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A Comparative Analysis of Institutions, Policies, and Vehicle Emissions between the United States and the European Union

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Environmental Law: A Comparative Analysis of Institutions, Policies, and Vehicle Emissions of the United States and the European Union

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Abstract

William Ramsey: **Environmental Law: A Comparative Analysis of Institutions, Policies, and Vehicle Emissions of the United States and the European Union**
(Under the direction of Dr. Krishna Ladha)

The following thesis undertakes a comparative analysis of the United States and European Union's institutions in place for the decision making process concerning environmental policy, as well as certain policies that have come out of this process (most specifically those concerning vehicle emissions). Several concerns over the environment have come about in the last few years, and the problem of pollution is one that must be addressed. I will examine how the EU and US are dealing with these concerns about the state of the environment, as well as the processes that are involved in creating legislation to tackle the situation. It has been found that while the United States is making an effort to alleviate the problem of vehicle emissions, the European Union is far surpassing the US in its efforts. I will explain in more detail the causes behind this situation, as well as discuss reasons why the European Union is making such advances against pollution.

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Introduction

In the world today, there is a large movement in favor of saving our environment. Everyday, large amounts of pollution are generated at an alarming rate from various automobiles, factories, and even the use of some household products. Therefore, it has become a major goal of various governments to act in an effort to stop the destruction of the environment in a swift and effective manner.

The release of such films as "An Inconvenient Truth" and the publication of papers from various research bodies like the Stern Review have helped to focus attention on the environment. The United States is constantly held in low regards when it comes to helping the environment, while the European Union is seen as an example of proper efforts. And over the last few years, as some individuals have discussed the rise in ocean levels, the disappearance of large ice masses in the north and south, and the increase in the Earth's temperature, the EU and US have begun in their own fashion and methods to deal with the situation.

Through the use of several policies and laws, these governments are attempting to rectify the situation at hand, before it becomes any worse. The final goal of these policies is to stop pollution before it is too late and leave future generations with a much cleaner and pollutant free environment, thus ensuring the earth can be enjoyed for years to come.

The purpose of this thesis is to make a comparative analysis among the European Union and the United States in terms of their fight against pollution. I will discuss in detail the institutions that go into the creation of environmental policies, as well as the policy outcomes specifically pertaining to the current problem of vehicle emissions. The thesis will answer such questions as: What exactly are these steps being taken to solve

the problem of pollution and a dying environment? What institutions are involved in making decisions, and are these policies or ideas actually being created at a fast enough pace to keep up with the ever growing problem?

I will discuss the idea of democratic institutions and how US officials feel the constant need to please constituents under situations similar to that of the Prisoner's Dilemma game, while certain officials in the EU are free of this burden due to their appointment to office. The issue arises from politicians elected by local districts and their need to please these districts for future re-elections. The European Commission, for the various reasons outlined in the thesis, appears to be well positioned to containing the effects of this outside influence. And I will also examine how beneficial the US has been to environmental policy in the last several years. While it appears institutions such as the EC (European Commission) in the European Union enable steady progress, the US seems to be subject to high variance depending on who is controlling the executive branch.

While the United States and the European Union are both attempting to reduce levels of pollution, they have entirely different institutions involved in this process. The overall goals of these two bodies may be one in the same, but the methods used to achieve these goals are anything but similar.

The United States

The United States decision-making process is one that involves all parties in order to achieve an outcome. It begins with the preference of the people and moves on to the institutions that mold, debate, and decide the final outcome of policies and legislation. Through this process, the United States achieves its own distinct methods of dealing with events, especially that of the environment.

The People:

The people of the United States directly elect members of the House of Representatives, the Senate, and the President. Therefore, citizens of the United States do in fact play a large role in the outcome of decisions in Congress. The people are the voters, and they control who is elected to office or not.

Unfortunately when it comes to the environment, citizens in the United States have expressed concern for other topics rather than the environment. While most United States citizens do feel that the environment is an important topic, it is not of the largest concern at this time. What this means is that there are several other important issues that Americans feel have a higher priority in terms of finding a solution. These topics include education, poverty, and fighting terrorism, to name a few.

Fig. A

NBC News/Wall Street Journal Poll conducted by the polling organizations of Peter Hart (D) and Neil Newhouse (R). March 2-5, 2007. N=1,007 adults nationwide. MoE ± 3.1.

"Let me list some issues that have been proposed for the federal government to address. Please tell me which one of these items you think should be the top priority for the federal government. [See below.]" If more than one: **"Well, if you had to choose just one, which do you think should be the top priority?"**

	%
The war in Iraq	30
Health care	18
Terrorism	13
Job creation and economic growth	12
Illegal immigration	9
The environment and global warming	7
Energy and the cost of gas	4
Reducing the federal budget deficit	4
All equally (vol.)	3

Fig. B

CNN/Opinion Research Corporation Poll. Jan. 19-21, 2007. N=1,008 adults nationwide. MoE ± 3.

"How important is it to you that the President and Congress deal with each of the following issues in the next year? Is it extremely important, very important, moderately important, or not that important? . . ."

	Extremely Important	Very Important	Moderately Important	Not That Important	Unsure
	%	%	%	%	%
The situation in Iraq	59	31	5	4	1
Terrorism	54	32	11	3	-
Health care policy	44	36	16	4	1
The economy	38	41	18	3	1
The federal budget deficit	37	37	20	4	1
Energy policies	34	39	22	3	2
Illegal immigration	32	29	29	10	1
Taxes	31	35	27	5	1
Global warming	29	30	23	16	2
Stem cell research	18	27	33	17	4

For example, in Figure A (An NBC News/Wall Street Journal Poll) the top three priorities listed by participants included the war in Iraq (30%), healthcare (18%), and terrorism (13%). The environment and global warming came in third to last with only 7% of the vote. The same was the case for a CNN research poll. According to participants, the situation in Iraq was the most important topic with a vote of 59%, and terrorism (54%)/healthcare (44%) fell behind it. Global warming only received 29% of the vote. These are just a sample of public opinion polls conducted across the country. And in effect, this leads to a lowering of the priority level for environmental legislation in Congress. Thus, the control voters have deters Senators and Representatives from doing what they feel is right for the nation as a whole because they are constantly trying to be re-elected.

The process of allowing citizens to directly participate in the election of officials is one that can have both positive and negative outcomes. In the area of the environment, the process is yielding more negative effects because the public support is lacking. If, however, the public valued saving the environment more than other topics such as education, it would become apparent to elected officials that this is something to be addressed when creating new policies in order to please constituents. Arguably, supporting the environment has to begin with the people before it can move on to the institutions.

The Institutions-

The institutions that comprise the decision making process are those which have some influence on the final outcome. This of course begins with Congress and the

President, but it also includes such bodies as the Supreme Court, and the information at the time.

The institutions involved in the creation of policies or laws form a ladder. So to begin, one must move from the base of the ladder to the peak, and in this case, that would be information. The United States tends to take a reactive approach when it comes to dealing with the environment. An article in the Journal of Risk Research states that "Today, the conventional wisdom is that Europe endorses the precautionary principle and seeks proactively to regulate risks, while the US opposes the precautionary principle and waits more circumspectly for evidence of actual harm before regulating." In other words, the United States doesn't act until it is proven to be necessary. (Weiner and Rogers p. 318)

The information gathered on an issue is used to determine whether or not the issue needs to be dealt with promptly or at a later date. If the information is not entirely proven to be a major concern in the present, it is dealt with at a more appropriate time. For example, the United States Supreme Court reversed its ban on all forms of asbestos because some of the forms weren't scientifically proven to be a health risk. (Corrosion Proof Fittings, et al. v. The Environmental Protection Agency and William K. Reilly, Administrator. 1991) Therefore, the product is available to be used commercially again until it is deemed unhealthy for consumers. Unfortunately, if the asbestos is eventually proven to be a health risk like the other types were, the damage will have already been done. Since the information in this example did not appear to cause immediate concern, the issue has been moved aside and will not be a concern until scientific data proves it to be one.

The next institution, Congress and its committees, "is given chief responsibility for enacting public policies and for appropriating the funds necessary to implement them, powers that translate into a continuing role of overseeing, and often criticizing, executive agency actions" (Kraft, 2000, p. 122). Based on the information gathered about a legislative topic, legislation moves to the committees. The process of creating environmental laws or policies is no different than creating any other law or policy in the United States. The idea must grow from a proposal, to a bill, and finally into a law. Typically a bill is introduced into the House of Representatives or the Senate where it is referred to subcommittees (this will be discussed in more detail later in the chapter). These subcommittees range on topics from economics, to trade, and of course, to the environment. After several drafts and revisions to the bill based on studies and expert testimony, the bill is presented to the House and Senate for debates and voting. Throughout this process, the problem of pleasing voters, lobbyists, and even campaign contributors really takes effect because it is where these individuals or groups can influence their representatives to approve or disapprove of a law based on how it will affect their state or local area.

Each committee has a chairman overseeing the drafting of bills. The problem in terms of dealing with pollution is that the environment typically falls under the committee for Energy and Commerce, and the committee chairman is John Dingell from the state of Michigan, which is where several large car manufacturers and their employees reside. Although there are no allegations against Dingell, his constituents consist of auto industry supporters, whether they are managers or employees. In a letter to the President expressing his concerns over the treatment of the auto industry, Mr.

Dingell says, "over 6 million American jobs are dependent on the auto industry. In my home state of Michigan – the heart of the automotive sector – auto industry dependent jobs make up almost 22 percent of the state's workforce. I know these people personally – they are decent, hard-working, devoted Americans who still believe in an honest day's work for an honest day's wages..."(Dingell; Letter to President Bush Feb. 10, 2006). Obviously he is working for the approval of his voters, as per the rules of the game set out in the Constitution, and therefore any environmentally friendly legislation that will be detrimental to the auto industry will have to meet his approval before it makes its way to Congress for debate. Perhaps this would prove to be beneficial for the environment if the committee chairman were a representative from California who is known to promote strict environmental policies.

After several drafts and revisions to the bill, based on studies and expert testimony, it is presented to the House and Senate for debates and voting. Again, the process of debate among Congress over bills is constantly influenced. Whether it is through lobbyists who use aggressive tactics and gifts, constituents threatening the loss of reelection, or even one's party line, Senators and Representatives rarely make decisions on their own so as to pursue what is good for the United States. On issues that have not assumed national prominence, Congress appears to be trapped in a Prisoner's Dilemma game whereby the good of the whole is sacrificed to the good of parts.

If each member of the House and Senate is pushing legislation that benefits his or her own voters or contributors without much consideration for voters/lobbyists in another state, not much is accomplished in terms of finding a solution. For example, a Senator or Representative from Michigan (home of several car manufacturers) will not favor any bill

which calls for further vehicle emission reductions if it will costs his or her voters and supporters jobs or more money, even if this bill will help reduce green house gas and CO2 emissions. In contrast, a Senator from Florida would rather spend money on preserving endangered wetlands than support a bill that allows oil companies from the north to drill in surrounding coastal areas.

The United States has long been known for the existence of parties, as have most governments. However, the US is basically a two party system, Republicans versus Democrats. Until recently, the Republicans had the majority of seats in Congress and President Bush was a Republican himself. Under this kind of scenario, legislation that Republicans favor passes swiftly, while legislation with more of a Democratic emphasis encounters more obstacles. Taking the environment for example, President Bush pulled the US out of the Kyoto Protocol, a large international effort to fight against air emissions of pollutants. There was not a majority in Congress to oppose this. In fact, the Senate voted in 1997 not to ratify the treaty when it came time (a complete opposition to the Democratic president [Clinton] of the time who favored the treaty) (Tom Randall; National Policy Analysis, 2002). According to an article in the Washington Post by Helen Dewar and Kevin Sullivan, Sen. Larry E. Craig (Idaho), head of the Republican Policy Committee, stated the treaty was "designed to give some nations a free ride, it is designed to raise energy prices in the United States and it is designed to perpetuate a new U.N. bureaucracy to manage global resource allocation" (Washington Post; Dec. 11, 1997).

However, this is not to say that if the tables had been turned and a Democratic majority had been held in the Senate at the time, that the US might not have voted to ratify the treaty. In fact, it is quite possible that the US would have ratified the protocol

under the optimistic and supportive President Clinton. President Bush is now experiencing this same power struggle of Republican president against Democratic Congress over the approval of a defense budget. However, this will be explained in more detail later on in the chapter.

The next institution would be that of special interest groups. In terms of lobbying, there are numerous special interest groups in Washington D.C. each year. In fact, there are around 34,750 lobbyists registered with the government. (Washington Post, June 22, 2005 pg A01) However, the process of lobbying is criticized due to an uneven distribution of influence.

