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## Religious positions on climate change and climate policy in the United States<sup>1</sup>

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### Abstract

February 2006, a group of 86 evangelical leaders, under the auspices of the Evangelical Climate Initiative, challenged the Bush administration on global warming. Other religious groups and leaders in the USA, and other countries, have taken positions as well. As the US evangelical community seems to have a considerable influence on the views and policy of (Republican) national leaders, these developments are relevant for assessing US and international climate policy. Using argumentative discourse analysis, this paper analyzes the religious positions on climate change and climate policy in the United States, as evident in their communication in the media, opinion documents, and websites. Religious positions show a wide range of views, images, and discourses that deal with fundamental moral and ethical questions concerning climate change, stewardship and social justice. Our main conclusion is that both proponents and opponents of strict climate policy strongly value these concepts, but that they interpret them in different ways. A robust policy strategy (regarding support in the religious community) should pay careful attention to the effects of both climate change and climate policy on the poor in both developing nations and the USA itself.

**Keywords:** environmental justice, equity, ethics, religion and environment, climate policy, United States

### 1. Introduction

February 2006, a group of 86 evangelical leaders, under the auspices of the Evangelical Climate Initiative (ECI), challenged the Bush administration on global warming with their 'Evangelical Call to Action' (ECI, 2006). Other religious groups and leaders in the USA and other countries have taken positions on this issue as well. The (religious-)ethical aspects of climate change are the central theme of their statements. The debate has attracted much attention in the media, and some attention in scientific forums as well (e.g. Kolmes and Butkus,

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2007; Nisbet, 2006; Nisbet and Mooney, 2007). Simultaneously, climate change and climate policy have become more prominent in the US political debate as well, often with moral and religious-ethical connotations. For example, Al Gore notes in his 'An Inconvenient Truth' that it is 'deeply unethical' to allow the rise in CO<sub>2</sub> emissions to continue (Gore, 2006). President Bush referred in the State of the Union in January 2007 for the first time to climate change as a serious societal issue, noting that technological breakthroughs would allow us to become 'better stewards of the environment' (Bush, 2007).

Climate change and climate policy raise many questions that have strong moral and ethical dimensions, which are important for policy formation and international negotiations (Brown, 2003; Brown et al., 2006; Gardiner, 2006). The issue is riddled with social dilemmas due to e.g. the spatial and temporal dispersion of causes and effects, diffusion of responsibility for the problem, and lack of institutions through which different countries and generations can effectively influence each others' behaviour (Gardiner, 2006; Jamieson, 1992). One of the main ethical dimensions of climate change therefore is the issue of distributive justice. Climate policy deals with the question of how best to divide a scarce resource that no one owns, i.e. how to equitably (both interregionally and intergenerationally) distribute the costs (e.g. climate change impacts) and benefits (e.g. economic growth) of emissions and responsibility for policy action to mitigate and adapt to climate change (Brown et al., 2006; Gardiner, 2004, 2006; Grubb, 1995; Singer, 2006). See e.g. Gardiner (2004), Groenenberg and Van der Sluijs (2005), and Grubb (1995) for extensive discussion of the ethical aspects of various approaches to assigning emission reduction targets. Other specific ethical issues include procedural justice (who gets to participate in policymaking and how), how to deal with the many uncertainties (who should bear the burden of proof, and if, when and how to act under uncertainty), research approaches (e.g. economic approaches such as discounting and cost-benefit analysis), and some specific policy approaches (especially geoengineering) (Brown et al., 2006; Gardiner, 2007; Jamieson, 1996; Singer, 2006; Toman, 2006). Generally speaking, climate change is an ethical, as well as religious, issue because it poses questions on how we ought to live and how humans should value and relate to each other and non-human nature. In addition to insights from economics and natural science, moral and religious-ethical considerations form an important input for policymaking on complex and uncertain issues such as climate change (Hogue, 2007; Jamieson, 1992; Rolston, 2006).

Different religious views (or more generally, different philosophies of life) can lead to different approaches to environmental issues. One often-heard complaint, especially towards Judeo-Christian traditions, is that the classic 'dominion' argument (mankind transcends and has rightful mastery over nature) results in the abuse and destruction of nature (Greeley, 1993; Guth et al., 1995; ICT, 2006; Schultz et al., 2000; Trevors and Saier, 2006; White, 1967). One's view on the relationship between man and nature influences one's attitude towards ecology. A different, less

anthropocentric, approach to nature and religion (also included within Judeo-Christianity) would prove less destructive (White, 1967). Others point to 'End Times thinking' (dispensationalism) as an additional barrier to support for environmental policy (Guth et al., 1995). Presenting religious beliefs as the sole source of anti-environmental attitudes, however, seems too simplistic. Greeley (1993) and Schultz et al. (2000) argue that, while studies have indeed found a negative relation between Judeo-Christian beliefs and pro-environmental attitudes, this relation is often small and may be due to political and moral conservatism rather than religion itself. Nonetheless, different religious views do seem to be related to *what type* of concerns people hold. For example, Schultz et al. (2000) found that respondents who expressed more literal beliefs in the Bible scored lower on ecocentric environmental concerns, but higher on anthropocentric environmental concerns. No relation was found with self-reported pro-environmental behaviour. These different bases for environmental concerns could however result in different views on both the nature of an environmental problem, as well as the desirability of various policy strategies to counter it.

