from 2005 to 2007, these check-ups do not always happen due to lack of capacity and lack of priority.<sup>266</sup>

### *Poland*

Poland does not have very strict regulations regarding qualified experts. Basically there are three categories of people that are allowed to call themselves qualified experts: 1. People with at least one year of post graduate study in a building related field (architecture, construction, engineering etc.), 2. People with graduate studies or a M.Sc. degree that have completed a training course and passed the exam, or 3. Architects and engineers who are responsible for the designs and construction of buildings or installations.<sup>267</sup>

Poland does have minimum energy performance requirements for both boilers and air-conditioning systems, and from January 2009 it is mandatory to have both boilers and air-conditioning systems regularly checked. Since then, however, there has not been any proper study that checked whether this measure is also carried out, so this case study can therefore not go into this specific aspect.

### *Spain*

According to a 2007 ENPER-EXIST report, in Spain the EPC training courses that are available to become a qualified assessor are voluntary and EPCs can be issued by professionals who have never attended the training course.<sup>268</sup> Training courses can even be followed online. Furthermore the requirements for EPC assessors differ per region,<sup>269</sup> and the training courses are also organised on a regional level.<sup>270</sup> This can lead to substantial regional differences, as is the case between the region Castilla and León, which offers 36-hour training courses, and the department of Madrid, which offers 100-hour training courses. This causes large differences between the quality of the qualified EPC assessors, and therefore in the quality of the issued energy performance certificates. There is no official system or national organisation that takes care of this at the national

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<sup>266</sup> ENPER-EXIST. 2007. *Applying the EPBD*. p.90

<sup>267</sup> Andaloro. 2010. 'Energy certification of buildings'. p.5854

<sup>268</sup> ENFORCE. 2010 *Comparison of building certification* p.11

<sup>269</sup> idem. p.6

<sup>270</sup> idem. p.12

level.<sup>271</sup> Some courses are supported by professional associations such as the Spanish Technical Association of Climatisation and Refrigeration, or by universities.

#### *4.5 Discussion*

Concluding from the above it seems that all three countries have the EPBD fully implemented, although Poland still struggles with the implementation of the recast. As the Netherlands already had an energy policy for buildings in place prior to the introduction of the EPBD, it was relatively easy to transfer the adjustments of the EPBD to national legislation. Spain has the EPBD fully implemented as well, but practical implementation will prove difficult. In Spain the central government is responsible for the implementation of the directive, but the autonomous communities are responsible for compliance. As Spain has not implemented a decree concerning existing buildings (part of the 2010 recast), it will now be brought to court. On the other hand, however, Spain is the first country to introduce a mandatory renewables target, which is an important condition for zero energy buildings. Poland implemented the EPBD into national legislation somewhat later than the initial deadline of 2006. This could have to do with the fact that the country was very busy adjusting to all sorts of EU legislation after its entry to the European Union.

According to the analysis above it seems that the Netherlands is clearly the most advanced when it comes to the introduction of the energy scale. The energy label, which displays the energy scale, however, is not that well implemented and only used in 20% of the housing transactions. This makes that the ambitious energy scale loses a great deal of importance. The fact that 35% of the buildings in the Netherlands has an A or B label is also of relative importance, as each country can set up the energy scale according to national preference. Spain, for example, has set a very ambitious and strict energy scale, in which achieving the A label can only be reached by a contribution of renewable energy of at least 70%, causing the majority of buildings in Spain to fall in category C or lower.

When comparing the three member states, however, the Netherlands can still be seen as the most ambitious concerning the EPC. The country was the first of the three to implement the EPC, the first to introduce a higher energy class than A (namely A+), and contrary to the other two, the Netherlands has a central database where EPCs can be

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<sup>271</sup> idem. p.15

stored. Poland introduced the measure as late as possible, and has up to date not installed an energy scale based on the preferred A-G scale. Spain has introduced the EPC and the energy scale, but was recently taken to the European Court of Justice for not applying the EPC to existing buildings, as the EPBD requires.

When looking at calculation methods it can be concluded that Poland in this field has the highest degree of compliance as it has introduced CEN standards. This was quite a logical step for the country, as it had no previous system to transfer from. The Netherlands had a history with its own calculation method, and will hold on to it as long as possible, as it will bring additional costs to change systems. Spain's method is also loosely based on CEN standards. What complicates the situation in Spain, however, is that the country has such strong autonomous communities, plus the fact that the country is divided into 12 different climatic zones, with different energy performance standards.<sup>272</sup>

In this fourth field of comparison it seems that the Netherlands has the strictest regulations. In both Poland and Spain regulations surrounding the qualification for expert are vague, in Spain it is even possible to obtain an EPC-expert degree online. Spain furthermore lacks a central authority, causing the skills and requirements for qualified experts to differ greatly per region.