The United States is well known for the aggressive lobbying that takes place. It is also well known for the fact that large corporations with money are able to afford these aggressive attempts to influence Senators or Representatives to vote in a manner that benefits these corporations. The problem is that smaller special interest groups such as environmental lobbyists are overwhelmed and go unheard in their attempts to promote environmental legislation. This is because the smaller groups have less to offer politicians looking for re-election. The groups have a small voter population (small active but large passive supporters), not much money, if any, to offer up for future campaigns, and the groups don't receive much media attention in order for the individual to receive good or bad press. Therefore, it is extremely difficult for these lobbyists to gain attention and influence, whereas large corporations are able to offer gifts such as travel. (EurActiv)

One of the most recent examples of this weakness is the case of Jack Abramoff (a Washington lobbyist) who flew Rep. Bob Ney in a private jet to Scotland for a game of

golf. He was eventually convicted on several charges of fraud, bribery, and conspiracy among other things. The new Speaker of the House Nancy Pelosi, however, is hoping to change this situation through the introduction of a new bill (H.R. 4682). Ms. Pelosi is calling for new regulations that keep members of Congress from participating in any acts that tend to influence their decisions on legislation (i.e. favors for votes from lobbying groups). The act is known as the Honest Leadership and Open Government Act of 2006.

The bill is aimed to end the gift giving and favor swapping actions and replace them with honest and ethical means of communicating concerns or points of view. If the bill is passed, it could mean a more level field for all types of special interest groups, as is the case in the European Union. However, the bill will have to be reintroduced because no action was taken on the bill in the last session of Congress. (H.R. 4682) Regardless, the idea of pleasing constituents would still have an effect on politicians, and therefore, Senators or Representatives from large auto manufacturing states would find it hard to pass legislation that could lead to the loss of jobs for a majority of the voters from that state.

Interest groups also play a large role in the court system as they do in Congress. Special interest groups are one of the main factors in initiating environmental litigation against pollution. Such groups as the National Audubon Society and the Sierra Club are just an example of those working through the courts. This can be seen in the recent ruling against the EPA, which states that the organization is not doing enough to reduce greenhouse gas emissions (This will be explained in further detail in the Vehicle Emissions chapter).

Another institution is the Presidency. The fact that the president is elected, leads

back to the argument that he is somewhat controlled by his constituents. However, this is not entirely the case. For example, since the President can only serve two terms in office, his re-election acts as an appointment in that he is no longer concerned with pleasing certain voters, but rather doing what he feels is best for the nation as a whole. Regardless, the president has an immense amount of influence over the creation of policies. He is in one of the most publicized positions in the US government, and can therefore raise concerns on issues and draw public attention. "Without presidential endorsement, major policy initiatives have rarely been successful" (Vig, 2000, p. 99). The president can also involve himself in policy formation by assigning staff or experts to issues through research or meeting with interest groups in determining and creating legislation. And of course, the president always has the power of veto to stop legislation and force a revision of the policy (Vig, 2000, p.98-120). However, even with this power, Congress must approve any plans or budget expenses the president proposes, thereby demonstrating the principle of checks and balances.

In terms of the environment, there are two scenarios that can take place. Either Congress and the president both agree on the approval of a bill (which typically follows party lines), therefore making it simple to pass an environmental law, or the two disagree on the issue and the bill is forced to pass even stricter voting standards to become a law. Currently, the president and Congress tend to disagree on certain issues (i.e. in the 2006 election Congress became a different party from the President. That is, the people elected a Democratic majority Congress while the President remained a republican). An example of the above scenario is the current situation between President Bush and Congress over a withdrawal deadline from Iraq. Congress will only pass a war-funding bill if the troop

withdrawal deadline is kept. However, President Bush has stated he will veto any bill with a withdrawal deadline attached, and this is making for little progress in terms of passing a budget. George Bush Sr. also faced an opposition Congress (1991-1992). His approach to the 102nd Congress was "a more negative, confrontational stance" (Vig, 2000 p.100), and even used his veto power twenty-one times that year.

However, even if the president and Congress did agree on certain topics, it would be necessary for the environment to be one of those concerns. Otherwise, the topic would simply be overlooked during legislation and debate.

Also, there is the institution of the United States Supreme Court, which interprets the laws. While the justices who sit on the Supreme Court are appointed rather than elected, they are given the position for life. In looking at this situation, it appears to be a positive one in which the individual justice does not have to worry about pleasing voters for reelection and can therefore act according to what he or she truly believes is best. However, there are several critics who argue that judges aren't exactly capable of making decisions in terms of governmental policy, especially in such technical areas as the environment because "they must respond to individual demands for justice" (McSpadden, 2000, p. 145). According to Lettie McSpadden, "There is a tension between American's desire on the one hand for substantively "correct" decisions reached by experts and, on the other, for democratic decisions made through public participation and facilitated by the courts' insistence on due process" (McSpadden, 2000, p. 145).

In terms of environmental law, the US has typically approached this subject through common laws such as nuisance or injury, which tend to only allow for action after a harm has been committed, as in the above examples. However, according to

Lettie McSpadden, the US has begun to shift to more of a statutory law, which attempts to prevent the above-mentioned harm from occurring in the first place. This can come in such forms as prescribing the correct/proper method for dumping crude oil or treating sewage so as to avoid any resulting harm to the environment or people. In doing this, "lawmakers hope to prevent many injuries to public health and the natural environment. Prevention, rather than remediation, is the goal of public law" (McSpadden, 2000, p. 146).

While the US Supreme Court ruled against the EPA in April 2007 (as previously stated, this will be explained in further detail in the Vehicle Emissions chapter), it has not entirely been beneficial to the environment. For example, in 2001 the Supreme Court overturned a Clean Water Act ruling when it ruled that the act does not "protect small, isolated bodies of water" (NRDC Press Release, Jan. 9, 2001). According to the NRDC (National Resources Defense Council), the decision "will destroy the second largest Great Blue Heron breeding colony in northeastern Illinois". This decision reversed a 15 year-old directive that helped to defend and save certain water sources. And in a recent decision, the Supreme Court has decided to hear a case between Duke Energy Corp. and Environment Defense concerning plant emissions. In June 2005, a U.S. Court of Appeals ruled (Duke Law, Environmental Defense v. Duke Energy Corp.) that the plant only had to show a reduction in emissions per hour (unlike the EPA view of reducing emissions annually). While this may seem to satisfy emission needs, the energy plant has been running for more hours causing the annual emission levels to increase.

This same outcome could also be seen as Presidents Reagan and Bush (Sr.) replaced the liberal judges and William Rehnquist became chief justice in 1986.

According to McSpadden, "the High Court became even more business oriented ... most environmental litigants stopped taking appeals there" (McSpadden, 2000, p.156). Still today, a current majority of the justices have been appointed by Republican presidents (and some have been approved by a Republican majority Congress), which therefore basically leads to a one party, conservative decision making body because the other political views are overruled. Congress moved from Republican to Democratic majority in the last election (in response to the views of voters), the Supreme Court did not. Rather the last appointed justices, John Roberts and Samuel Alito, were nominated by a Republican president and approved by a republican majority Congress. The weakness that arises from this, is the fact that the majority of the justices were appointed by one party (Republican) based on the views held and past decisions made by the justices. In short, justices are nominated by a president because he or she reflects similar views on legislation as the president at the time does. And since they are appointed for life, the justices will most likely remain on the Supreme Court for about thirty years before a new president and Congress can appoint someone else.

In fact, an article by Linda Myers discusses this length of office in detail. Meyers states that, "from 1789 to 1970 the average justice served for close to 16 years and retired at about age 68. Since 1970, the average tenure has risen to 25.5 years and the average age on leaving office has risen to about 79" (Myers, Cornell Jan. 27, 2005). And before President Bush's recent appointment of two Supreme Court justices, including Chief Justice Roberts, there had not been a vacancy for ten years (one of the longest periods between appointments thus far). Critics claim the time between appointments will continue to grow, and that it is necessary to come up with a new system of appointment

involving term limits. (Myers, Cornell, Jan.27, 2995)

And finally, there are incentives. The incentive is what drives an institution to make a certain decision. What are the benefits (incentives) or drawbacks to accepting a policy or law? According to some individuals, the most important concern is the question of cost and benefit. Any policy or law geared towards the environment must be attainable at a minimal cost. That is, the means to achieve a goal (in this case reducing pollution) must cost less than allowing the problem to continue. If the US feels as though it will spend more trying to fix a "problem" than it would have spent leaving the problem alone, no policy or law will be enacted.[1] According to Myrick Freeman, "Because pollution control and environmental protection are costly, it is in our best interest to be economical in our decisions about environmental protection and improvement" (Freeman, 2000, p.191).

Policy Outcomes-

All the parties involved dramatically influence the policy outcomes from these institutions. The creation of environmental policy is based on the way in which the institutions are positioned in terms of current topics of interest and opinion. That is, the values or opinions of the moment can help or hurt the passing of policies, but at the same time the process of change in the United States is slow. Therefore, it will take time, evidence, and support for environmental policy to make its way to the forefront of affairs.

In the chapter concerning vehicle emissions, one can gain a better understanding of the policies that have been created to deal with that specific form of pollution. While

[1] A perfect example of this is the Kyoto Protocol, which will be discussed in a later chapter.

the US and EU differ in their approaches, it is quite apparent that one goal exists between the two bodies; reducing emissions.

Summary-

The United States is extremely capable of achieving success in terms of creating and promoting environmental legislation. However, the major problem that exists is the fact that several different factors must be in place for this to occur. The president, Congress, and Supreme Court must be in agreement in order to usher in uncontested legislation, and a case such as this can take years to fall into place.

As one may already know, the fact that several Supreme Court justices were recently replaced has set the course for the next several years. Even if the President and Congress are in agreement (or of the same party due to future elections) in passing environmental policies, the Supreme Court will still be more pro-business oriented. And although the Supreme Court surprised many individuals with its ruling against the EPA's lack of progress in April 2007, this has not been the trend over the past several years in environmental cases.

The president himself can be a detriment to environmental policy. Through his power, he is able to veto any legislation he feels is not right for the country, and this has been a major roadblock in dealing with pollution. His ability to appoint and fire the head of the EPA (the United State's most organized defense against pollution)[2] only hurts the

[2] The EPA, as it is more commonly known, is charged with the duty of enforcing numerous environmental laws and policies, conducting research, and offering assistance to others in the fight against pollution. The organization is one of the United State's foremost weapons in the fight to save the environment.

situation. This places extreme pressure on the EPA to perform actions that please the President. At the same time, Congress is able to control the budget of the EPA, thereby increasing or decreasing it at will. This leads to yet another cycle whereby Congress reduces the budget if they aren't happy with the EPA's progress (hurting the program even more) or increase it based on good work. However, if the president feels the EPA is hurting his efforts (i.e. creating controversy over vehicle emissions) he can simply fire the organization's head and hire someone new to take charge.[3]

Another major problem observed in the institutions of the United States is the fact that positions on the committees that present the bills to be decided on in Congress are all directly elected by the people. As stated in the previous stages, this can lead to outside influence over what items are presented to Congress by those in agenda setting positions (e.g. the example of John Dingell).

As one has previously read, it is possible for environmental legislation to prosper. Regardless of the above-mentioned problems, an environmentally friendly President, Congress, and Supreme Court can change the direction the United States is currently heading. However, how long will this take to occur? Again, even if in the next election a democratic President is elected to coincide with the Democratic Congress, Republican presidents have appointed a majority of the Supreme Court justices (many in the last few years). Therefore, if in the future the perfect scenario came about, could they make up for the last eight years (perhaps even longer) of slow environmental improvement? And even if they could, what economic means would be necessary to achieve such a goal? This is why a steady approach (one in which a goal is continually rather than sporadically

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[3] The current example of firing the U.S. attorneys is a great example of this idea.

sought after) to dealing with pollution and the environment is necessary, much like in the European Union. The EU has been constantly working to battle the effects of pollution with new policies and laws being created whenever possible.

The European Union

The decision making process of the European Union involves the input of the people's preference and the framework of the institutions in order to achieve various outcomes. It is this distinct process, which has allowed for the EU to be held in high esteem in dealing with matters of the environment, and it will continue to serve as a stepping-stone in the European Union's progress.