Considering the large influence of religion on public life in the United States, the strong focus on the ethical aspects of climate change in the religious debate, and the important choices that will need to be made in the coming years concerning international climate policy, it is interesting to explore the perceptions among religious groups on this issue. This study aims to provide an overview of the religious societal debate that is taking place among the US Judeo-Christian communities. What are their positions on climate change, what measures should (or should not) be taken to deal with it, and what moral and religious-ethical arguments form the foundations of these positions? Following from that, this paper presents some possible implications and lessons for policymaking.

## **2. Structure and methodology**

Different social understandings of the world lead to different social actions: within a particular worldview, some forms of actions become natural whereas others become unthinkable (Jørgensen and Phillips, 2002; Runhaar et al., 2006). This paper analyzes the views and positions of various religious groups on climate change and climate policy and the ways they give meaning to the issue. These matters are explored by means of argumentative discourse analysis (Fischer and Forester, 1993; Hajer, 1995, 2005; Jørgensen and Phillips, 2002; Majone, 1981; Runhaar et al., 2006). Argumentative discourse analysis explores patterns in written or spoken statements and related practices in order to identify the representations of reality that are employed. It also explores the social-political practices from which social constructs emerge and in which the actors are engaged. The meaning of the scientific evidence in a given context is analyzed within the context of the particular social practices in which the discourse is

produced. In this paper, we employ the instrument of value mapping and argumentative analysis to analyze the discourses of interest.

A Value Mapping and Argumentative Analysis (Fischer, 1995; Van der Sluijs et al., 2003) aims to analyze different positions in a debate in a structured way. Actors in a debate can agree or disagree on an issue on different levels. Four levels of agreement/disagreement are discerned: (1) the ideological view, (2) the problem setting and goal searching, (3) problem solving, and (4) outcomes and fairness. For each of these levels, the views and positions of actors are mapped and compared, i.e. whether there is agreement or disagreement, and why. The four levels form two themes: views on the problem (section 4) and views on the solutions (section 5), each with a fundamental and a practical layer (levels 1 and 4, and 2 and 3 respectively). The ideological view is the deepest level where disagreement can occur and can lead to very different views of whether there is a problem or what it is. One can hold the view that a radically different ideological starting point is required. Ideological argumentation focuses typically on ideology and alternative societal orders. On the next level, problem setting and goal searching, groups may agree on the existence of a problem, but not on identifying precisely what the problem is, how to formulate it, and what the end goal or solution point should be. On the level of problem solving, groups may agree on the existence of a problem and further agree on policy goals but disagree on the strategies and instruments required to reach the goal. Problem solving argumentation typically focuses on effectiveness, side effects, and efficiency of methods. At the last level where disagreement can occur, outcomes and fairness, groups often care about the fairness of solutions to problems, but can hold different views on what constitutes fair outcomes. For example, one can hold the view that the policy at hand does not serve the public interest or public wellbeing. Fairness argumentation focuses typically on public interest, unexpected societal side effects, and distributive justice.

This study centres on the societal debate on climate change among (Judeo-Christian) religious groups in the United States. It includes the recent discussions that have attracted widespread media coverage, as well as earlier and less visible initiatives. Broader issues, such as the debate in other countries, in other religions, general public perception, and general religious perceptions of ecology and nature (besides the views that were brought up in the discussion on climate change), are taken into account to a limited extent. These issues are used to position the debate in a broader context. The main scope of the study is an inventory of the various positions and arguments. An overview of the different stakeholders and institutional setting, and the extent and timing of the societal debate is also presented. The study does not assess the quality and scientific validity of the arguments and the processes and events that shape the debate.

The field of study was initially explored by examining online news coverage on the recent statement of the Evangelical Climate Initiative, and later broadened. Sources were collected

using internet search and snowball sampling, and include opinion documents, press releases, website statements and frequently asked question sections, speeches, blogs, and online newspaper articles. These documents originate from religious groups/churches, associations and umbrella organizations of such groups, religious environmental groups and platforms, and individual leaders. Sources were selected based on their accessibility, relevance, and coverage of opinions, religious groups, and topics within the debate. In total, approximately 100 documents have been selected and analyzed. The study is part of a large project on 'Technology and Religion' by the Netherlands Study Centre for Technology Trends (STT), for which an essay was written as a primer on the topic for an interested general public (Wardekker and Petersen, 2008). Therefore, public accessibility was an important criterion.

### **3. Participants in the religious climate debate**

The recent call by the Evangelical Climate Initiative (ECI) does not stand alone, and is not the first of its kind either. Similar calls and statements concerning climate change can be found originating from various Christian traditions in the United States, such as Evangelicals, Baptists, Catholics, Quakers, and umbrella organizations of multiple denominations, dating back to the early 90s (Wardekker and Petersen, 2008). Knickerbocker (1998) already describes a 'growing trend among faith groups to emphasize the environment', but apparently these initiatives never received much media attention (Hogue, 2007), at least until the recent revival of the debate. The majority of public statements originate from national associations of churches (e.g. the US Conference of Catholic Bishops) and national topical religious networks (e.g. the Evangelical Environmental Network). Media articles often quote the opinions of individual leaders in their own right (though their affiliation is usually mentioned). Regional associations and individual churches provide material as well. Besides calls for stricter climate policy, some other initiatives can be found that criticize these proposals. E.g. the Interfaith Stewardship Alliance (ISA) has published a response to ECI's 'Call to Action' (ISA, 2007). This counter-movement consists mainly of topical groups and individual leaders, usually connected to conservative religious organizations. It is however interesting to note that the evangelical proponents of stricter environmental policy also present themselves as 'biblically orthodox' (EEN, 2007) and religiously/politically conservative in general, apparently in response to 'identity framing' attempts describing (religious) environmentalism as spiritualistic and drawing connections with liberalism, 'new age' like ideas, or even nature worship (see e.g. EEN, 2007; Ekklesia, 2006; Hagerty, 2006; Harden, 2005; Sirico, 1997) (it should be noted that religiously inspired opponents of strict policy face similar identity framing attempts, referring to them as fanatics).