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<sup>272</sup> Sánchez de la Flor, F. et al. 'Climatic zoning and its application to Spanish building energy performance regulations'. *Energy and Buildings* 40 (2008). p.1

## Conclusion

Part one of this thesis discussed the history of EU environmental policy, and the environmental policies of the Netherlands, Poland, and Spain. It also analysed the positions of the countries towards environmental policies and possible reasons or motives behind these positions. Part two of this thesis consisted of a case study, concerning the Energy Performance of Buildings Directive of 2002. The case study tried to get an answer to the question in what way or to what extent EU member states' preference or reputation towards environmental policy influenced its actual implementation behaviour of certain environmental legislation.

Before this question can be answered it is important to keep a number of things in mind, which were also mentioned earlier in this thesis. The three member states discussed in this thesis have different backgrounds, histories, climates, and cultures. The member states also have a different amount of resources and money, and this will surely affect their behaviour towards environmental policy. In short, countries differ greatly, and these differences should be kept in mind when drawing a comparison between the three.

The case study looked at four aspects of implementation of the Energy Performance of Buildings Directive (EPBD), with an emphasis on the implementation into national legislation, and the implementation and presence of the Energy Performance Certificate (EPC). Looking at these aspects and its implementation, it seems that the national preferences or reputations were clearly present in the implementation of the directive. As expected did the Netherlands have a higher degree of implementation than Spain or Poland. It must be said that this higher degree of implementation did not affect all areas of implementation, and the Netherlands was surely not the best implementing member states of the European Union, but compared to Spain and Poland it gave more priority to the implementation of the directive than did the other two.

The Netherlands was quick with implementing the directive into national legislation. This had to do with the fact that the Netherlands already had an existing buildings policy in place, making it easier to implement additional legislation. This can be explained by Sabatier's first theory, that some measures are more easy to implement in some countries than others. For the Netherlands it was easier to implement the EPBD, as

it had most of the legislation already in place. It therefore had to make fewer adjustments than Poland or Spain.

Liefferink's third point can also be applied here. The Netherlands had significant influence on the design of the EPBD during the negotiations, and was able to form the policy in a way that it was more easily adjustable to national standards. Poland for example, was not even a member state yet when the negotiations of the EPBD were going on. Poland was therefore more a 'policy taker' when it came to the directive. The EPBD was already agreed on before Poland joined the European Union in 2004, leaving the country no choice but to accept and implement the directive, although with a little delay. As the country has limited resources, and as this directive is not the only directive that needs to be transposed to national legislation, Poland focuses on the bare minimum of implementation and prefers to focus on measures that encourage economic growth and on flexible mechanisms.

Spain, just like Poland, had to make considerable adjustments to implement the EPBD. It did not have any environmental legislation in place before the EPBD, as the country's focus was more on economic goals. When in November 2011 Spain still had not implemented all aspects of the EPBD into national legislation, the country once more confirmed its 'grey' reputation, and the Commission was forced to take Spain to the European Court of Justice. It must be said, however, that on other parts of environmental legislation, such as renewable energy, Spain is doing particularly well.

Regarding the Energy Performance Certificate the Netherlands was once more a frontrunner on the European stage. The Netherlands implemented the EPC a year prior to the official deadline, and it also included two subcategories on the energy scale, A+ and A++. Poland implemented the EPC just before the deadline, while Spain only implemented the EPC partly, causing the Commission to take Spain to court. Although the Netherlands seems to be the green one of the three again, there is some more discussion to it in this case. The Netherlands has indeed introduced all the necessary legislation, but in practice it turns out that the EPC is barely used. This could have to do with the current liberal government that prefers to focus on economy rather than on environment. Also the economic crisis is likely to play an important part. The housing market is heavily hit by the financial crisis, and not really open to introducing new features at the moment.

This is an example of Sabatier's socio economic conditions that influence implementation. The financial crisis in the Netherlands currently causes that the government does not comply with the legislation concerning the Energy Performance Certificate. In Spain the Energy Performance Certificate compliance is low due to another reason mentioned in chapter three, its federal structure. As Dimitrakopoulos and Richardson argue a federal structure is problematic for implementation, and in Spain this is clearly visible with the EPC. There is no central authority watching the compliance of the EPC, there is no central registry where EPC information is stored, and there is a big quality difference between different EPCs in different autonomous communities. This makes the EPC a hard measure check compliance of.