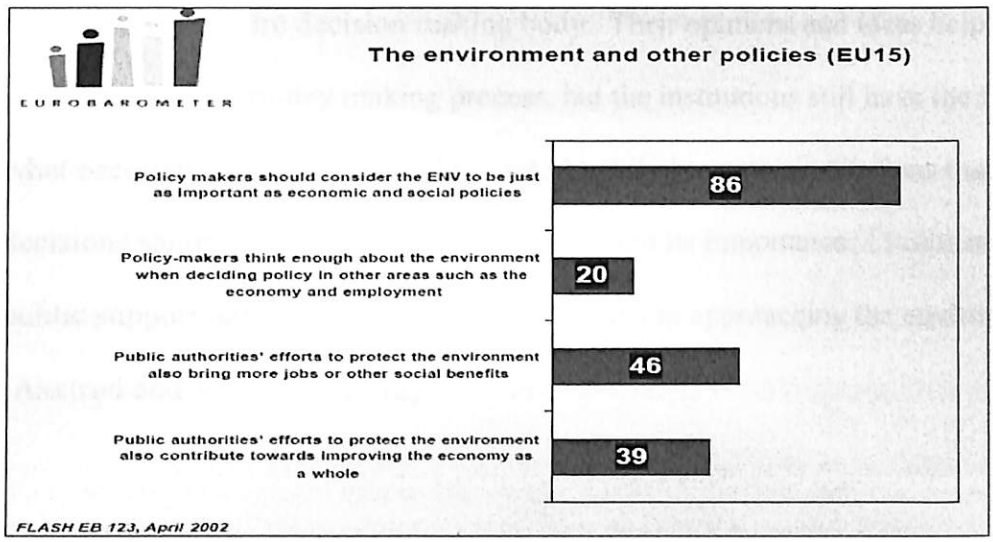
The People:

While more of the decision-making positions are appointed in the European Union than the US, there is still a fair portion elected by the people. For example, the people directly elect Parliament, and the Council of Ministers is headed by a different member state president (elected by the people) every six months. Therefore, the government's views are influenced by those of people. However, certain key positions such as those on the European Commission are appointed. They are not directly elected, thereby taking the power of influence away from the people. This proves to be extremely beneficial in that, unlike the United States, every time a new head (President) is appointed on the Council of Ministers the Commission is not dissolved and then reappointed[4].

Another major difference is that the citizens of the European Union, unlike those of the United States, are much more supportive of environmental legislation. According to studies conducted by the European Commission, the environment is growing to

[4] This is discussed in more detail later in this chapter. Please see the European Commission section.

become a major concern among the people in Europe. For example, in 2002, EU citizens polled by Eurobarometer (which monitors public opinion in the EU) felt that the environment was just as important as other policy topics such as economics.



If the people are indeed supportive of the creation and promotion of environmental legislation, elected officials would do what they could in their power to make sure the constituents are pleased.

It appears that the EU, as well as its citizens, has taken the subject of a clean environment and made it one of the leading factors in achieving future success in terms of sustainable development. The government of the European Union has clearly expressed the need for a healthy environment in order for Europe to survive well into the coming years. In fact, a recent European Commission publication stated that, "The European Union is committed to sustainable development: in other words, development that will enable future generations to enjoy a better quality of life – not only in Europe but worldwide." The article goes on to say, "That is why the EU strives to ensure that its decisions in each of these three fields – economic, social and environmental – have no adverse effect in the other two areas. Thus, when decisions are taken on agriculture,

fisheries, transport, energy, trade, development, etc., consideration is always given to the environmental implications" (Europe On The Move, European Commission, pg. 3).

While the views of the people and the government appear to be proenvironment, they aren't the entire decision making body. Their opinions and ideas help to influence institutions in the policy making process, but the institutions still have the final say as to what becomes policy and what does not. Luckily however, institutions that make policy decisions share this view on the environment and its importance. "Political will and public support have been the keys to EU success in approaching the environment" (Axelrod and Vig, 1999, p. 72).

The Institutions:

The institutions which make up the decision making body of the European Union are somewhat different than that of the United States. There are of course information, incentives, and the European Court of Justice, but instead of a two party system, the EU has a multi party system. And also, it has a parliamentary form rather than a presidential form. While there are much deeper and more complex issues which give rise to a separation between the two decision making bodies, it is the above differences which help to separate the US and EU in terms of this paper and gives them their own individual routes towards the goals being discussed.

Once again, it is important to begin from the bottom of the process and discuss the importance of information. As stated before, it has been noted that the European Union takes more of a proactive effort when it comes to the environment. That is, the EU tends to act according to the precautionary principle and "seeks to proactively regulate risks"

(Weiner and Rogers). For example, the European Union, under a 1999/77/EC Directive, has decided to ban all forms of asbestos from use in building materials. While the United States has reversed this decision because there is not enough evidence to support the potential for health risks, the European Union has decided to continue the ban and has also promoted the use of alternative materials.

However, it must be stated that the European Union does not simply react to just any claims concerning the health risks involved with certain actions, but, as in the case of the asbestos, if there is some proof that an action is dangerous to the environment and air people breathe then the EU does take action to resolve the situation before it is too late.

Again, the information from research, public opinion, and expert testimony is sent to committees for the decision process. However, the European Commission is the body which has the final say on legislation presented to Parliament and the Council of Ministers.

The main difference between the Commission and other branches of EU government is that it looks at the interest of the European Union as a whole, and Commission members do not take orders from their local governments[5]. This relieves the burden of attempting to please voters (i.e. passing laws to be re-elected), which tends to

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[5] The following are two excerpts from the oath new European Commission members take:

*"I do solemnly undertake: to be completely independent in the performance of my duties, in the general interest of the Communities; in the performance of these duties, neither to seek nor to take instructions from any government or from any other body; to refrain from any action incompatible with my duties."

*"I formally note the undertaking of each Member State to respect this principle and not to seek to influence members of the Commission in the performance of their tasks."

influence, especially in the United States, the other bodies. This is especially important with the Commission because this is the body which drafts and introduces legislation.

This appointment of position proves to be very opportunistic when it comes to the voting process. This is because the Commission controls what is voted on by Parliament and the Council. Legislation is proposed through various committees of the Commission. And from these committees, the proposals (bills) make their way through the Commission and onto Parliament and the European Council to be accepted. In a way, this means that no individual member state can influence what is voted on. Rather, all laws and policies decided on by Parliament and the Council are issues that will benefit the European Union as a whole. Therefore, it is much easier for an environment friendly government, such as the EU, to pass policies or laws dealing with the environment even if the constituents don't fully support or understand this decision. This is not to say that democracy or transparency is in anyway a negative idea. Rather, it is to say that the European Union's form of democracy acts in a manner that is much more receptive to environmental legislation. After all, every party (every member state) is given a say in the matter (in parliament and the Council of Ministers). It is simply the fact that the European Union is in a much better position to move the status quo to a position that benefits the environment.

Take for example, Germany and Spain disagreeing over different environmental standards. The power and framework of the EU allows it to propose a EU interpreted status quo. This status quo will satisfy Germany and Spain, while at the same time benefiting the environment. The European Court of Justice (discussed in detail later on)

will help to back this decision if it's legal or help to resolve this decision so that it is. This is a democratic process, and all parties do have an involvement in the process.

There is also another major difference from the U.S. in that all aspects of the government are represented on the Council (i.e. economic sectors, trade, the environment) when it comes to voting on a specific subject. That is to say, that when there is a vote on a topic of economic interest, the Council consists of individuals from the economic sector. This is also true when the Council is voting on a topic concerning the environment. In this case, environmental interests are represented on the Council, which is known as the Environmental Council. (Vig and Axelrod, 1999, pp. 72-97)

The European Parliament is also an integral institution, and its positions are directly elected by the people. The positive side of this direct election is that it "tends to reflect the diverse interests of political parties and groupings across Europe" (Axlerod and Vig, pg. 75). This has lead to parliament favoring "stronger EU policies, especially in the fields such as environmental and consumer protection that are popular with the electorate" (Axlerod and Vig, pg.76).

In the EU, lobbyists discuss their findings and opinions with various consultative bodies that then propose bills or legislation to the appropriate Commission head. One of the more influential bodies of representation for the environment would be that of the EEB. According to Stavros Dimas (EU Commissioner for Environment), "The European Environmental Bureau is a key stakeholder in the process of formulating, monitoring and evaluating EU environmental policies. It defends the interests of more than 140 citizens' organisations across Europe in order to protect, preserve and improve our environment and protect our health and our resource base for future prosperity." The EEB (European

Environment Bureau) is an association consisting of 143 nongovernmental organization members in over 31 different countries. The purpose of this body is to maintain close involvement in discussion with various European Union decision-making bodies (i.e. the Council of Europe, the European Parliament, the European Commission, and even the Economic and Social Committee of the European Union), as well as with the Bureau's members and the general public. The organization distributes numerous pamphlets and papers in an effort to keep the public and its members fully informed of the happenings in terms of legislation and the environment. This close communication with key decision makers and the public helps to ensure an exchange of ideas, as well as the creation of environmental legislation.

Unfortunately, while this openness among special interest groups does allow for smaller environmental groups to be heard, it doesn't keep large automobile groups quiet. As in the United States, large industry groups are concerned about the eventual impacts that various environmental legislation might have on their business practices. Therefore, they tend to retain several lawyers in Brussels to meet with officials (Axelrod and Vig). This will be discussed in more detail in the following chapter.

. The reason this openness becomes a weakness for the EU and fighting pollution is the simple fact that automakers can pressure decision makers to rewrite or "water down" legislation so that it benefits them as well. The case of auto emissions is a perfect example of this type of weakness, and it will be explained in more detail in the following chapter. However, it must be stated here that although these lobbyists have some influence, the ultimate goal of the EU is to promote sustainable development. Therefore, the environment is not completely overlooked in these situations. Rather, the European

Commission looks to compromise on the issue by finding a solution that benefits everyone.

In terms of a single president for the European Union, there realistically isn't one. The President of the European Council rotates every six months among the member states. This acts as a balancing tool for varying opinions and views among the members. That is, no one president has more power than any other, and "the country in charge can shape the agenda" (Axlerod and Vig, pg. 75). For example, when the German Social Democratic-Green government took over the council in 1999, it pushed energy tax legislation. However, as a new president comes to be, new policies are generated.

As stated before, another benefit is that the Council allows ministers on the environment to vote on environmental issues, economic ministers to vote on economic issues, and so on. Therefore, if an environmental issue is being discussed, the individuals who vote on the issue are those specific and knowledgeable to that issue and the concerns involved.

In the European Union, the Supreme Court is known as the European Court of Justice. The justices who preside over this Supreme Court are appointed by their governments (one for each member state) for six-year terms. This is extremely beneficial because it removes the pressure of pleasing voters, but at the same time it allows for the court to change with the times.

The European Court of Justice works to interpret and enforce the laws of the European Union. If there are any problems in terms of infringing on environmental laws, the Court of Justice is able to see that violators are prosecuted criminally. Since the court is reappointed every six years, the members will evolve with the views of the time.

Although there is a chance for justices to be reappointed for another six-year term, there is no guarantee. This is unlike the United States where they are appointed for life, thus leading to new legislation being interpreted by individuals who have been sitting on the court for over thirty years.

This also leads to the point that most environmental lawsuits are based on the government suing companies or individuals. For example, in 1988, the ECJ ruled in favor of Denmark's law, which called for the use of returnable (recyclable) bottles for such items as beer or milk. This was in opposition to the claim that the practice of using returnable bottles was an obstacle in terms of trade. Therefore, the ECJ ruled in favor of the environment over trade (Axelrod and Vig, 1999, pp.72-97). In the US, it is typically the other way, where companies sue state governments over regulation laws such as the case of Duke Energy Corp. discussed in the previous chapter. Currently, the European Union is going after Warsaw and Prague over their climate change plans, and the EU has also taken legal action with Spain over environmental concerns.

According to Lettie McSpadden, many environmental lawsuits have begun to reach settlement outside of the courts. This is due to high litigation costs and even the fact that environmental groups and corporations don't want to drag out the clean up/restitution process. This move to alternative forms of settlement has increased recently due to the use of "voluntary standards of operation" (McSpadden, 2000, p. 162). As a matter of fact, McSpadden states that "the European Union has been particularly active in this area , and European nation states have long preferred to cooperate with industry rather than confront it in court" (McSpadden, 2000, p. 162).

And finally, there are incentives. Again, the incentive is what drives an institution

to make a certain decision. What are the benefits (incentives) or drawbacks to accepting a policy or law? What will be the effects of this decision?

Unlike the United States, the European Union approaches the situation of the environment in a proactive manner. Therefore, the EU may use a cost benefit analysis like the US, but not on the same level. Take the case of the asbestos ban for example. The US decided to overturn previous bans on all forms of asbestos. A lack in scientific evidence that all forms of the product caused cancer allowed the US to justify this response. In doing this, the US is able to save large amounts of money and time that otherwise would have been used to search and pay for alternative materials to be used in the place of asbestos. The European Union on the other hand, felt that there was enough evidence to continue the ban on all forms of asbestos.