Climate change is also an issue in other arenas besides that of US Christian groups. Similar initiatives can be found in other countries, such as the United Kingdom, Australia and The Netherlands, as well as on an international level, most notably from the World Council of

Churches. It appears however, that there is not as much of an open debate between groups of religiously inspired proponents and opponents of strict climate policy, as is the case in the United States. Opinion pieces can be found from many other religions as well, e.g. Judaism, Islam, and indigenous religions. In the recent US debate, Jewish groups/leaders often cooperate with the Christians. And finally, climate change has been an issue in the 'general' public debate, i.e. general public opinion (which includes religious views), for many years. These other arenas are occasionally referred to in this paper to provide context.

#### **4. Views on the problem**

A considerable portion of the debate on climate change among religious groups in the United States deals with whether the issue is a problem, what the problem is exactly, and what goals should be set for the future. Differences in opinion range from more practical matters such as which aspects of climate change and climate policy are considered important, to fundamental matters such as the world we would want to live in and how it should be managed.

Most opinion documents that plea for stricter climate policy start with the statement that there is a scientific consensus on anthropogenic climate change, emphasizing certainty. A few sources treat uncertainties in a more open manner (e.g. USCCB, 2001). Furthermore, the consequences will be large and negative. Opponents of strict policy emphasize uncertainty, or sometimes claim certainty for the opposite. They see no consensus, only a limited and natural climatic change, and limited and not only negative consequences. Both parties refer to scientific reports, institutes, and (religious) scientists whom they consider reliable. In the recent debate, both groups have also actively formed coalitions with those scientists (e.g. Beisner et al., 2006; Harvard-CHGE and NAE, 2007; NAE, 2007; Spencer et al., 2005).

##### **4.1. Ideological view**

One of the most fundamental aspects of the debate on climate change among religious groups becomes apparent when examining their perspectives on why changing the climate through human activities is (or is not) morally unacceptable. The Evangelical Climate Initiative's 'Call to Action' states: 'This is God's world and damage we do to God's world is an offence against God Himself'. This opinion is connected with the commandment to 'love God and love what God loves' (ECI, 2006), gratitude for the gift of creation and passing this gift on to future generations. Most sources mention generically damage to the world, nature, or the natural system. A few others more specifically mention destruction of habitats, vanishing of species or ecosystems, and decline in biodiversity. These issues concerning the impacts of climate change on nature relate to the concept of 'stewardship', which is prevalent in all of the large monotheistic religions: mankind has the role to look after the wellbeing of the natural world. In the religious debate, care for the environment or climate is often referred to as 'creation care' or

'environmental/climate stewardship', avoiding the negative connotations that many evangelicals have with 'environmentalism' (e.g. Hedman in Harden, 2005; The Economist, 2007c). Both proponents and opponents of strict climate policy use and value this concept; both groups regard God as the owner of the world and mankind as a steward with the task to take care of nature. They also use similar imagery, describing the world as 'God's garden'.

While they use strikingly similar concepts and imagery, the interpretation of these concepts and images is very different, however. ECI's 'Call to Action' and similar initiatives argue that God created the earth as 'good' and that it is mankind's task to preserve 'God's good garden' (EEN, 1994), here referring to the wilderness. In contrast, their critics argue that mankind's task is to 'fill and subdue the earth' and to 'turn the wilderness into a garden' (Spencer et al., 2005), referring to a more 'landscaped' view of this garden. There are considerable differences in opinion on the relationships and roles of mankind, God, and nature. Opponents of strict policy tend to place mankind above nature and see nature's role more as something to serve mankind. While mankind should take care of nature, 'human beings come first in God's created order ... And that primacy must be given to human beings and for human betterment' (Land in Hagerty, 2006). Their discourses place mankind as a 'co-creator' and relate to human development and population growth as a blessing and mission rather than a threat. They argue that God would not have created nature so fragile that mankind could easily destroy it, and that God would not have intended healthy nature and human development to be incompatible. Proponents of strict policy on the other hand emphasize mankind's interdependence with nature, warning that the natural balance is threatened, and they see mankind as part of nature (reminiscent of many indigenous religions and eastern traditions, but similar thoughts are also expressed from e.g. Islam). Following this line of reasoning, some also relate protecting nature to the commandment to love one another: 'We must see the whole creation as our neighbor.' (ABC, 1991). Some discourses focus on development, overconsumption and wasting of resources as a threat to creation; one author even refers to this as 'decreation' (McKibben, 1999). Others express a more hopeful vision, posing (like their critics) that development and preserving nature are not incompatible, which is presented as a hope and incentive to improve.

#### **4.2. Problem setting and goal searching**

The religious deliberations frame climate change predominantly as a moral and religious-ethical issue. Three specific ethical themes are in the forefront of the discussion: the effects of anthropogenic climate change on nature (as described above), the implications for future generations (intergenerational equity), and the implications for the poor. The latter issue – impacts of climate change on the poor – is the most prominent moral theme in the religious debate. It is usually referred to as 'environmental justice', a matter of social justice. In general public perception, moral issues are highly important as well (Kempton, 1991; Jaeger et al.,

2000; Wardekker, 2004), and all three themes can be found in perception studies (see also e.g. Kempton, 1997; Leiserowitz, 2005, 2006; Lorenzoni and Pidgeon, 2006). However, unlike in the religious discourses, the care for future generations seems to be the most prominent factor (Kempton, 1991) (as is also apparent in 'An Inconvenient Truth'; Wardekker, 2007). The religious sources mention a host of effects that could be negative for humans (the poor and future generations), such as droughts, floods, heat waves, decline in food production, more intense hurricanes, famine, spreading of diseases, more environmental victims and refugees, and increased risk of violent conflict. Some sources also specifically mention negative effects in the United States, e.g. damage and victims due to natural disasters and national security risks due to increases in environmental refugees and conflicts elsewhere.