The feature of calculation methods discussed in the case study gives a somewhat different impression. When it comes to calculation methods Poland seems to have the highest degree of compliance to the EPBD. This image, however, is also a little distorted, as both Spain and the Netherlands also have a properly working calculation system in place, which is just a little different from the one the EU prefers. In the case of the Netherlands this was because the country already had a calculation system in place, which meets the requirements of the international ISO standards. Sabatier's theory of the amount of adjustment can be applied to Poland here, as the country had no calculation system in place at all, it was relatively easy to adjust to the calculation system prescribed by the EPBD.

Ending with the fourth feature, of checking compliance, it seems that only the Netherlands has a clear and proper training system for accredited experts. According to Gunn's theory this has to do with the priority a country attaches to specific legislation. It is not only about the resources that are available, but also about the resources that are made available. Both Spain and Poland attach less importance to the education of qualified experts than the Netherlands does. The courses for experts vary greatly in quality and price, and in Spain it is even possible to become an accredited expert by taking an online course. This could be taken as a sign that Spain is not willing to invest in the training of qualified experts. It must be mentioned here, however, that the language of the EPBD concerning qualified experts, once again leaves large room for interpretation, as it is not specified in the directive what 'qualified' entails. According to both Gunn and Sabatier this will significantly hinder the implementation process of the measure.

When looking this specific case study it can be concluded that the traditional 'green' state, the Netherlands, indeed has a higher degree of implementation than the 'grey' or new member states Spain and Poland, and that these reputations therefore are justified. When summing up the theory from chapter three it indeed seems that the Netherlands has the best credentials when it comes to environmental policy and implementation. The country has a high GDP, financial resources, a culture of consensus, and a strong and well-developed civil society.

Spain and Poland are both still developing a civil society, and concerning environmental policy the two do not differ that much from each other. Both countries prefer economic measures over environmental ones, both still have a semi-problematic relationship with NGOs, and limited financial resources. However, Poland does seem to have the best potential for becoming an 'improving laggard' as the country for the first time since the fall of communism has the same government for a second term, indicating that the government is getting stronger. Spain, on the other hand, has a federal structure, and according to Dimitrakopoulos and Richardson this is "a recipe for implementation problems".<sup>273</sup>

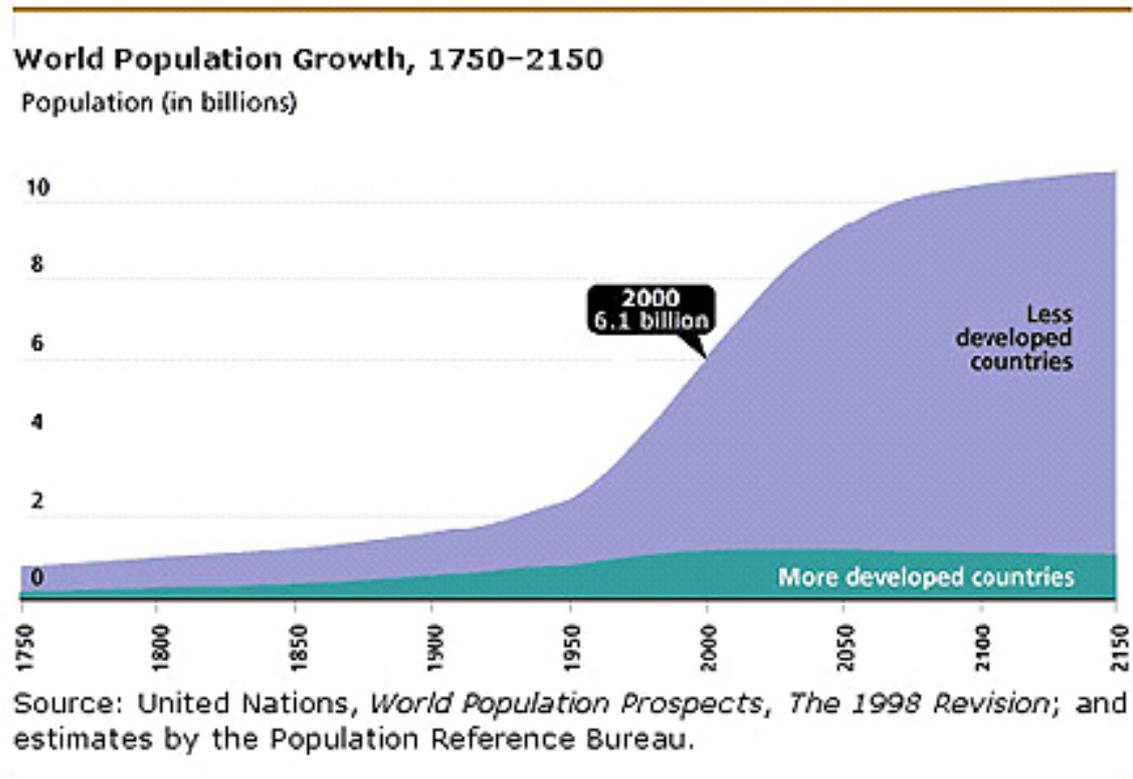
In Poland, furthermore, civil society is developing and NGOs pop up like daisies. But most of all the transition the country has made in such a short period of time, since 1989, compared to Spain who has started this development in 1975. Both countries have more or less the same amount of development concerning environmental policy, but Poland seems to be somewhat quicker in its transition. Poland, however, in the following decades awaits the tough task of the transition from coal to another form of energy source and it is then that the country will show its true environmental colours.