This decision may cause the EU to spend more money on alternative products, but the benefit of having a healthier environment for citizens and the future outweighed the cost of the venture. This is one large difference in the types of incentives for the US and EU. While one may look to save time and money, another may feel that future health (even a slight improvement) is better than a risk.

Policy Outcomes-

Like the situation in the United States, the European Union's institutions dramatically affect the policy outcomes. As stated before, the creation of environmental policy is based on the way in which the institutions are positioned in terms of current topics of interest and opinion. Through the EU's distinctive practices and methods, policies are aimed at making some form of impact, especially when it comes to the

environment. This can clearly be seen in relation to one of the largest environmental problems facing both the European Union and the United States; The problem of vehicle emissions.

Summary-

The European Union has gained large recognition for its efforts to fight pollution. The framework of the institutions that make up the decision process only adds to the Union's success in these endeavors, and the fact that there is a lack of influence among the members is another means of support.

As previously discussed, the election of officials into positions of agenda setting tends to hurt (at least currently and in the past) the creation of proenvironmental legislation. However, the European Union doesn't seem to face this problem. The agenda setting body in the EU, the European Commission, is appointed to position rather than elected. In fact, each member must take the oath which is located as footnote in the previous pages which specifically states that influence or working for one's own member state is strictly prohibited and looked down upon. Therefore, European Commission members are ideally left to make decisions as a group as to what is best for the community as a whole.

Also, the European Union doesn't have the problem associated with the US "spoil system". The EEA (European Environment Agency) is almost a twin to the EPA in the United States. However, the members who govern the EEA consists of country representatives (thereby allowing all countries a say in matters), two members of parliament (thereby giving the government a say in matters), expert scientists, and even

two members of the European Commission. And the most important difference, is the fact that European Commission (an independent body) nominates the executive director which is voted on by members of the EEA. This allows the EEA to work for the betterment of the environment without fear of the executive director losing his or her job every time the president changes on the Council of Ministers.

The European Union has been working vigorously over the past several years, with this framework, to promote environmental legislation. The creation of new policies have enabled the European Union to address the problems at hand and in a proper fashion. Although the EU may not be succeeding in all environmental areas, the Union is aware of the problems and is currently attempting to address the situation in the most proper fashion. One major example of this is the European Union's fight against vehicle emissions.

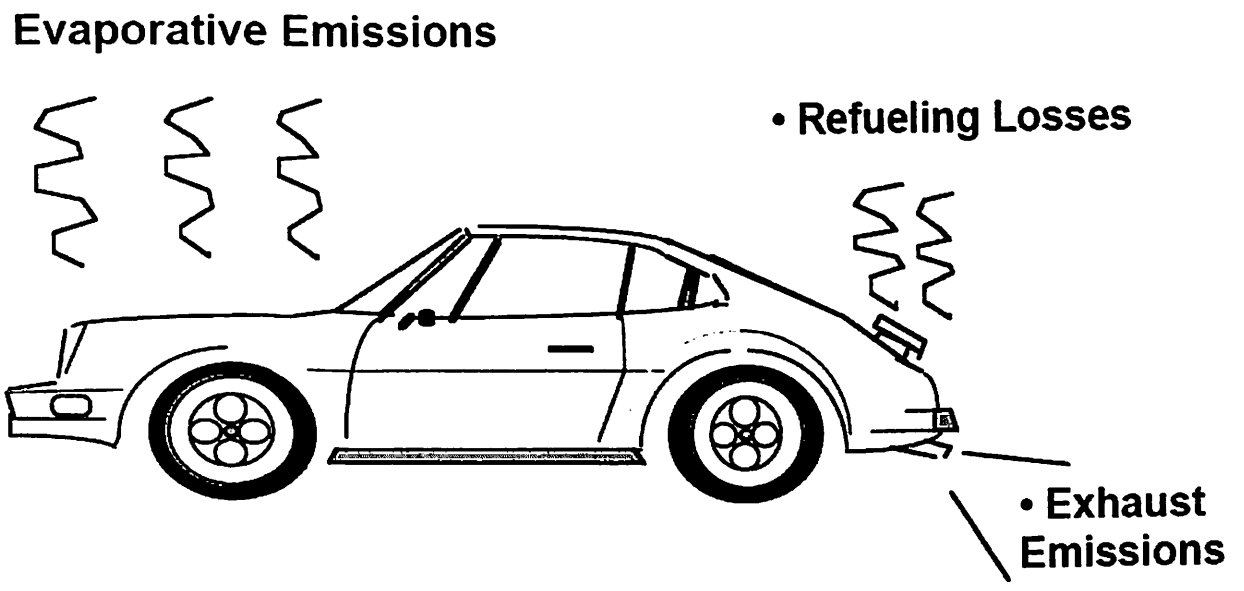
The Case of Auto Emissions

In looking at the case of automobile emissions and how the United States and the European Union are dealing with the problem, one can see the aforementioned strengths and weaknesses in action. The following describes how these strengths and weaknesses help or hurt the role of the US and EU in battling automobile emissions.

The Problem:

The problem of CO2 is that it is one of the leading causes of global warming. This greenhouse gas acts to trap heat from the sun once it enters the Earth's atmosphere. Typically, this heat (excess amounts of it) would be reflected off the Earth's surface and back into the atmosphere. Unfortunately, carbon dioxide acts to keep the heat from ever leaving, thus causing the Earth to become warmer. This is much the same idea as a greenhouse, hence naming CO2 a greenhouse gas. This, along with other greenhouse gas emissions, can cause serious problems in terms of the environment, and therefore, the issue needs to be dealt with.

Pollutants are produced from a car in several ways. The following picture is a depiction of the major forms of air pollution from vehicles.



In fact, the majority of CO2 (one of the leading gases emitted by vehicles) emissions don't even come from the actual production of the car (i.e. the factory). The vehicle pollutes the environment most when it is in use, or in other words being driven. The picture above helps to better demonstrate this point. As one can see, the most common types of vehicle pollution are produced from evaporation of gas, refueling losses, and exhaust emissions. Vehicle use accounts for 75% of CO2 emissions and fuel production makes up another 14%. (Sauer)

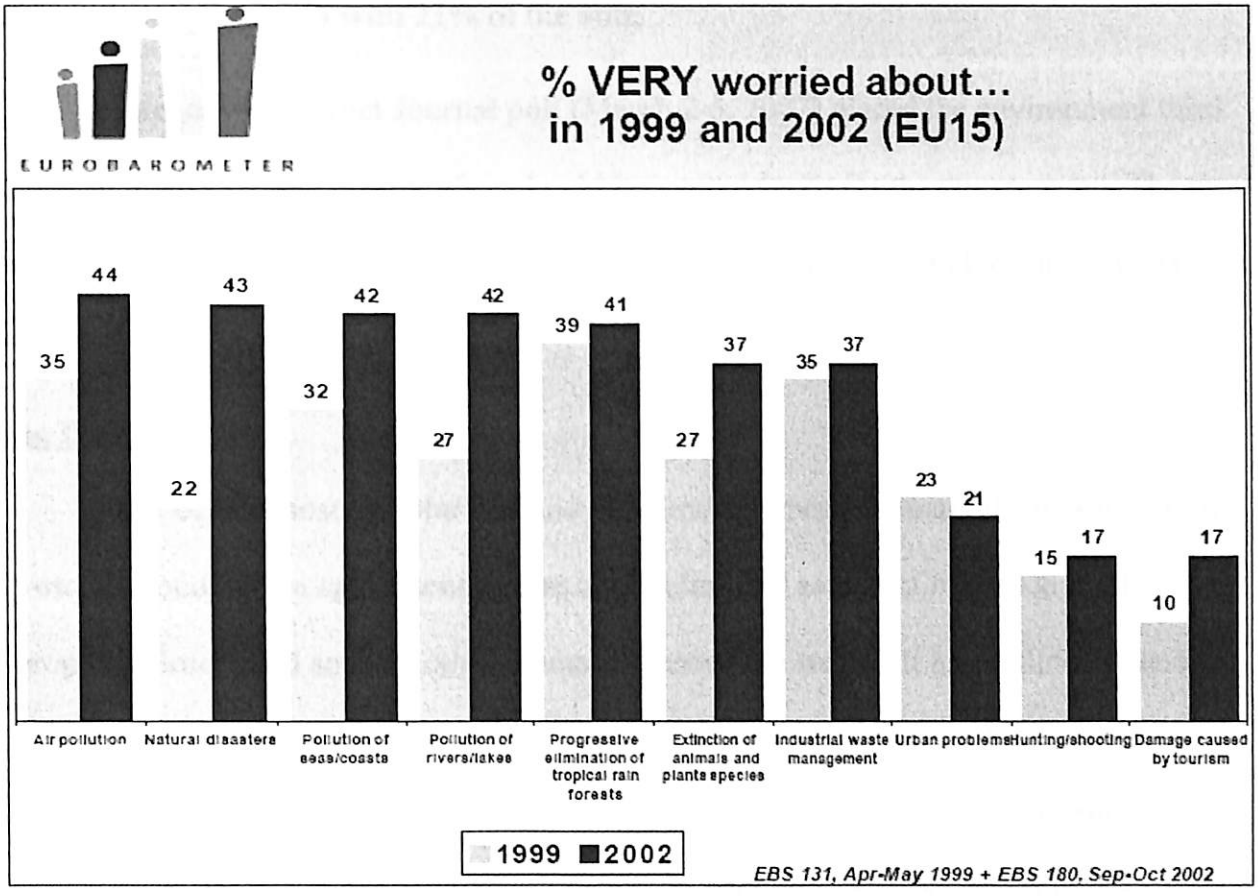
The automobile has become a widely used necessity in the United States. Since its creation, more and more individuals have become owners and operators of automobiles, thus causing tons of pollutants (in the millions) to be produced each year. According to the EPA, "motor vehicles are the single largest contributor to ground-level ozone, a major component of smog. Ground-level ozone is the most serious air pollution problem in the northeast and Mid-Atlantic States. Cars also emit several pollutants classified as toxics, which cause as many as 1,500 cases of cancer in the country each year. Auto emissions also contribute to the environmental problems of acid rain and

global warning" (National Safety Council). In fact, transportation accounts for 30% of OECD carbon dioxide (CO2) emissions. And in the U.S., cars and small trucks make up 20% of the United States' CO2 emissions (Sauer). This doesn't include other modes of transportation such as trains, large trucks (18 wheelers), or even planes.

The same is the case with the European Union. According to the EU, "Air pollution has been one of Europe's main political concerns since the late 1970s. European Union policy on air quality aims to develop and implement appropriate instruments to improve air quality. The control of emissions from mobile sources, improving fuel quality, and promoting and integrating environmental protection requirements into the transport and energy sector, are part of these aims."

The People:

According to an EU study, air pollution was one of the main worries associated with the environment among citizens. In fact, it moved from third with 35% of the vote to first with 44% of the vote in four years (1999-2002). Also in 1999, another poll by Eurobarometer showed that 69% of EU citizens felt that pollution was an extremely important problem that needed to be addressed. In fact, 56% felt that a change in the way people lived could prove to be crucial in saving the environment (Carter, 2002). This can prove beneficial in terms of creating legislation to combat pollutants that harm the air people breathe. This is because a lot of support for such legislation would exist.



It appears that the only plausible way for the topic of the environment and pollution to gain full support in legislation is if voters throughout the U.S. truly supported the fight against air pollution. Unfortunately, this does not appear to be the case. While most United States citizens believe that the environment is an important topic, it is not important enough. What this means is that there are several other important issues that Americans feel have a higher priority in terms of finding a solution. These topics include education, poverty, and fighting terrorism to name a few.

