Social policy is, however, already found at the level of the European Union. Any increased governance capacity developed by the European Union in response to CC issues might spill over into the area of social policy. In an earlier era, the European Union's developing governance capacity on economic issues eventually led it to take on issues in areas such as human rights, foreign policy, security, and environment, so this sort of spillover has historical precedents. It is harder to envisage parallel developments producing much in the way of social policy at the global level, though de Swaan (1992: 45–6) speculates that redistributive pressures may accompany the marginal increase in the bargaining power of poor countries associated with global environmental issues.

Conclusion

Any conclusions we might reach about relationships between CC and social policy can for the moment only be highly tentative and speculative. No state has yet made the sort of commitment to acting on CC in a way that would yield compelling evidence on the potential conflicts and compatibilities between environmental and social policy. It is also entirely possible that the state may not in the end be where the action is on CC: that international regimes, transnational governance networks, paragovernmental activity steered by the giant reinsurance companies, civil society, and various local and regional arrangements will loom larger. This very development may have profound implications for social policy that remains tied to the idea of a sovereign and autonomous state.

Acknowledgement

Thanks to Robert Goodin for his helpful advice.

The growing remit of the EU in climate change policy and citizens' support across the Union

Jürgen Gerhards and Holger Lengfeld

The European Union's environmental and climate change (CC) policy has developed remarkably since the 1970s. Environmental protection was not on the political agenda when the EC was launched in 1957, and only isolated environmental guidelines appeared until the early 1970s. However, environmental protection has become increasingly important since the 1970s (Barnes and Barnes, 1999; McCormick, 1999; Bailey, 2003). Since then the breadth of environmental regulations has increased substantially, and environmental protection has worked its way up the policy agenda and into the EU's primary law. Nowadays, environmental protection and policies on CC are as important as freedom of movement, the social market economy, and gender equality rights.

In this article, we first give a brief description of the emergence of EU environmental policy from the early 1970s until 2007. Second, using 2006 survey data, we analyse to what extent EU citizens support the idea of environmental protection and then explain attitudinal differences at the individual and country levels. We thus broach the way that citizen support may legitimize CC policies as part of a new political settlement, raised in the Introduction.

The emergence of the European Union's environmental policy

From its beginnings until 1985, environmental protection was neither included in the European Treaties nor defined in primary legislation as a European task (Gerhards and Lengfeld, 2008). The EU expanded its responsibility for environmental questions, however, by a strategy known as 'frame-bridging' (a concept developed by Snow in researching social movements; Snow et al., 1986). In the preamble of the Treaty of Rome, the EU states its objective to improve life and employment conditions for its citizens. The Treaty's creators intended the term 'life conditions' to be viewed in a strictly economic light. However, the 'frame-bridging' strategy enabled EU institutions to include, step-by-step, ecological 'living standards' as a relevant mission (cf. Johnson and Corcelle, 1989: 2ff.; Knill, 2003: 19 ff.). With the *Single European Act* of 1987, the Treaty for the European Economic Community expanded and separated environmental policy from other fields. Consequently environmental policy was given its own Directorate General, which served to underscore the important institutional position of the environment. The Maastricht and Amsterdam Treaties (1993 and 1999, respectively) further strengthened this delineation between environmental policy and other political arenas. These institutional developments culminated in the Reform

Treaty of Lisbon 2007. The Reform Treaty incorporates further agreements regarding climate change and the fight against global warming, which have been added as targets for the European Union. In addition, several provisions of the treaties have been amended to include solidarity in matters of energy supply and changes to the energy policy within the European Union.

One of the most important aspects of EU environmental policy concerns the community's enlargement. The EU has created a contingency between membership and investment in comprehensive environmental protection. The 1993 Copenhagen criteria insist that every acceding state has to accept the Acquis Communautaire before joining the Union. Chapter 21 of the Acquis covers environmental protection which provides the basis for examining acceding states' compliance with EU environmental policy.