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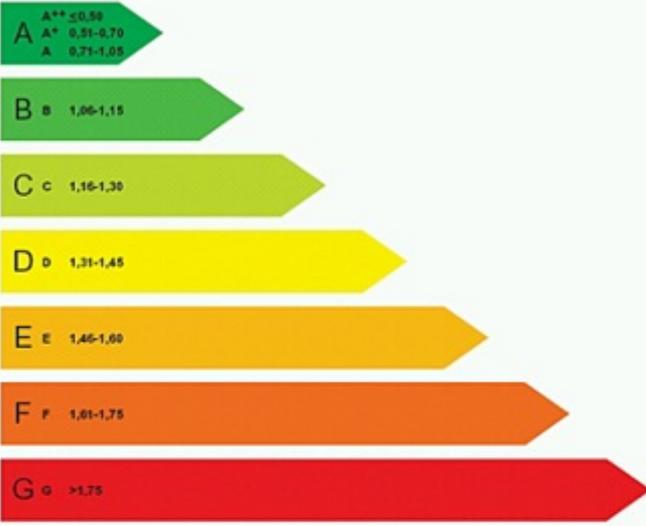
<sup>273</sup> Dimitrakopoulos & Richardson. 2011. *Implementing EU Public Policy*.

## Appendices

### Appendix 1 World Population Growth



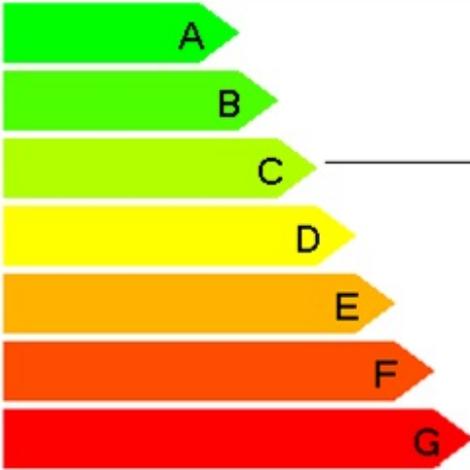
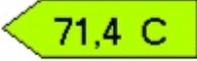
**Appendix 2 Energy Performance Certificate in the Netherlands**

<p>Energieprestatiecertificaat    energielabel</p>	<p>Bestaande bouw Kantoor</p>
<p>Algegeven conform de Regeling energieprestatie gebouwen.</p>	<p>Energieklasse</p>
<p>zeer energie zuinig</p>  <p>A<sup>++</sup> <math>\leq 0,20</math>  A<sup>+</sup> 0,21-0,70  A 0,71-1,00  B 1,06-1,15  C 1,16-1,30  D 1,31-1,45  E 1,46-1,60  F 1,61-1,75  G <math>&gt; 1,75</math></p> <p>zeer energie onzuinig</p>	<p>B 1,12</p>
<p>De energieprestatie van een bestaand gebouw wordt uitgedrukt in de energie-index. Het getal geeft de energieprestatie van een gebouw aan. Deze wordt berekend op basis van de bouwweigenschappen, gebouwgebonden installaties en een gestandaardiseerd bewoners/gebruikersgedrag. (Het gestandaardiseerde energiegebruik per m<sup>2</sup> gebruiksoppervlakte is xxxxxx MJ/m<sup>2</sup>.)</p>	<p>1,12</p>
<p>adres gebouw:                    Jansstraat 1bis                    opnamedatum:                    1 januari 2006     1234 AB Utrecht                    certificaat geldig tot 10 jaar na opnamedatum  gebruiksoppervlakte:            xxxxxx                    m<sup>2</sup>                    afmeldnummer:                    12345  volgnummer gebouw:            18</p> <p>certificaat op basis van een ander representatief gebouw of gebouwdeel?    ja/nee  adres representatief                    Voorstraat 2  gebouw of gebouwdeel:            5678 AB Utrecht                    certificaat geldig tot:                    1 januari 2016</p>	
<p><u>Adviesbedrijf</u>  Naam: Bedrijfsnaam  Inschrijvingsnummer: 12345678  Handtekening adviseur:</p>	<p>Bedrijfslogo</p>