The Los Angeles Times published a survey in 2000 where voters leaving the polls were asked which issues were most important to them. The environment received a range of 3% to 10% over the course of seven surveys every two years from 1982 to 2000. The closest that the environment came to being a top issue was in 1990 when it finished

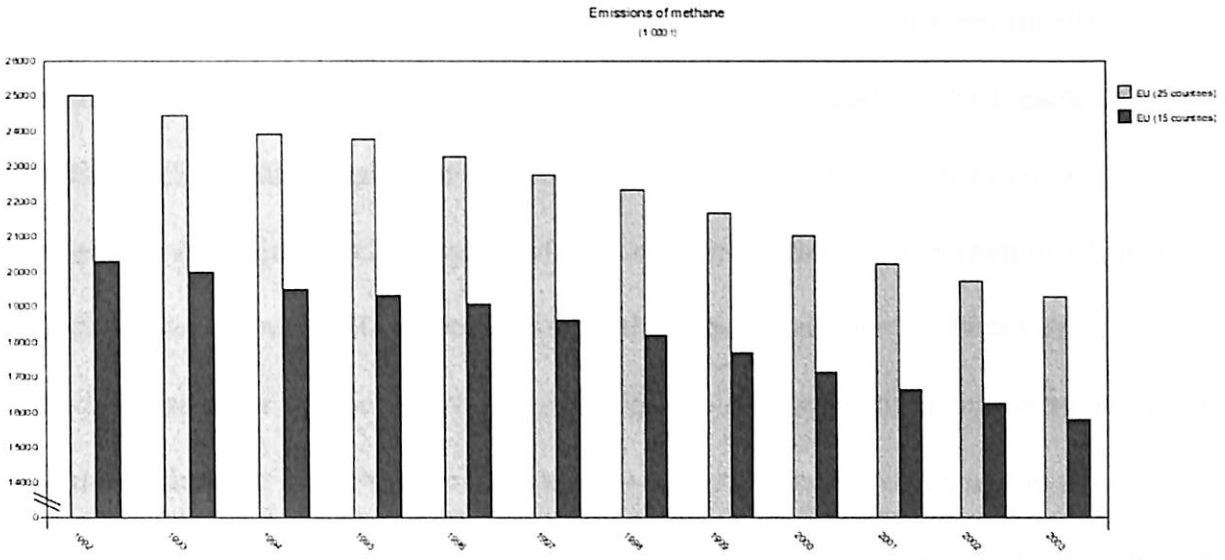
under education (26%) with 21% of the vote.

Also, a Wall Street Journal poll (March 2-5, 2007) placed the environment third to last in a survey concerning what should be a top priority for the government. The most important subjects in the survey were the war in Iraq, healthcare, and terrorism to name a few.

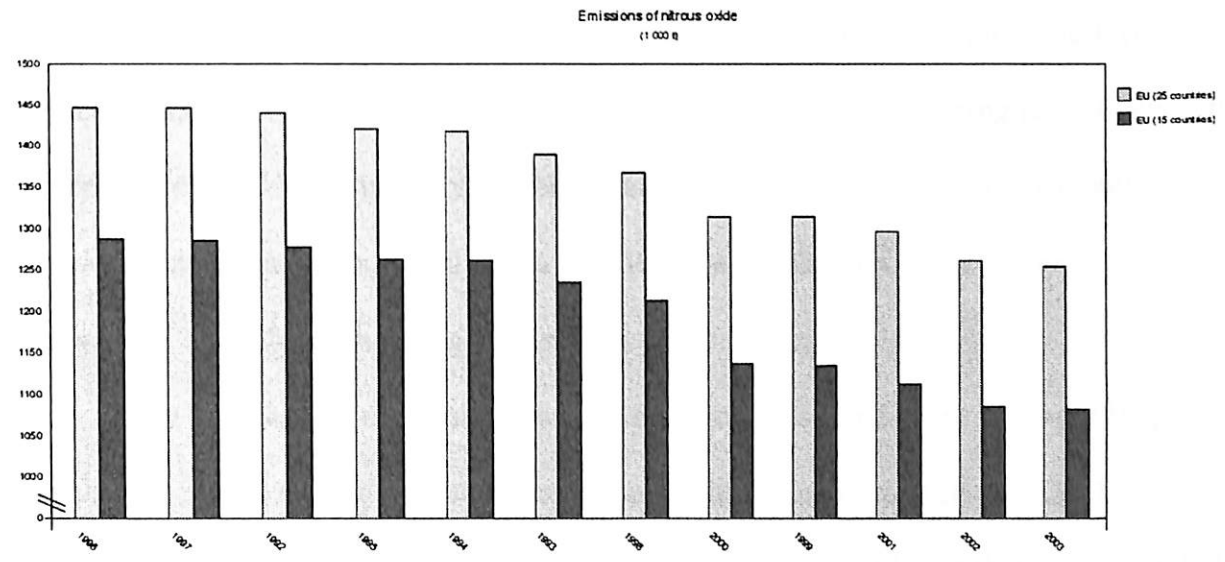
The Policies:

One of the most popularized and well-known environmental efforts is that of the Kyoto Protocol. The agreement acts as a guideline and source of influence for the European Union and several other countries around the world. It has outlined several goals for the coming years, as well as requirements that are to be met by members.

The main goal of the Kyoto Protocol is to reduce the emission of greenhouse gases such as carbon dioxide, nitrous oxide, and methane. As one can see in the following graphs, nitrous oxide and methane have been decreasing in the European Union over the years from 15,183.94 (1,000 tons) in 1992 to 10,883.69 (1,000 tons) in 2003[nitrous oxide] and from 24987.09 (1,000tons) in 1992 to 19257.85 (1,000 tons) in 2003 [methane].



Source: Eurostat



Source: Eurostat

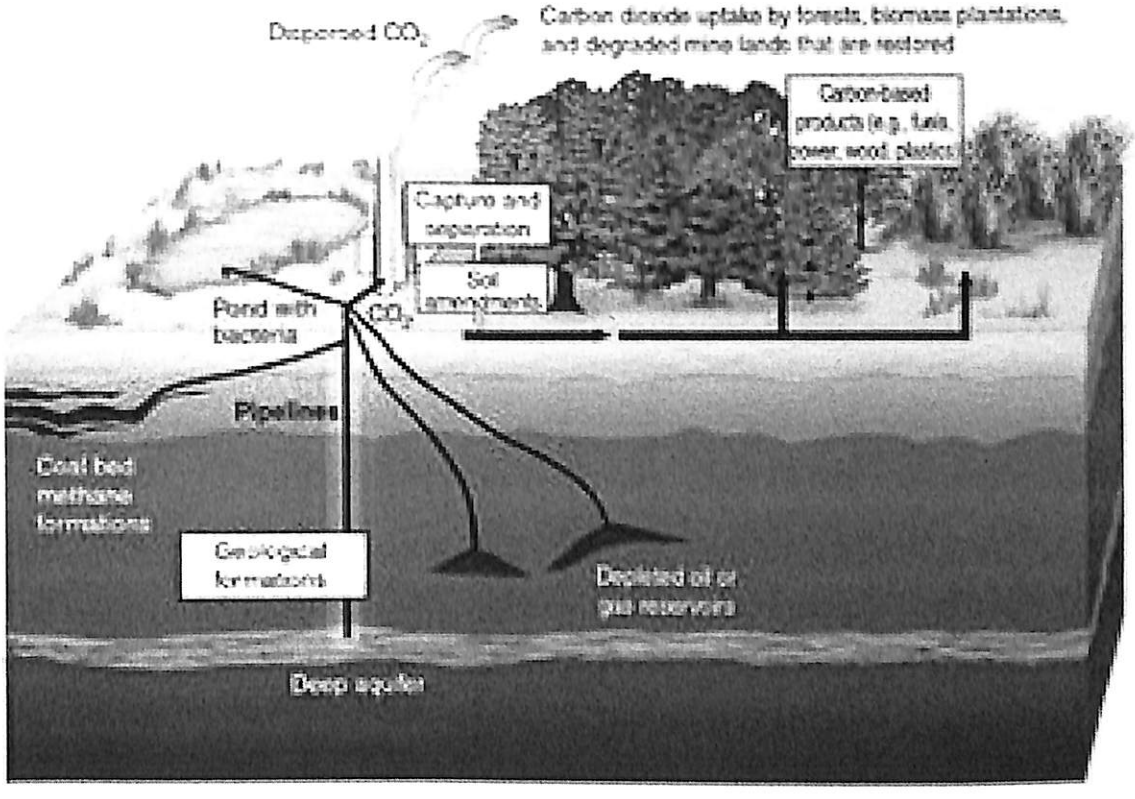
As for the emission of carbon dioxide, the case is not the same. In fact, the emission of this GHG has increased over the years. According to some, this has been caused by the increase in transportation and use of energy for cold winters (This problem will be discussed later in the chapter). However, under the Kyoto Protocol, which is governed by the United Nations, countries are surveyed for any potential problems or shortcomings. If any problems do arise, they are immediately addressed.

As stated earlier, the US has argued that the plan was not scientifically proven to be attainable, thus the pullout from the Kyoto Protocol in 2001 under President Bush. At the COP-7 (Seventh Session of Conference of the Parties to the UN Framework Convention on Climate Change) in Marrakech, Dr. Harlan Watson (Senior Climate Negotiator and Special Representative for the U.S. Department of State) stated, "The United States does not believe that the Kyoto Protocol is the right answer to the challenge of climate change. The Protocol is flawed -- its targets are arbitrary and in many cases unrealistic, it does not include developing countries, and its costs would harm the U.S. economy. The United States has made it very clear that it does not intend to ratify the Protocol" (Watson, 2001). However, in the case of the European Union, the Kyoto Protocol was ratified regardless of the lack of scientific support (acting proactively rather than reactively). Unfortunately, several members are not projected to reach their emission reduction goals, but they have at least begun the process of reducing emissions somewhat. Therefore, the program is not a complete loss.

This is a perfect example of what was being discussed in the previous chapters. The United States views its incentives as being money and time driven. The Kyoto Protocol was not proven to be scientifically valid or successful, and therefore the US did not feel as though the money needed to achieve the goals of the Kyoto Protocol outweighed the effects of not acting at all. It was deemed better or more beneficial for the US to go another route. The EU on the other hand, felt that there was some benefit to ratifying the protocol. Even if the goals aren't achieved, the EU is still on its way to reducing emissions. This incentive was large enough to convince the EU that the time and money necessary to make this venture was worth it.

And as for meeting the reductions, the EU, along with the UN, has created new methods of addressing the situation. The mechanisms that are now being employed to reduce gas emissions include carbon sinks, afforestation, and even reforestation. Carbon sinks are objects such as plants, trees, or even the ocean, which absorb carbon dioxide from the atmosphere. By moving industries closer to water or planting trees nearby, a reduction in emission levels can be obtained.

*Illustration 2: Carbon Sink



As for afforestation and reforestation, this is simply the process of planting more trees. Afforestation calls for the trees to be planted in an area that has never been populated by trees before, while reforestation is the act of replanting trees where they once were. These actions will help to reduce GHG emissions enough for the EU to reach the goals set out by the Kyoto Protocol.

Since the United States has decided to achieve emission reductions without the help of the Kyoto Protocol, it has begun some initiatives of its own such as the EPACT program. The program uses incentives as a bargaining tool.

In August of 2005, President Bush signed the Energy Policy Act (2005). EPACT, as it is more commonly referred to, is an incentive based program. The act aims to award individuals for such things as energy efficient homes (through the purchase of material such as certain types of windows, roofing, or insulation)

*Tax Incentives

Product Category	Product Type	Tax Credit Specification	Tax Credit
Windows	Exterior Windows	Meet 2000 IECC & Amendments	10% of cost not to exceed $200 total
	Skylights	Meet 2000 IECC & Amendments	10% of cost not to exceed $200 total
	Exterior Doors	Meet 2000 IECC & Amendments	10% of cost not to exceed $500 total
Roofing	Metal Roofs	Energy Star qualified	10% of cost not to exceed $500 total
Insulation	Insulation	Meet 2000 IECC & Amendments	10% of cost not to exceed $500 total

(U.S. Department of Energy)

or even the purchase of energy efficient cars. In 2008, consumers of hybrid cars can receive a $2,220-$3,000 credit on either the Ford Escape or Mercury Mariner.