Effects of climate change on the poor are considered a problem because, as the 'Call to Action' states: 'we are called to love our neighbors, to do unto others as we would have them do unto us, and to protect and care for the least of these' (ECI, 2006). Most sources use the term 'the poor' in a generic way. Often, it seems to be applied to the poor in developing nations (i.e. relating to interregional equity), but sometimes it refers to the poor in the United States as well. Impacts of climate change on developing nations are seen as morally unacceptable, for two reasons. Firstly, the developing nations are harmed, and receive the most severe impacts, through a problem that up till now is caused mostly by the developed nations ('do unto others...'), appealing not only to harming others, but even stronger, to 'the rich' harming 'the poor'. An occasional source adds to this that this harm is done in the process of becoming even richer. Secondly, the statements remark that the developing nations are also the most vulnerable, and the least able to adapt to climate change. The vulnerability argument is also used in reference to the poor in the United States itself. Implications for future generations are seen as reason for concern, as the choices made today determine the world they will live in. Their chances should not be diminished, and the gift of creation should be passed on. Opponents of strict climate policy are present at this level of the debate only to a minor extent. They share the concerns for the poor (and future generations) with proponents of strict policy, but doubt that anthropogenic climate change will pose a significant threat. For as far as there is a problem, that problem is a lack of development, not the impacts of climate change. Developed nations, they state, are better able to adapt to climatic changes and weather extremes, and have more money to spend on the environment as well. The goals of proponents and opponents are very different: one group aims to limit anthropogenic climate change and therefore its impacts, and the other group aims to improve development and therefore increase societies' resilience.



## Religious opinions on climate change

We need to end the subsidies for, and increase the taxes on, fossil fuels so that their price will rise and alternative clean technologies will become competitive.

And we need to spread those clean technologies abroad, with a giant program of international aid and cooperation, so that the developing nations do not follow our energy path.

(McKibben, 1999)

Technological innovation and entrepreneurship can help make possible options that can lead us to a more environmentally benign energy path. Changes in lifestyle can ease the way to a sustainable and equitable economy in which sacrifice will no longer be an unpopular concept.

(USCCB, 2001)

However, concerns about climate change are frequently cited to justify policies that prevent poor countries from building fossil fuel power plants. ... A better approach would be to develop technologies that generate more energy, at lower cost and with fewer emissions – and export that technology to poor countries.

(Spencer et al., 2005)

So we here in America probably can do many things to exempt ourselves from the immediate consequences, but the front edge of disaster is most going to affect those who have the least.

(Hagerty, 2006)

Reducing greenhouse gas emissions also addresses another crucial issue important to America's religious community – energy dependence.

America needs to reduce its reliance on oil through the rapid adoption and encouragement of clean and renewable energy sources and new technologies.

(WAC, 2004)

Indigenous people have warned all along that European-style industrialization is devastating the natural balance.

The dominant culture has scoffed at these "New Age" prophesies, but they turn out to have been based on solid "scientific" experience.

(ICT, 2006)

The only "acts of God" left are earthquakes and volcanoes; those are still "natural disasters," but everything else is at least in part our handiwork. And that results in, and will increasingly bring, very different-feeling world.

(McKibben, 1999)

Figure 1. Examples of religious opinions on climate change.

## 5. Views on the solutions

The second theme of the debate on climate change among religious groups in the United States is how to cope with the issue. As with views on the problem, this question involves both practical matters, such as which policy strategies are deemed useful, as well as more fundamental matters, such as the fairness of these policy strategies and how society in general should respond to climate change.

### 5.1. Problem solving

The 'Call to Action' and many other sources start their discourse on the solutions with the statement that action is urgent, because impacts already occur and because choices made today fix emissions for some time due to the long life expectancies of technologies. They

present 'packages' of policy options, ranging from government regulations, and technological innovation, to adaptation, and behavioural changes.

Many sources, especially opinion documents, press releases, and newspaper articles, present generic ideas, such as energy efficiency, energy from renewable sources, technologies that emit little CO<sub>2</sub>, and hybrid vehicles (the latter being a more specific idea that seems popular). Other sources, often more educational documents aimed at their own communities, mention more specific options and present 'tips' and 'success stories' of e.g. companies, churches, and individuals. With regard to options for governmental action, the recent initiatives mainly point to 'market based cost-effective mechanisms' such as 'cap-and-trade'. The 'Climate Stewardship and Innovation Act' (most recently: Lieberman et al., 2007) by Senators McCain and Lieberman in particular is mentioned as a useful and important option. It reduces emissions through 'a business-friendly cap-and-trade program that would spur investments in energy efficiency and renewable energy, making our U.S. economy more efficient and reducing our dependence on foreign sources of energy' (EEN, 2005).