Appendix 3 Energy Performance Certificate in Poland

<b>ŚWIADECTWO CHARAKTERYSTYKI ENERGETYCZNEJ</b> dla budynku mieszkalnego nr .....			
<b>Ważne do:</b>			
<b>Budynek oceniany:</b>			
Rodzaj budynku		fotografia budynku	
Adres budynku			
Całość/Część budynku			
Rok zakończenia budowy/rok oddania do użytkowania			
Rok budowy instalacji			
Liczba mieszkań			
Powierzchnia użytkowa ( $A_t$ , m <sup>2</sup> )			
Cel wykonania świadectwa	<input type="checkbox"/> budynek nowy <input type="checkbox"/> budynek istniejący <input type="checkbox"/> najem/sprzedaz <input type="checkbox"/> rozbudowa		
<b>Obliczeniowe zapotrzebowanie na nieodnawialną energię pierwotną<sup>1)</sup></b>			
<b>EP - budynek oceniany</b> <b>123,2 kWh/(m<sup>2</sup>rok)</b>			
↑    ↑ <b>Wg wymagań WT2008<sup>2)</sup></b> <b>Wg wymagań WT2008<sup>2)</sup></b> <b>budynek nowy</b> <b>budynek przebudowany</b>			
<b>Stwierdzenie dotrzymania wymagań wg WT2008<sup>2)</sup></b>			
<b>Zapotrzebowanie na energię pierwotną (EP)</b>		<b>Zapotrzebowanie na energię końcowa (EK)</b>	
Budynek oceniany	<b>123,2</b> kWh/(m <sup>2</sup> rok)	Budynek oceniany	<b>111</b> kWh/(m <sup>2</sup> rok)
Budynek wg WT2008	<b>130,0</b> kWh/(m <sup>2</sup> rok)		
<sup>1)</sup> Charakterystyka energetyczna budynku określona jest na podstawie porównania jednostkowej ilości nieodnawialnej energii pierwotnej EP niezbędnej do zaspokojenia potrzeb energetycznych budynku w zakresie ogrzewania, chłodzenia, wentylacji i ciepłej wody użytkowej (efektywność całkowita) z odpowiednią wartością referencyjną. <sup>2)</sup> Rozporządzenie Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie (Dz. U. Nr 75, poz. 690, z późn. zm.), spełnienie warunków jest wymagane tylko dla budynku nowego lub przebudowanego. Uwaga: charakterystyka energetyczna określana jest dla warunków klimatycznych odniesienia – stacja ..... oraz dla normalnych warunków eksploatacji budynku podanych na str 2.			
<b>Sporządzający świadectwo:</b>			
Imię i nazwisko:			
Nr uprawnień budowlanych albo nr wpisu do rejestru:			
Data wystawienia:		Data	Pieczętka i podpis

**Appendix 4 Energy Performance Certificate in Spain**

Certificación Energética de Edificios Indicador kgCO <sub>2</sub> /m <sup>2</sup>	Edificio Objeto
 <p>The image shows a vertical energy performance scale with seven levels, A through G, represented by arrow-shaped bars pointing to the right. The bars are colored as follows: A (dark green), B (light green), C (yellow-green), D (yellow), E (orange), F (red-orange), and G (red). A horizontal line extends from the right side of the 'C' bar to a callout box on the right.</p>	 <p>A callout box containing the text "71,4 C", where "71,4" is in black and "C" is in white on a yellow background. A line connects this box to the 'C' level of the energy scale.</p>
Demanda calefacción kWh/m <sup>2</sup>	B 9,9
Demanda refrigeración kWh/m <sup>2</sup>	D 84,1
Emisiones CO <sub>2</sub> calefacción kgCO <sub>2</sub> /m <sup>2</sup>	E 13,9
Emisiones CO <sub>2</sub> refrigeración kgCO <sub>2</sub> /m <sup>2</sup>	D 33,6
Emisiones CO <sub>2</sub> ACS kgCO <sub>2</sub> /m <sup>2</sup>	A 0,9
Emisiones CO <sub>2</sub> Iluminación kgCO <sub>2</sub> /m <sup>2</sup>	B 23,0

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