Within recent years, climate policy has become an integral part of EU environmental policy (Anderson et al., 2007; European Commission, 2007a). The European Union has played a key role in the development of the two major treaties, the 1992 United Nations Framework Convention on Climate Change and its Kyoto Protocol, agreed in 1997. In 2000, the Commission launched the European Climate Change Programme (ECCP). The ECCP has led to the adoption of a wide range of new policies and measures. In its March 2007 meeting, the European Council made another far-reaching decision regarding the combat against CC. The European Council emphasized the EU's commitment to transform Europe into a highly energy-efficient, low greenhouse-gas-emitting economy. The Council defined binding targets by 2020 to: (a) reduce EU emissions by 20 percent regardless of progress made in post-Kyoto Protocol international negotiations; (b) make 20 percent of the EU's overall energy consumption come from renewable energy sources; and (c) decrease EU energy consumption by 20 percent as compared to projections.

In sum, environmental protection and climate policy have become permanent components of EU policies over the past 20 years. This does not imply that the EU has transformed into a community devoted to ecologically sound policies. Nevertheless, economic criteria have been increasingly supplemented by ecological standards that at times contradict the former. This interaction of ecological and economic objectives has taken the EU's ecological concept beyond abstract ideology into a number of concrete decisions.

Environmental attitudes of EU citizens

For every policy, however, it is important to question its support among citizens. To what extent do citizens from different EU countries support the idea of an EU with a high level of environmental and climate protection that may constrain purely economic criteria? Unfortunately there is no data set available which allows us to analyse attitudes towards EU climate policy. Cognitive dissonance theory (Festinger, 1957) has shown, however, that more specific attitudes – like attitudes towards climate policy – are strongly consistent with more general attitudes – such as attitudes towards environmental policy. This argument allows us to analyse a survey in which attitudes towards environmental protection have been asked, and to interpret the findings in the light of the EU's policy.

We have analysed the Eurobarometer (EB) 66.1 conducted in Autumn 2006, an up-to-date survey containing environmental questions conducted in all EU countries, the 2007 acceded states Romania and Bulgaria, and the candidate countries Turkey and Croatia (see European Commission, 2007b). To measure how European citizens accept the EU's normative idea of climate protection, we have chosen the following question posed to the respondents: 'Economic growth must be a priority for our (name of country), even if it affects the environment.' Respondents could choose from four answers: 'totally agree', 'tend to agree', 'tend to disagree', and 'totally disagree'. This item has two advantages. First, the respondents clearly have to speak out against the priority of ecological over economic claims. Compared with questions which solely ask for the acceptance of environmental protection, the item avoids answers biased by social desirability. Second, agreement or disagreement with the statement is connected with ecological or, alternatively, economic costs for which the individual or the community must pay. To measure the level of support for the EU's environmental policy, we combined the 'totally disagree' and 'tend to disagree' responses (see figure 1).