Religious communities see an active role for themselves as well. National and regional topical networks and church associations organize public campaigns, e.g. by releasing statements and attracting media attention and by developing commercials, and influence other actors by lobbying among companies and politicians, for example. They also prepare and distribute informational and educational materials on climate change and energy saving to local churches, so they can educate themselves and their members, and urge churches and religious leaders to set a good example. News articles and information documents note that (at least some) local churches have indeed taken this role upon themselves. E.g., the Maine Council of Churches notes: 'Churches across the state have stepped up to the challenge, carrying out energy audits, organizing special workshops and programs of worship focused on climate change, pledging to reduce their own contributions to global warming and making known their concerns to elected officials and the general public through letters, meetings, and articles in the media.' (MCC, 2007). Other interesting examples are the 'What Would Jesus Drive?' campaign, shareholders initiative 'Interfaith Center on Corporate Responsibility', and 'The Regeneration Project' with the 'Interfaith Power and Light' campaign with many religious green energy suppliers in multiple states (see e.g. Stults, 2006). Opponents of strict policy reject most policy proposals. The best way to cope with climate change, they suggest, is to decrease vulnerability through adaptation, economic development, and if emissions need to be reduced, through technological innovation.

## **5.2. Outcomes and fairness**

The critics of the recent evangelical initiative strongly oppose drastic steps to prevent/limit further climate change, also from the point of view of concern for the poor. These efforts are largely futile, costly, and divert resources from more beneficial uses. In addition, they argue that

strict climate policy will be very harmful for the poor, both in the US and in developing countries. Proponents of strict policy share these concerns, at least to some extent.

Opponents of strict policy note that they have the same motive for action (concern for the fate of the poor) and recognize the other religious initiatives as 'well-intended'. However, they state that 'It matters little how well we mean, if what we do actually harms those we intend to help.' (ISA, 2007). They argue that limiting greenhouse gas emissions, and reducing energy consumption to reach that goal, would require significantly increasing the costs of energy. This would slow economic growth and would also result in increasing prices for other goods and services, including basic necessities such as food, clothing, shelter, and heating/cooling. Furthermore, they pose that a call for strict policy (such as ECI's 'Call to Action') 'asks the poor to give up or at least postpone their claims to modern technology that is essential for a better future for themselves and their children' (Beisner et al., 2006: 14) by resisting the growing use of cheap (fossil) energy and, in general, dealing with developing nations through a form of 'eco-imperialism'. While the wealthy can afford such things, the burden would be borne most heavily by the poor. In the United States itself, their situation would worsen due to increased costs of living on an already limited budget, loss of jobs due to economic downturn, and limitations in using energy for essential things such as heating and air-conditioning (which would reduce their resilience against weather extremes). In developing nations, the poor would be harmed by a less healthy world economy and reduced availability of cheap, reliable energy sources. Their opinions on what could be done to responsibly cope with climate change vary from not obstructing economic growth, by keeping energy inexpensive, and adaptation strategies 'for whatever slight warming does occur' (ISA, 2006), to stimulating economic growth and innovation by promoting sustainable and efficient technologies. 'By exporting advanced technologies, developed nations would improve their environmental quality and enable their people to become wealthier, healthier and safer' (Spencer et al., 2005). Interestingly, the proponents of strict policy share these concerns. E.g.: 'Developing nations have a right to economic development that can help lift people out of dire poverty' (USCCB, 2001), and 'We must make a distinction between the 'luxury emissions of the rich' and the 'survival emissions of the poor'' (Hallman, 2005). They place the responsibility for preventing/limiting further climate change with the developed nations, and suggest limiting the environmental impacts of development – as did the opponents of strict policy - by sharing advanced technologies with the developing nations. Several sources also state that the rich have the responsibility (both on a social and individual level; ECI, 2006) to assist the poor in adapting to climate change. In the US opinion documents, this policy option does not take the foreground, but the notion is supported. On the international level, the World Council of Churches gives considerable attention to adaptation (see e.g. Robra, 2006). Few sources calling for strict policy specifically deal with the consequences of climate policy for the poor in the United States itself, although they are optimistic on the economic effects of policy

and sustainable technology. One source (QEW, 2007) does suggest increasing funds for the Low Income Energy Assistance Program.

## **6. Discussion and conclusions**

The issue of climate change is receiving an increasing amount of attention within religious communities in the United States and in the rest of the world. The Evangelical Climate Initiative's (ECI) 'Call to Action' and its follow-ups are recent examples, and have attracted considerable attention in the media. Calls to politics to take more notice of the issue originate from a multitude of religious convictions and movements. Some opposition to these initiatives exist as well. In the US, several Jewish-Christian groups have organized a counter-initiative to ECI, criticizing its views on climate change and climate policy.

The present study analyzed this debate by looking at published sources, focusing on Judeo-Christian groups in the United States. This limits the analysis mostly to the statements of religious leaders and figureheads on the topics of environment and climate change. An interesting question, however, would be to what extent these views are actually supported by their congregations. E.g. do the same perceptions of the issues of climate change and climate policy live in the religious community as a whole, how large is the group of religiously inspired proponents of strict policy, are there differences in perception between demographical groups (e.g. between urban and rural believers, the latter of whom may already have some type of land ethic), and how do they apply their beliefs in their daily lives? Surveys cited by several sources (e.g. EEN, 2005) show support for climate policy in the religious community, but these are fairly generic. Furthermore, do the awareness raising activities of churches (e.g. being an example, educational activities, etc.) actually result in behavioural changes, and to what extent has this religious debate permeated into entrepreneurial and policy communities? It would also be interesting to study perceptions in other countries and other religions. While no organized religiously inspired opposition to strict policy was found on the international level and a number of other countries that were briefly examined (and this finding was confirmed by other participants in the STT project), that does not mean that such opposition does not exist. Furthermore, how do religious communities in developing and newly industrialized countries, e.g. in Africa, Asia, or Latin America, perceive climate change and attempts to solve this issue (such as climate impacts, biofuel production/plantations, and development in these countries)? The perceptions on climate change among religions such as Islam (especially regarding its large influence in Asia and Africa, and increasing influence in Europe as well) and Hinduism (especially regarding its large influence in growing economies such as India) would be most interesting to study further as well. Harvard University's Forum on Religion and Ecology has performed similar studies on several religions regarding ecology in general in the past.