*** Tax Incentives 2008**

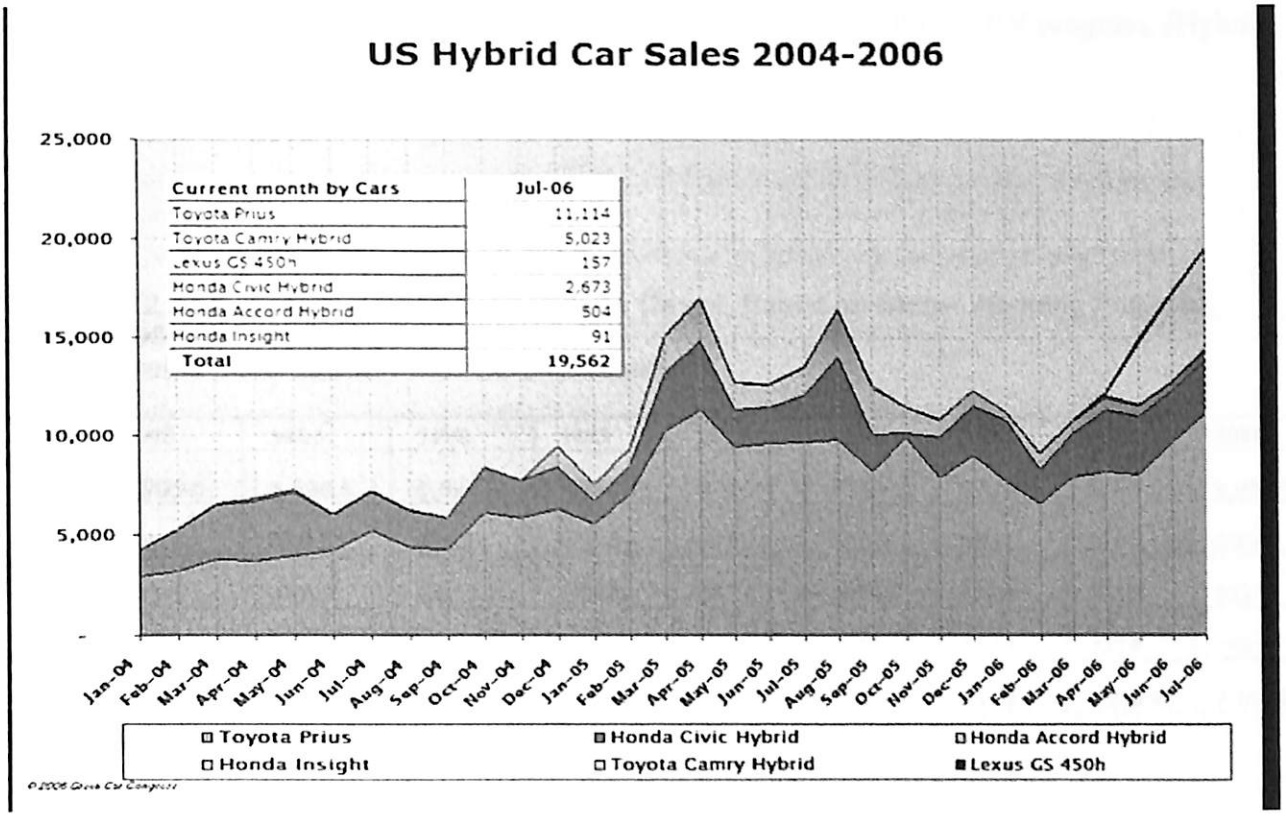
Make	Model	Credit Amount	News Release #
Ford	Escape Hybrid 2WD	$3,000	IR 2007-22, Jan. 31, 2007
Ford	Escape Hybrid 4WD	$2,220	IR 2007-22, Jan. 31, 2007
Mercury	Mariner Hybrid 2 WD	$3,000	IR 2007-22, Jan. 31, 2007
Mercury	Mariner Hybrid 4WD	$2,200	IR 2007-22, Jan. 31, 2007

(U.S. Department of the Treasury)

As one can see from the chart, individuals and businesses typically receive an income tax credit. This credit is determined by the fuel economy and weight of the vehicle. These tax credits can also be obtained by alternative fuel producers, in the form of a 10-cent per gallon credit for up to 15 million gallons.

The United States has also begun a national campaign for low emission vehicles. According to a publication from the EPA, "National LEV will have public health and environmental benefits nationwide. Across the country, National LEV will reduce ground level ozone, the principal harmful component in smog, as well as emissions of other pollutants, including particulate matter, benzene and formaldehyde. This will assist states in achieving cleaner air while the economy grows." The program was put into effect in 1997, but retail of LEV's did not occur nationally until 2001. The government is also enforcing a large incentive program in an effort to get consumers to purchase these low emission vehicles. The incentives typically come in the form of tax deductions (EPACT), special driving lanes on highways, or even rebates. These incentives are directed at private owners, as well as public companies or agencies.

It appears that these incentives are somewhat paying off. Hybrid car sales since 2004 have slowly increased.



As the above graph shows, hybrid car sales have increased 21.4% since just August of 2005. In fact, hybrid car sales accounted for 1.8% of vehicle sales in March of 2007. This is almost double its share from the previous year's market share. (LA Times, Martin Zimmerman) The introduction of the Lexus 450h and other hybrid SUV's, such as the Ford Escape hybrid, have helped with this growth in sales due to the availability of options for SUV consumers. However, the 1.8% of vehicle sales also means that 98.2% of vehicle sales weren't hybrid cars. Is this slow increase in hybrid sales really going to make an impact on reducing CO2 emissions while the amount of transportation[6] continues to grow at an alarming rate?

Unfortunately, the LEV standards for these vehicles pertain to five pollutants: nitrous oxide, carbon monoxide, hydrocarbons, PMs, and formaldehyde. Carbon dioxide

[6] More detail on this later in this chapter. Please see section on Transportaion levels.

is not part of this group, and is therefore not regulated under the NLEV program. (Hybrid Cars)

Table ES2. U.S. Emissions of Greenhouse Gases, Based on Global Warming Potential, 1990, 1995, and 1998-2005
(Million Metric Tons Carbon Dioxide Equivalent)

Gas	1990	1995	1998	1999	2000	2001	2002	2003	2004	P2005
Carbon Dioxide	4,990.6	5,308.5	5,594.0	5,673.9	5,853.4	5,767.0	5,814.7	5,875.3	5,988.7	6,008.6
Methane	701.7	672.5	629.8	616.5	611.2	597.7	600.2	602.2	606.5	611.9
Nitrous Oxide	333.5	357.7	348.8	346.8	342.8	337.9	333.6	332.9	359.9	366.6
HFCs, PFCs, and SF_6	87.1	94.9	134.3	133.9	138.0	128.5	137.8	136.6	149.5	160.2
Total	6,112.8	6,433.5	6,707.0	6,771.1	6,945.4	6,831.0	6,886.3	6,946.9	7,104.6	7,147.2

(Energy Information Administration)

Unfortunately, the US has not been able to reduce GHG emissions like the EU except for methane. As one can see in the above chart, methane decreased from 701.7 to 597.7 in 2001. But even methane has begun to rise again, and in 2005 it was back to a level of 611.9.

The EU, in addition to the Kyoto Protocol, has created its own form of the NLEV program. The European Commission has requested that automakers sign voluntary commitments in order to reduce CO2 emissions. This is a major difference from the US because there are no CO2 (one of the most problematic GHG gases) emission requirements at this time. This plan also calls for energy efficiency, and it calls for taxes on energy products as well as the creation of electricity from renewable energy.

As for the objective to reduce Carbon dioxide emissions, three different groups of automobile manufacturers were asked to sign agreements. They are:

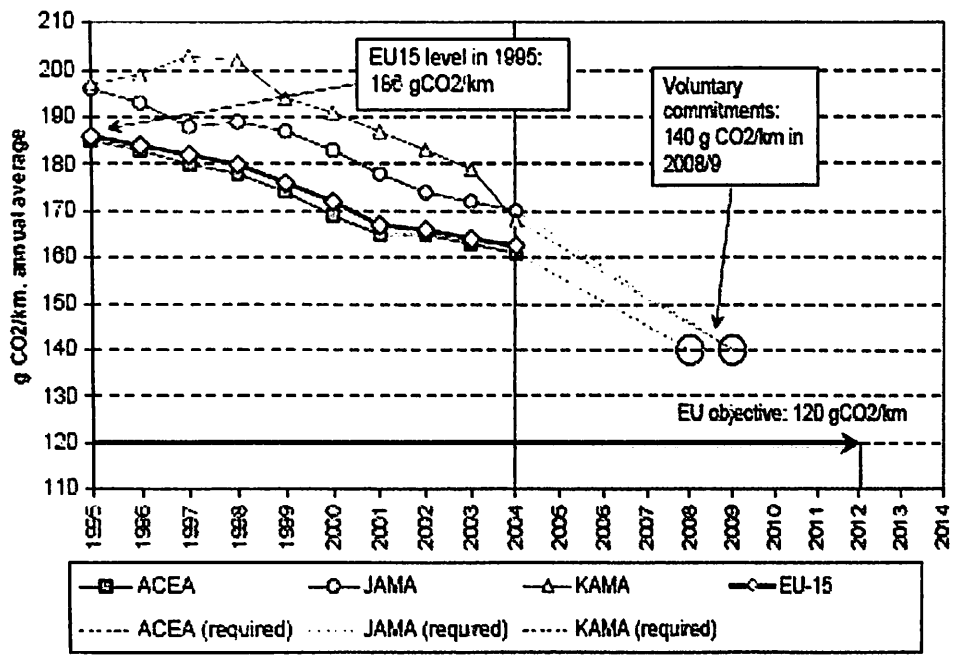
*ACEA: European Automobile Manufacturers Association (Association des Constructeurs Européens d'Automobiles)

* JAMA—Japanese Automobile Manufacturers Association

* KAMA—Korean Automobile Manufacturers Association

The cars sold by these manufacturers make up about 90% of the cars sold in the European Union. These agreements will last until 2009 for JAMA and KAMA, but only until 2008 for ACEA. "The fleet of new passenger cars put on the market in 2008/2009 will consume, on average about, 5.8 l petrol/100 km or 5.25 l diesel/100 km" (ECCP).

Figure 1 - EU 15 average new car fleet CO_2 emissions between 1995 and 2004



A number of issues can be highlighted based on the experience gained in the implementation of the current strategy[20]:

(Source:http://ec.europa.eu/environment/co2/pdf/com_2007_19_en.pdf)

However, as one can see from the above graph, the program is not achieving much success. While new cars being produced by the various automakers included in the agreement have indeed reduced CO2 emission levels (163 g/km in 2004- down 12.4% from 1995), they are not expected to reach the emission goals set out in the agreement by 2008/2009 (140g/km). This voluntary agreement proves to be a weakness in that the EU must start over with mandatory requirements that will take more time meet. While some may argue this is the same situation with the Kyoto Protocol, which has mandatory standards, it must be said that the EU and its member states who aren't expected to reach the target are creating new ways to solve the problem on time rather than simply moving back the target date.

As of February 2007, the EU has agreed on stricter standards for the promotion of CO2 reductions. However, large car lobbyists were able to express concern over the original standards planned (120g/km) and convince the European Commission to promote a somewhat lower standard (130g/km), thus bringing up the problem of lobbying. (CorporateEurope, 2007)

While some may argue that this defeats the purpose of an appointed European Commission, this is not the case. Although automakers were able to argue for a decrease in required reduction levels, there was not a large decrease that was agreed upon. As a matter of fact, the level of 130g/km is still less than the 140g/km that was decided upon in the voluntary agreement.

The United States is currently experiencing similar problems in attempts to begin CO2 emission reductions. However, instead of reaching a compromise, car companies are attempting to do away with any form of CO2 requirements.

In California and Vermont, carmakers are suing the state governments to block legislation on requiring a reduction in carbon dioxide emissions set to begin in 2009. The argument is that these emission standards violate federal laws. The car companies are claiming that any state regulations such as this "usurp the federal government's authority to set fuel efficiency standards" (Schneider). And just recently, US District Judge Anthony Ishii ruled that the car companies were in fact able to go to trial. An article states, "Judge Ishii is allowing the automakers to continue with that fuel-economy standards argument, as well as an argument that the regulations undermine the federal government's ability to conduct a uniform foreign policy" (Green Car Congress). This seems to be a major roadblock in the ability of the United States to address the problem of pollution.

One final policy for discussion is that of C.A.F.E. standards. The Corporate Average Fuel Economy is a policy dealing with the fuel efficiency of an automobile, and was signed into practice in 1975. Fuel efficiency is determined by the number of miles a car travels per gallon of gasoline. Title V, "Improving Automotive Efficiency", under the Energy Policy Conservation Act, brought C.A.F.E. into existence. The policy called for fuel efficiency to be 27.5 mpg (miles per gallon) by 1985. After this goal was achieved in 1985, the NHTSA (National Highway Traffic Safety Administration) was allowed to set higher or lower standards for vehicles. In 1990, the official efficiency level was set at 27.5 mpg, and it has remained at this level since that time.

The overall environmental effect of achieving higher fuel efficiency is the fact that the fuel an automobile burns or consumes is the source for the greenhouse gases the automobile emits. Accordingly, the less fuel a car burns on a regular basis, the fewer

pollutants that are produced. Thus, the better the environment is overall. Both the European Union and the United States observe this policy, yet the European Union is currently attempting to enact even stricter standards. According to an article by the Institute for the Analysis of Global Security, "Unless the U.S. is hit by a major energy crisis, the prospects for significantly increasing Corporate Average Fuel Economy (CAFE) are unlikely, due to the vociferous public opposition to CAFE, the strength of Detroit lobbyists, and the political consequences for legislators who show interest in raising fuel economy levels. The prospects are similarly dismal for a national tax on gasoline, which would quickly reduce driving, roads, and the size of our vehicles, as well as raise the necessary funds to create a new transportation energy infrastructure" (Bradley Berman, Energy Security).