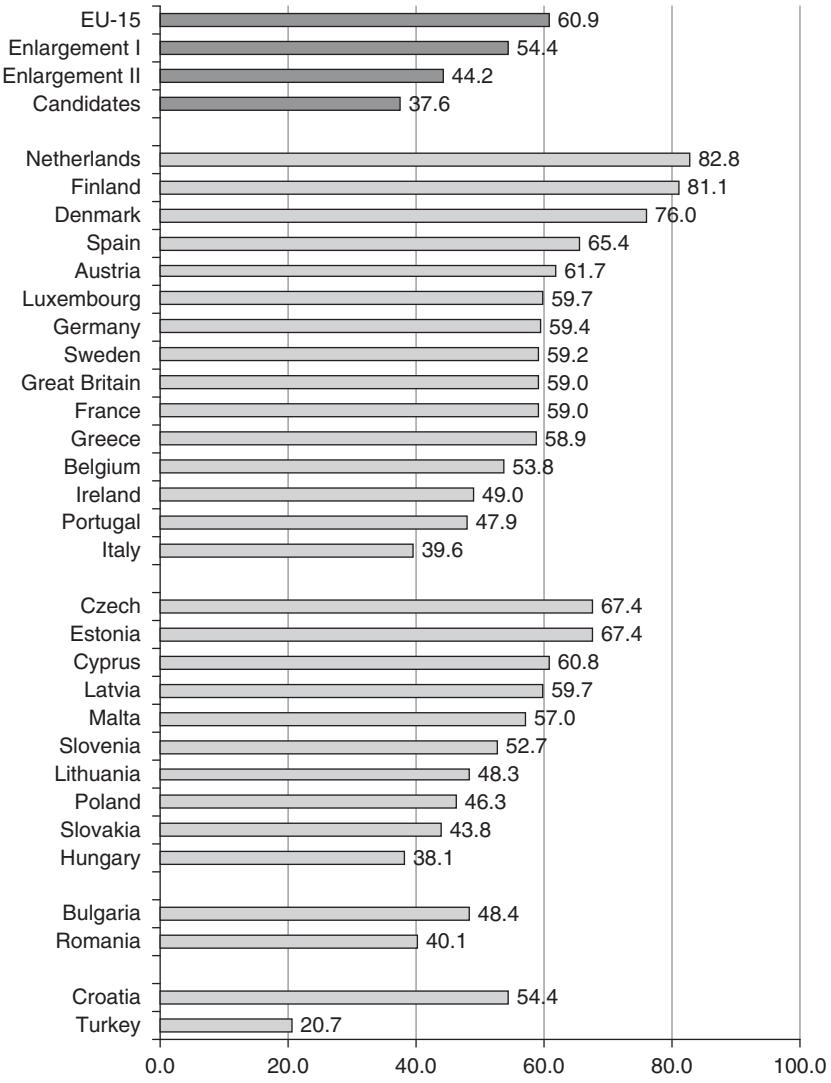

Figure 1 Percentage of citizens who *disagree* that economic growth must be a priority over environmental protection
Source: Eurobarometer 66.1.

In 18 of the 29 countries the majority of citizens agree to restrict economic growth in favour of environmental protection. There are, however, distinctions in the level of support between the four country groups. Some 60 percent of EU-15 citizens give precedence to environmental protection over economic growth; in the Accession I and II countries, the approval rating is 54 and 44 percent, respectively, and 37 percent in the two candidate countries. The Netherlands and the Scandinavian countries Denmark and Finland have the highest approval rating for environmental protection, whereas Romania, Italy, Hungary, and Turkey are at the end of the scale. In Turkey, only slightly more

Table 2 Explaining attitudes towards the environment: priority for economic growth over environmental protection (linear regression)

	Model 1	*Model 2*[b]	*Model 3*[b]	*Model 4*
Individual level				
Age (in years)	.053[c] (2.37)	.060[d] (3.13)	.068[e] (4.53)	.070[e] (4.91)
Education[a]	–.097[b] (–4.44)	–.082[e] (–4.04)	–.078[e] (–6.28)	–.072[e] (–5.58)
Political orientation (0 = Left; 10 = Right)	.060[c] (2.48)	.062[c] (2.43)	.046[c] (2.19)	.049[c] (2.23)
Country level				
Environmental quality (Environmental Sustainability Index ESI)		–.120[c] (–2.63)		–.061 (–1.45)
Degree of wealth and modernization (Human Development Index)			–.193[e] (–4.01)	–.172[d] (3.51)
R^2	**.014**	**.028**	**.050**	**.053**

Notes:
N = 10.011; stepwise extended linear regression models with robust standard errors in consideration of clusters depending on country membership (26 countries); without Luxembourg, Cyprus and Malta because of missing ESI-data. Standardized regression co-efficients are indicated; t-values in brackets.
[a] In EB 66.1, education is measured by the year of stopping full-time education.
[b] Because the macro factor ESI and HDI are correlated (r = .36), we have calculated two separate models.
[c] $p_t < .05$.
[d] $p_t < .01$.
[e] $p_t < 001$.
Source: Eurobarometer 66.1.

than 20 percent of the respondents disagreed that economic growth should have priority. Italy stands out in the EU-15 group for its lack of support for this sentiment.