Religious groups in the United States frame the discussion on climate change and climate policy mainly as an ethical issue. Three specific ethical themes are at the forefront of the debate: the effects of anthropogenic climate change on nature (creation care, or environmental/climate stewardship), the implications for future generations (care for one's children; intergenerational equity), and the implications for the poor (environmental justice; interregional equity among other things). The implications of climate change – and climate policy – for the poor is the dominant theme. Proponents and opponents of strict policy employ the same concepts, images and motives in their discourses, but have very different interpretations of these things. Concerning the effects on nature, proponents state that God created the earth as 'good', and that mankind is part of nature and has the task to preserve this 'garden of God'. Climate change threatens creation and is therefore morally unacceptable. Opponents of strict policy place nature in a more serving position to mankind, who has the task to *turn* the earth into a 'garden'. Concerning implications for the poor, proponents of strict policy argue that the poor (particularly in developing countries) will face the most severe impacts of a problem that the rich have created, while they are the most vulnerable and least able to adapt. Developed nations have the moral duty to prevent this. They suggest various policy strategies, ranging from regulations to technology, adaptation and behavioural change. Recent initiatives favour cap-and-trade schemes in particular. Religious communities take an active role, by setting an example, educating their members and lobbying. Their critics however are concerned about possible negative effects of climate policy on the poor, both in developing nations and in the United States. They fear that the poor will have to bear the heaviest burden of such policies and press for increased resilience through economic (and technological) development instead. Proponents of strict policy share these concerns to some extent, and clearly place the responsibility for action with the developed world. A robust policy strategy (regarding support in the US religious community) would have to pay careful attention to the effects of both climate change and climate policy on the poor in developing countries and the United States itself.

While it remains to be seen what effects this religious debate will have on US climate policy, several aspects make it very interesting. Firstly, the recent initiatives are attracting attention in the media and among scientists, corporations, NGOs, et cetera; secondly, these initiatives do not stand alone; and thirdly, they are actively forming coalitions with these other parties. Calls for more strict policy emerge from many other sectors of society, ranging from politics to corporations, farmers, and 'security hawks' (The Economist, 2007a,b). Coalitions are formed, including between 'unlikely' partners (e.g. joint media campaigns by evangelicals, Fortune 500 companies, and environmental movement; Gunther, 2006). As such, the religious initiatives should not be seen in isolation, but as part as a larger societal debate on climate change, which could lead to greater pressure to participate in international climate policy. And fourthly, religious environmental initiatives seem to be making environmental care accessible to the conservative

side of the political spectrum. Where the conventional environmental movement is highly distrusted among evangelicals/conservatives, these church based initiatives seem to take upon themselves roles similar to environmental groups.

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### **References**

- ABC (1991) *American Baptist Resolution on Global Warming*. Valley Forge: American Baptist Churches in the USA.
- Beisner, E.C., Driessen, P.K., McKittrick, R. and Spencer, R.W. (2006) *A Call to Truth, Prudence, and Protection of the Poor: An Evangelical Response to Global Warming*. Burke: Interfaith Stewardship Alliance.
- Brown, D., Lemons, J. and Tuana, N. (2006) 'The Importance of Expressly Integrating Ethical Analysis into Climate Change Policy Formation,' *Climate Policy* 5: 549-52.
- Brown, D.A. (2003) 'The Importance of Expressly Examining Global Warming Policy Issues through an Ethical Prism,' *Global Environmental Change* 13: 229-34.
- Bush, G.W. (2007) *State of the Union 2007*. Washington: United States Capitol.
- ECI (2006) 'Climate Change – An Evangelical Call to Action'. Dallas: Evangelical Climate Initiative. URL (consulted December 2008): <http://christiansandclimate.org/learn/call-to-action/>
- EEN (1994) 'On the Care of Creation: An Evangelical Declaration on the Care of Creation'. Wynnewood: Evangelical Environmental Network. URL (consulted February 2007): <http://www.creationcare.org/resources/declaration.php>