Enforcement:

Legislation is enforced in the United States through the court system and other means. The most important of those means is the Environmental Protection Agency.

"The core purpose of EPA's Criminal Enforcement Program is to conduct criminal investigations of violations that represent egregious conduct and that cause or threaten significant harm to human health and the environment, and to refer cases to the Department of Justice or states for criminal prosecution" (GOV). The E.P.A. makes every effort to monitor and prevent criminal pollutant activity. The organization has been charged with the task of enforcing and prosecuting policies and offenders. "The program conducts investigations in priority areas of potential criminal non- compliance, maintains expert investigative, forensic, scientific, technical, and legal components for case support,

develops a highly skilled national enforcement workforce through training, and develops partnerships with other units of government" (GOV). After September 11, 2001, the E.P.A. also began working with the F.B.I. in dealing with environmental terrorist threats.

In short, the Environmental Protection Agency helps to find criminals and offenders. However, perhaps these fines are not severe enough. Take the C.A.F.E. system of fines for example.

"The penalty for failing to meet CAFE standards recently increased from $5.00 to $5.50 per tenth of a mile per gallon for each tenth under the target value times the total volume of those vehicles manufactured for a given model year" (NHTSA). And this fine process is the same in the European Union as well. In 2002, car manufacturers such as BMW, Fiat, DaimlerChrysler, and Porsche did not meet their C.A.F.E. standard of 27.5 mpg.

It appears that in this situation, there is no actual punishment because these can just be passed on to consumers who are willing to pay higher prices in order to buy the car. Therefore, the pollutants are still being created but the government is making money as well as the car dealers. It appears that the only loser in this situation is the environment and the consumer (who either doesn't notice this or doesn't seem to care). Consumers, in general, have to care about the environment also in order for things to change.

As with the United States and mentioned briefly above, when the European Union passes laws, they are to be followed by all member states. In terms of environmental legislation, this means that member states are to comply with the regulations or standards set forth in the policy/law. In order to enforce this compliance among member states, the

Commission and the Court of Justice are called upon to ensure that EU law is appropriately implemented in each of the member states. Typically, member states are allowed, as they are in the United States, to determine their own means of achieving the EU law's desired results. For instance, if EU law calls for a reduction of GHG emissions by a certain percentage, it is the member state's own discretion as to how to achieve this reduction. If the member state is unable or unwilling to accomplish this objective, the Commission or Court of Justice becomes involved.

However, there are other forms of monitoring that occur on the environmental level. For example, the European Commission works closely with the Implementation and Enforcement of Environmental Law (IMPEL), even sharing the chairmanship of meetings. IMPEL "is an informal network of environmental authorities of the Member States, acceding and candidate countries of the European Union and Norway" (IMPEL). The objectives of IMPEL are simply to ensure the "effective implementation and enforcement of environmental legislation in the European Union". The organization also aims to promote better understanding of the problems facing the environment and the basis behind legislation, as well as developing the best method for monitoring, inspecting, and reporting environmental legislation.

Outcomes:

As can be seen in the following chart, only half of the current EU member states are expected to meet Kyoto targets for GHG emissions. However, of those, the larger member states (such as France, United Kingdom, Finland, Greece, and the Netherlands) will meet the goals. The chart below gives a list of the countries of the EU and whether or not they will meet their target level for Kyoto. It also displays by how much they will

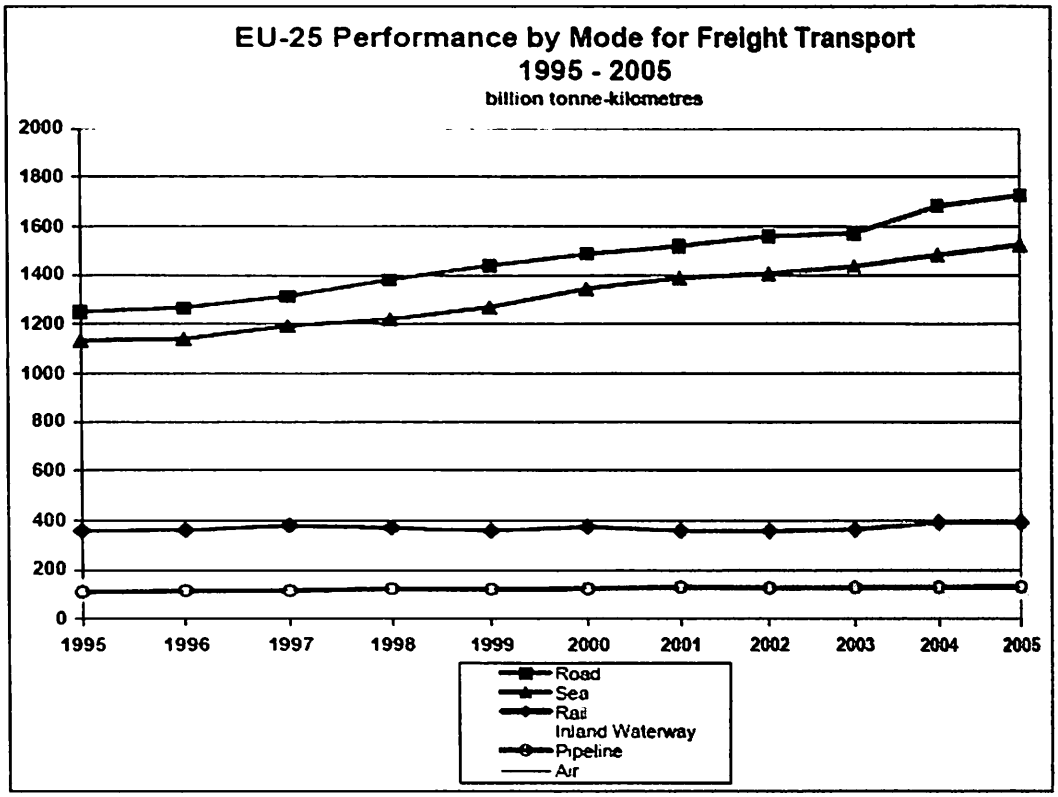
go under or over the target. While the emission of NO2 and methane continue to decrease (as previously discussed), the worst GHG (carbon dioxide) continues to increase at an alarming rate.

*Kyoto Target Projection

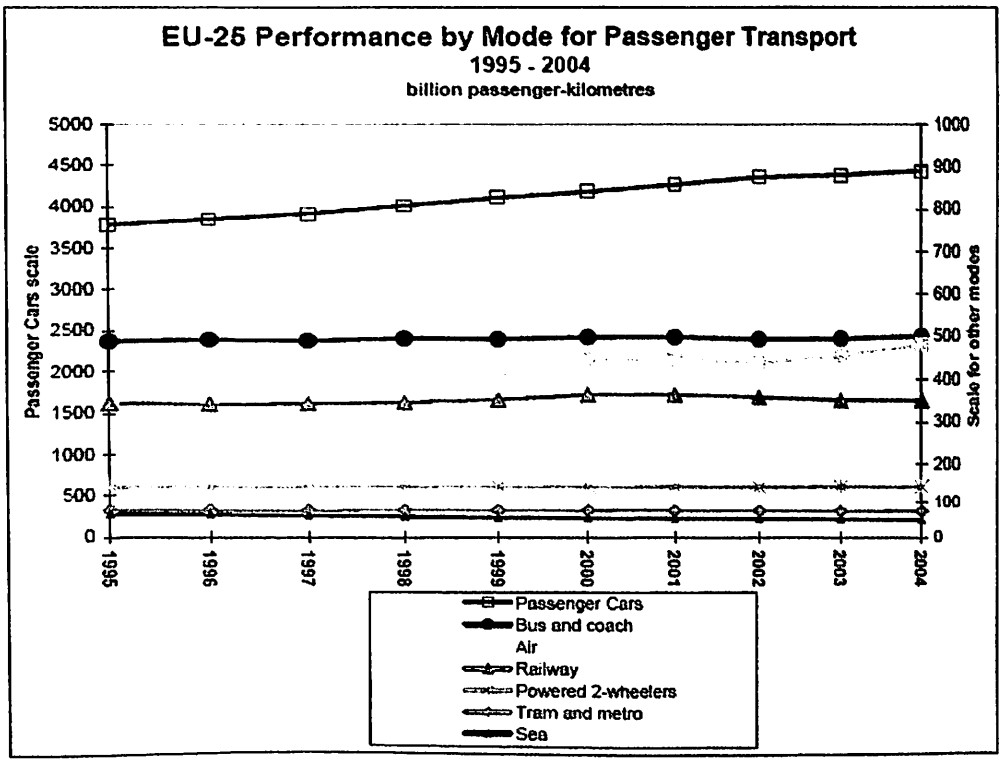
Country	EU Burden Sharing or Kyoto Target	Kyoto target projected to be reached?
EU-15	– 8.0 %	Yes
EU-15 Member States		
Austria	– 13.0 %	No
Belgium	– 7.5 %	No
Denmark	– 21.0 %	No
Finland	0 %	Yes
France	0 %	Yes
Germany	– 21.0 %	Yes
Greece	+ 25.0 %	Yes
Ireland	+ 13.0 %	No
Italy	– 6.5 %	No
Luxembourg	– 28.0 %	Yes
Netherlands	– 6.0 %	Yes
Portugal	+ 27.0 %	No
Spain	+ 15.0 %	No
Sweden	+ 4.0 %	Yes
United Kingdom	– 12.5 %	Yes

(Source: European Environment Agency)

Much of the increase in C02 levels can be attributed to several sources. These include a slow but steady (compared to the United States) increase in transportation,



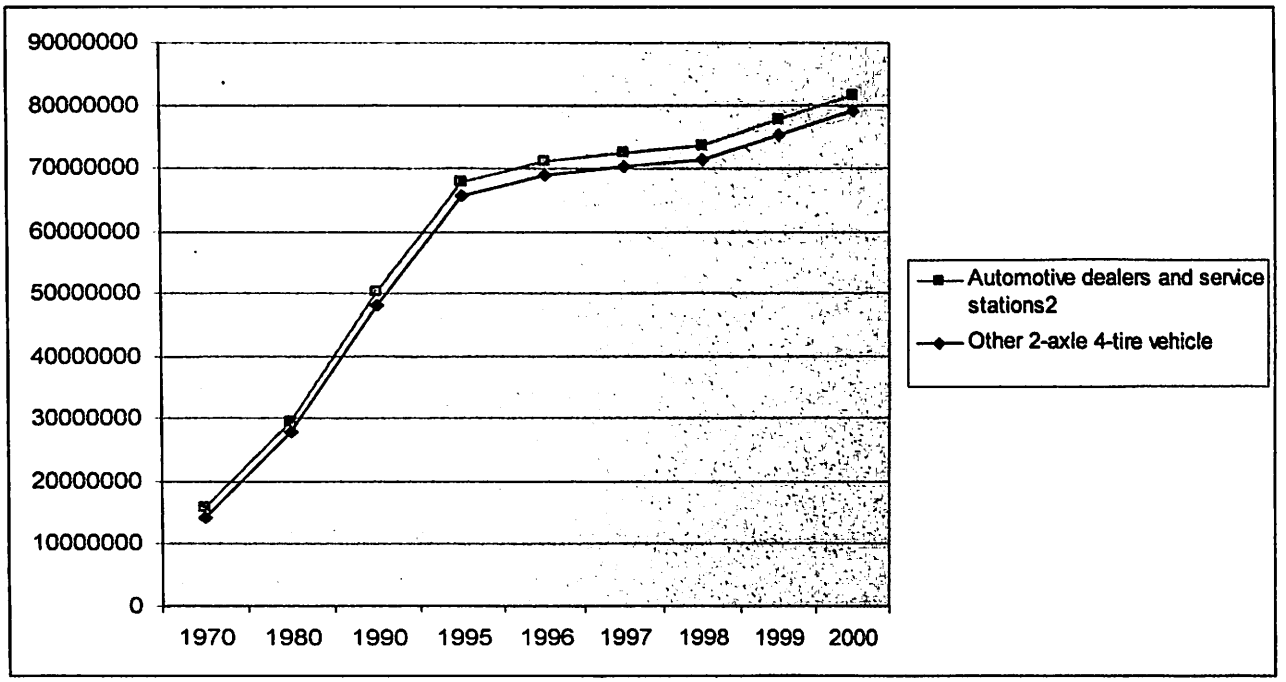
(As one can see, transportation [in terms of road and sea] has increased, but at a slow steady rate.)



colder winters which have led to the use of more energy by the residential sector, and even the effect of environmental problems. For example, Spain was hit hard by a drought in 2003, which forced the country to switch from hydro power to fossil fuels. This caused a large increase in GHG emissions and forced Spain into the lead in terms of CO2 emissions.