- EEN (2005) 'Global Warming Briefing for Evangelical Leaders'. Wynnewood: Evangelical Environmental Network. URL (consulted February 2007):  
[http://www.creationcare.org/files/global\\_warming\\_briefing.pdf](http://www.creationcare.org/files/global_warming_briefing.pdf)
- EEN (2007) 'Frequently Asked Questions'. Wynnewood: Evangelical Environmental Network. URL (consulted February 2007): <http://www.creationcare.org/responses/faq.php>
- Ekklesia (2006) 'Spotlight to Fall on Evangelical Divisions over Climate Change,' *Ekklesia News Brief*, 7 October 2006. URL:  
[http://www.ekkleisia.co.uk/content/news\\_syndication/article\\_06107is\\_god\\_green.shtml](http://www.ekkleisia.co.uk/content/news_syndication/article_06107is_god_green.shtml)
- Fischer, F. (1995) *Evaluating Public Policy*. Chicago: Nelson-Hall.
- Fischer, F. and Forester, J. (eds) (1993) *The Argumentative Turn in Policy Analysis and Planning*. Durham: Duke University Press.
- Gardiner, S.M. (2004) 'Ethics and Global Climate Change,' *Ethics* 114: 555-600.
- Gardiner, S.M. (2006) 'A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption,' *Environmental Values* 15: 397-413.
- Gardiner, S.M. (2007) 'Is Geoengineering the 'Lesser Evil'?' Paper presented at the conference 'Ethics and Climate Change', University of Washington, Washington, 3-4 May 2007.
- Gore, A. (2006) *An Inconvenient Truth*. London: Bloomsbury Publishing (book) and Hollywood: Paramount Classics (movie).
- Greeley, A. (1993) 'Religion and Attitudes toward the Environment,' *Journal for the Scientific Study of Religion* 32: 19-28.
- Groenenberg, H. and Van der Sluijs, J.P. (2005) 'Valueloading and Uncertainty in a Sector-Based Differentiation Scheme for Emission Allowances,' *Climatic Change* 71 (1): 75-115.
- Grubb, M. (2006) 'Seeking Fair Weather: Ethics and the International Debate on Climate Change,' *International Affairs* (Royal Institute of International Affairs 1944-) 71: 463-96.
- Gunter, M (2006) 'Strange Bedfellows - Evangelical Christians, FORTUNE 500 Execs and Environmentalists Band Together to Curb Global Warming', CNN.com / FORTUNE, 8 February 2006, URL: [http://money.cnn.com/2006/02/08/news/pluggedin\\_fortune/?cnn=yes](http://money.cnn.com/2006/02/08/news/pluggedin_fortune/?cnn=yes)
- Guth, J., Green, J., Kellstedt, L. and Smidt, C. (1995) 'Faith and the Environment: Religious Beliefs and Attitudes on Environmental Policy,' *American Journal of Political Science* 39: 364-82.
- Hagerty, B.B. (2006) 'Evangelical Leaders Urge Action on Climate Change,' National Public Radio, 8 February 2006, URL:  
<http://www.npr.org/templates/story/story.php?storyId=5194527>

- Hajer, M.A. (1995) *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Oxford University Press.
- Hajer, M.A. (2005) 'Coalitions, Practices and Meaning in Environmental Politics: From Acid Rain to BSE,' in D.R. Howard and J. Torfing (eds) *Discourse Theory in European Politics*, 297-315. London: Palgrave.
- Hallman, D.G. (2005) 'Globalization and Climate Change'. Geneva: World Council of Churches. URL (consulted April 2007): <http://www.oikoumene.org/index.php?id=2610>
- Harden, B. (2005) 'The Greening of Evangelicals - Christian Right Turns, Sometimes Warily, to Environmentalism,' *Washington Post*, 6 February 2005, URL: <http://www.washingtonpost.com/wp-dyn/articles/A1491-2005Feb5.html>
- Harvard-CHGE and NAE (2007) 'An Urgent Call to Action: Scientists and Evangelicals Unite to Protect Creation'. Washington: Harvard Center for Health and the Global Environment, Harvard Medical School, and National Association of Evangelicals. URL (consulted May 2007): [http://chge.med.harvard.edu/media/releases/documents/call\\_to\\_action.pdf](http://chge.med.harvard.edu/media/releases/documents/call_to_action.pdf)
- Hogue, M.S. (2007) 'Global Warming and Religious Stick Fighting,' *Cross Currents* 57 (1): 116-21.
- ICT (2006) 'God and Man at NASA: A Change in Climate,' *Indian Country Today*, 10 February 2006.
- ISA (2007) 'An Open Letter to the Signers of 'Climate Change: An Evangelical Call to Action' and Others Concerned About Global Warming'. Burke: Interfaith Stewardship Alliance. URL (consulted May 2007): <http://www.interfaithstewardship.org/pdf/OpenLetter.pdf>
- Jaeger, C.C., Kasemir, B., Stoll-Kleemann, S., Schibli, D. and Dahinden, U (2000) 'Climate Change and the Voice of the Public,' *Integrated Assessment* 1: 339-49.
- Jamieson, D. (1992) 'Ethics, Public Policy, and Global Warming,' *Science, Technology & Human Values* 17 (2): 139-52.
- Jamieson, D. (1996) 'Ethics and Intentional Climate Change,' *Climatic Change* 33: 323-36.
- Jørgensen, M. and Phillips, L. (2002) *Discourse Analysis as Theory and Method*. London: Sage.
- Kempton, W. (1991) 'Lay Perspectives on Global Climate Change,' *Global Environmental Change* 1: 183-208.
- Kempton, W. (1997) 'How the Public Views Climate Change,' *Environment* 39 (9): 12-22.
- Knickerbocker, B., (1998) 'Worried Churches Chime In on Global-Warming Debate,' *Christian Science Monitor* 90 (190): 3.



- Kolmes, S.A. and Butkus, R.A. (2007) 'Science, Religion, and Climate Change,' *Science* 316: 540-2.
- Leiserowitz, A. (2005) 'American Risk Perceptions: Is Climate Change Dangerous?,' *Risk Analysis* 26: 1433-42.
- Leiserowitz, A. (2006) 'Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values,' *Climatic Change* 77: 45-72.
- Lieberman, J., McCain, J., Lincoln, B., Snowe, O., Obama, B., Collins, S. and Durbin, R. (2007) Climate Stewardship and Innovation Act of 2007. Bill S.280. Washington: The Library of Congress.
- Lorenzoni, I. and Pidgeon, N.F. (2006) 'Public Views on Climate Change: European and USA Perspectives,' *Climatic Change* 77: 73-95.
- Majone, G. (1989) *Evidence, Argument, and Persuasion in the Policy Process*. New Haven: Yale University Press.
- MCC (2007) 'Climate Change – Energy Conservation Makes Good Sense'. Portland: Maine Council of Churches. URL (consulted April 2007): <http://www.maineCouncilofchurches.org/climateneu.html>
- McKibben, B. (1999) 'Climate Change and the Unraveling of Creation,' *Christian Century* 116 (34): 1196-9.
- NAE (2007) 'Evangelical, Scientific Leaders Launch Effort to Protect Creation'. Press release, 17 January 2007. Washington: National Association of Evangelicals. URL: <http://www.nae.net/index.cfm?FUSEACTION=editor.page&pageID=413&idCategory=1>
- Nisbet, M.C. (2006) 'Evangelicals: Moral Urgency of Climate Change,' Framing Science blog, 8 February 2006, URL (original no longer available, consulted December 2006): <http://web.archive.org/web/20061028060921/http://framing-science.blogspot.com/2006/02/evangelicals-moral-urgency-of-climate.html>
- Nisbet, M.C. and Mooney, C. (2007) 'Framing Science,' *Science* 316: 56.
- QEW (2007) 'Global Climate Change'. Burlington: Quaker Earthcare Witness. URL (consulted April 2007): <http://www.quakerearthcare.org/InterestGroups/OtherAreasBeingExplored/ClimateChange>
- Robra, M., ed. (2006) 'Climate Change'. Geneva: World Council of Churches. URL (consulted May 2007): <http://www.wcc-coe.org/wcc/what/jpc/pa-booklet-climate1.pdf>
- Rolston, H., III (2006) 'Caring for Nature: What Science and Economics Can't Teach Us but Religion Can,' *Environmental Values* 15: 307-13.

- Runhaar, H., Dieperink, C. and Driessen, P. (2006) 'Policy Analysis for Sustainable Development: the Toolbox for the Environmental Social Scientist,' *International Journal of Sustainability in Higher Education* 7 (1): 34-56.
- Schultz, P.W., Zelezny, L. and Dalrymple, N.J. (2000) 'A Multinational Perspective on the Relation between Judeo-Christian Religious Beliefs and Attitudes of Environmental Concern,' *Environment and Behavior* 32: 576-91.
- Singer, P. (2006) 'Ethics and Climate Change: A Commentary on MacCracken, Toman and Gardiner,' *Environmental Values* 15 (3): 415-22.
- Sirico, R.A. (1997) 'The New Spirituality,' *The New York Times Magazine*, November 23, 1997.
- Spencer, R.W., Driessen, P.K., and Beisner, E.C. (2005) 'An Examination of the Scientific, Ethical and Theological Implications of Climate Change Policy'. Burke: Interfaith Stewardship Alliance. URL (consulted May 2007):  
[http://www.interfaithstewardship.org/pdf/ISA\\_Climate\\_Change.pdf](http://www.interfaithstewardship.org/pdf/ISA_Climate_Change.pdf)
- Stults, M. (2006) 'Religious Groups Becoming a Factor in Climate Policy Debate'. Washington: Climate.org, Climate Institute. URL (original no longer available, consulted April 2007):  
<http://web.archive.org/web/20070407060340/http://www.climate.org/topics/localaction/religion-climate-change.shtml>
- The Economist (2007a) 'Climate Change - The Greening of America,' *The Economist*, 25 January, 2007.
- The Economist (2007b) 'Green America - Waking Up and Catching Up,' *The Economist*, 25 January, 2007.
- The Economist (2007c) 'Religion and Environment: a Cross of Green,' *The Economist*, 1 December, 2007.
- Toman, M. (2006) 'Values in the Economics of Climate Change,' *Environmental Values* 15: 365-79.
- Trevors, J.T. and Saier, M.H. (2006) 'Our Common Biosphere: Climate Change, Wars, Religion and Microbes,' *Water, Air, and Soil Pollution* 171: 1-3.
- USCCB (2001) 'Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good'. Washington: US Conference of Catholic Bishops. URL (consulted December 2008):  
<http://www.usccb.org/sdwp/international/globalclimate.shtml>
- Van der Sluijs, J.P., Risbey, J.S., Klopogge, P., Ravetz, J.R., Funtowicz, S.O., Corral Quintana, S., Guimarães Pereira, Â., De Marchi, B., Petersen, A.C., Janssen, P.H.M., Hoppe, R. and

- Huijs, S.W.F. (2003) *RIVM/MNP Guidance for Uncertainty Assessment and Communication: Detailed Guidance*. Utrecht: Utrecht University and RIVM/MNP.
- WAC (2004) 'An Interfaith Call for Global Climate Justice'. Washington: Washington Association of Churches. URL (consulted May 2007): <http://www.thewac.org/ClimateJustice.asp>
- Wardekker, J.A. (2004) *Risk Communication on Climate Change*. Report no. NWS-E-2004-120. Utrecht: Department of Science, Technology, and Society, Utrecht University.
- Wardekker, J.A. (2007) *Moral and Religious-Ethical Discourse in Al Gore's 'An Inconvenient Truth'*. Unpublished working paper. Bilthoven: Netherlands Environmental Assessment Agency.
- Wardekker, J.A. and Petersen, A.C. (2008) 'Religieuze Posities in het Klimaatdebat in de VS,' in M.D.J. van Well (ed) *Deus et Machina: De Verwevenheid van Technologie en Religie*, 350-9. The Hague: Netherlands Study Centre for Technology Trends (STT).
- White, L., Jr. (1967) 'The Historic Roots of our Ecological Crisis,' *Science* 55: 1203-7.

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