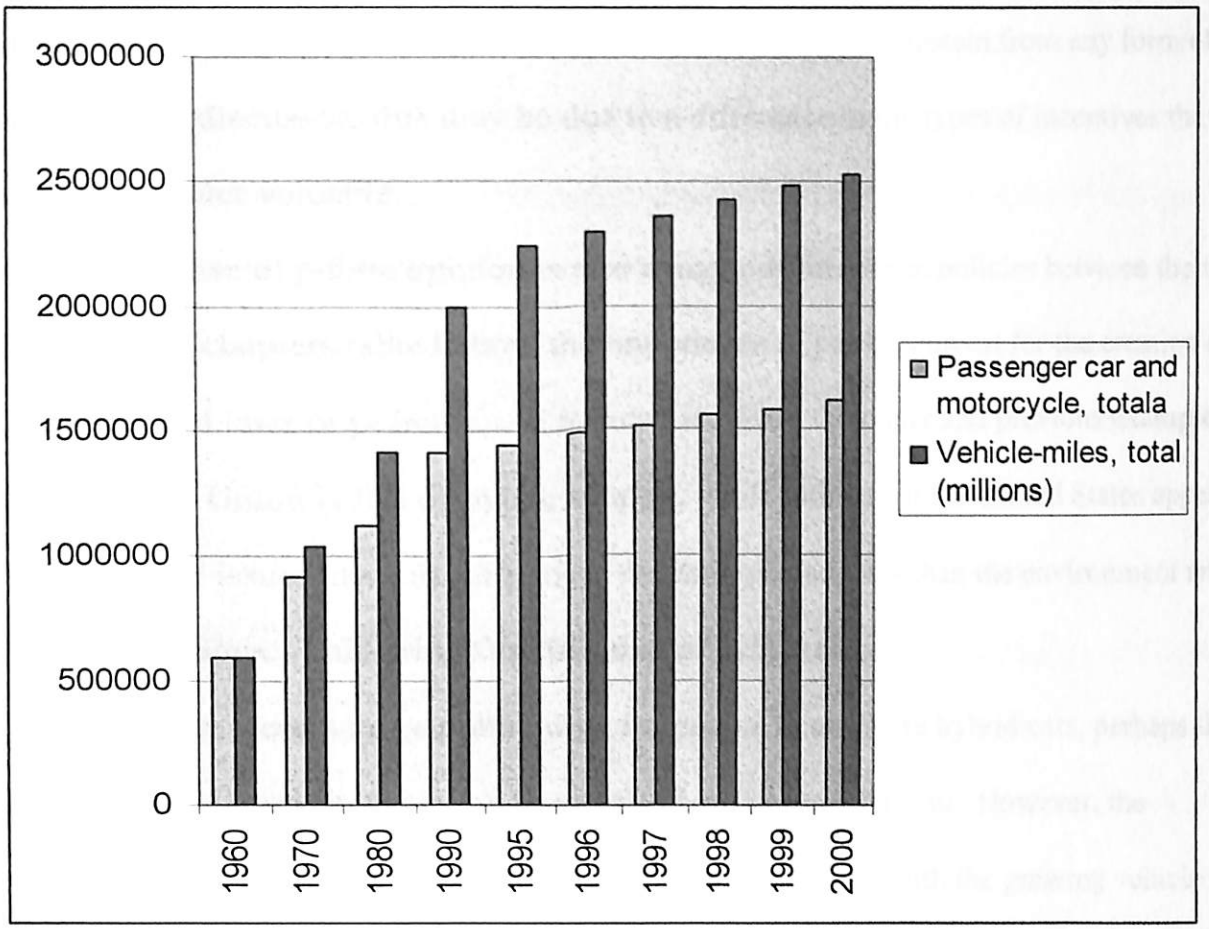
The same problem is occurring in the United States. The following chart, which shows a tremendous increase in the number of vehicle registrations since 1970 as well as an excessive increase in miles driven, supports this statement. The number of two-axle four-tire registered vehicles in 2000 is roughly 5.5 times larger than it was in 1970.

*US Transport Levels



(Bureau of Transportation Statistics)

*US Transport Levels II



This could definitely give rise to the claim that the number of cars on the road today is skewing the success of emission reduction efforts. But regardless, the transportation figures are a perfect example of why the emissions of CO2 and other green house gases need to be addressed. If transportation will continue to grow, then it is imperative that the EU and US do something about the types of cars used on the road. If not, the numbers will move from skewed back to an excess amount of emissions each year.

Summary-

The United States and the European Union have similar goals when it comes to fighting pollution. However, the two have different methods of reaching these goals. For

instance, the Kyoto Protocol is one of the European Union's largest attempts to fight green house gas emissions. However, the US has chosen to abstain from any form of the protocol. As discussed, this may be due to a difference in the types of incentives the US and EU consider valuable.

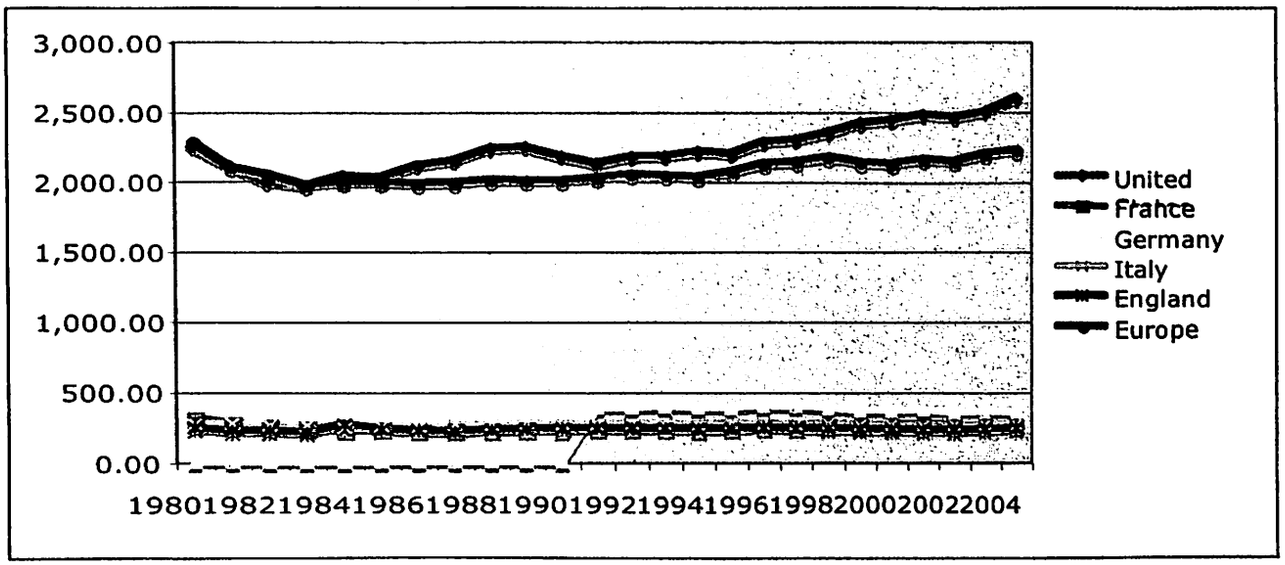
The case of public opinion is also a major difference in policies between the two. The previous chapters talked about the importance of public support for the creation of environmental laws or policies. As one can see from the paper and previous examples, the European Union is full of public support, while citizens of the United States appear to feel that other issues are currently more necessary to address than the environment and vehicle emissions. This brings up the point of hybrid cars.

If there were a large public urge for people to purchase hybrid cars, perhaps this effort by the United States lawmakers would prove more fruitful. However, the incentives aren't proving to be effective enough to keep up with the growing vehicle emissions. It is similar to the case of the EU and voluntary agreements with automakers. The people are given a choice between fuel efficient/environmentally friendly and non-fuel efficient cars. Unfortunately, the people are choosing non-fuel efficient cars even with the incentives. Perhaps the US should take more of a stand as the EU is doing and put more pressure on automakers to generally produce more fuel-efficient cars. However, how could lawmakers who are voted to office by these auto manufacturers and all of their employees ever pass a law that might hurt the industry economically (i.e. Dingell and the Energy committee)? This is one of the main benefits of having appointed officials, independent of any member state, as the agenda setters.

The fact that the EU did not back down against the automakers when setting new mandatory standards for vehicle emissions is extremely important to note. While US states are going to trial over any form of CO2 emission standards, the EU is working with automakers to make sure they can reach the targets while at the same time pushing them to reach new levels of success in terms of reductions.

Then there is the argument concerning the rise in transportation. As transportation continues to increase, the problem of vehicle emissions will also continue to grow. The European Union had an increase of 12 million tons of CO2 (or 1.5%) due solely to transportation increases. The US has had an increase of 14.8% from 1990-1999 on motor fuel alone. It is quite clear that if the US does not do something to deal with the increasing transportation, the EU will again move ahead in dealing with the environment. (Bureau of Transportation Statistics)(EEA). In fact, the following graph shows the US carbon dioxide emission levels compared to a few European countries specifically, as well as Europe as a whole. One can clearly see that the United States is above Europe as a whole when it comes to CO2 emissions.

*CO2 emissions from consumption of Petroleum: in millions of metric tons



Source: Energy Information Administration

And again, the difference among the information and incentives for the EU and US is large in scale. While the United States continues to imply that Global Warming or vehicle emissions are not causing the amount of damage others are claiming, the EU is steadily passing the US in the creation of new policies to help fight the problem. And even if it is proven that this environmental concern won't become a problem for years down the road, the EU still has the benefit of more fuel-efficient cars (which leads to less money spent on gas, perhaps even less of a dependence on oil) and will be ahead of the game when the concern truly does become a problem (perhaps even avoiding the issue at all). As the Stern Review states, "the costs of strong and urgent action on climate change will be less than the costs thereby avoided of the impacts of climate change under business as usual" (Stern Review, 2007, p.2).

However, as stated in the US chapter, if a few years from now it is scientifically proven without a doubt that GHG's are a major problem and are destroying the environment, will the United States even be able to catch up to the work the European Union has steadily been completing the last several years? And on top of that, will the US even make that effort based on the probable economic strain it will cause to enact so much in such a short amount of time?

Conclusion

As can be seen from the previous chapter, the various institutions truly do shape policy outcomes. The fact that the United States and the European Union have similar problems yet very different methods of dealing with these problems is an excellent example of this belief.

In terms of creating new and current legislation to deal with the problem of transportation and vehicle emissions, it appears the European Union is better adept at achieving a possible solution. The EU works hard to incorporate the environment in its decisions for all member states, as "it has become clear that most environmental problems transcend national boundaries and cannot be dealt with at the national level alone" (Wood, 2004, pp. 185-186). And, the EU has already enacted several forms of legislation that have at worst made some form of improvement in the reduction of GHG emissions. Although carbon dioxide emissions continue to rise slightly, the EU has the public support, as well as, the institutions needed to promote change in policies at an advanced pace.

The United States on the other hand, while making some effort to address the situation, appears to be slow in action. The US has created legislation which deals with some forms of GHG emissions, yet these are not entirely reducing the emission levels. And while the EU begins to restrict the amount of CO2 emissions from vehicles, the United States is in a legal dispute over whether or not state governments in California and Vermont can create stricter emission standards (especially concerning carbon dioxide) than those of the federal government. The United States is not motivated to address the

situations being discussed because currently the citizens aren't motivated to address the problems, and the case of outside influence among decision makers has not been tackled as it has in the EU. Other topics appear to have a higher priority and therefore this is where action is being taken.

The steady efforts the European Union has made since its first efforts at dealing with pollution have definitely enabled it to achieve the success it has thus far. If the United States continues to wait for more evidence or proof, or if it decides to continue focusing on ideas that only present little results (e.g. hybrid car sales), the EU will continue moving ahead. Overall, both the United States and the European Union are on their way to helping the environment. While the EU needs to find methods which help to deliver results more on target with set goals, the US needs to make the environment more of a concern. Perhaps the US will react and take measures to prevent the destruction of the environment in the short future before an environmental disaster forces action to take place.

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