Explaining attitudes towards the environment

We consider five factors affecting attitudinal differences at the individual and country levels (for more detailed information see Gerhards and Lengfeld, 2008):

- Income and modernization, as measured by the Human Development Index (HDI) (Diekmann and Franzen, 1999; Franzen, 2003);
- Ideology and beliefs, on a left/right continuum (Preisendörfer, 1999);
- Existing environmental conditions (Dunlap, 1994);
- Citizen cohort groups, measured by age (Buttel, 1979; Mohai and Twight, 1987; Greenbaum, 1995);
- Education level (Dietz et al., 1998).

Table 2 shows results of a linear regression analysis based on the Eurobarometer data described above. The results confirm most of our hypotheses.

The younger the respondent, the longer their time in the educational system, and the more they hold leftist political orientations, the more they speak out against the domination of economic over ecological claims. Additionally, Table 2 shows that support for economic growth is greater the lower the level of a country's wealth, measured by HDI, and its level of environmental quality; the latter effect is not significant in the last model, however. Furthermore, a comparison of the independent variables' standardized coefficients shows that the level of wealth and modernization of a country has the strongest effect on the respective citizens' support for environmental protection.

Conclusion

One can conclude from our findings that new EU initiatives regarding environmental protection and combating CC will find support from a majority of the citizens of the European Union. Citizens of

EU-15 countries, excepting Italy, show on average higher levels of support for the environment to take precedence over economic claims than citizens in Accession I and II country groups and in Turkey. If our causal analysis is correct, in the long run this difference could decrease if the expected economic modernization in the new member states proceeds (Gerhards, 2007; 2008). There is an implicit relationship here between support for social policy and environmental protection. The wealthier countries in Europe exhibit higher social expenditure rates. In addition, we have seen that Denmark, Finland and the Netherlands (i.e. countries with strong welfare states) exhibit the highest approval rating for environmental protection. These results support the suggestion made by Meadowcroft and Dryzek (above) who state that there might be no principle contradiction between environmentalism and welfare state attitudes.

There is thus evidence that the recent astonishing surge in the European Union's environmental and CC policy has legitimacy with the European public. Which is cause and effect, however, is a further research question we do not address here.

A note on the distributional effects of carbon taxes in the EU

Anil Markandya and Ramon Arigoni Ortiz

As outlined in the Introduction, climate change (CC) may exacerbate social inequalities. Carbon taxation, for example, may affect certain social groups more than others; for instance, lower-income households are likely to suffer a higher burden in their budgets when energy prices increase due to taxation. However, such negative impacts of taxation can be reduced if the revenue generated by the energy taxes is efficiently applied by the government in order to simultaneously compensate those more vulnerable groups (i.e. neutral tax reform).

Distributional impacts of carbon taxation in Europe

The distributional impacts of a carbon tax will depend essentially on three factors: (a) how much of the tax is passed on in the form of higher energy and other prices; (b) how the revenues are used by the government to reduce other taxes or to support compensatory programmes to help those facing fuel poverty, for example; and (c) the existing arrangements in the welfare systems to address concerns of fuel poverty.

Several studies have investigated, in the context of the European regulation, whether energy/carbon taxes are regressive; that is, whether households with lower (disposable) income pay a higher share of their budget than those with higher income. For example, Barker and Kohler (1998) considered the distributional effects of imposing additional excise duty on energy products according to carbon content in 11 EU member states, which would enable the EU to achieve the target of reducing 10 percent of carbon emissions by 2010. The authors concluded that the changes in the economies would be weakly regressive for nearly all the member states in the study (EU-15 without Greece, Austria, Sweden and Finland) if revenues were used to reduce employers' taxes; but they would be strongly progressive if they were given back as lump-sum payments to households. Similar results were found by Smith (1992) and Symons et al. (1997), who examined the income distributional impacts of carbon taxes in Germany, Italy, Spain and the UK.

A recent study by Wier et al. (2005) examined the direct (taxes imposed on households) and indirect (taxes imposed on industry indirectly affecting households through increases in prices) distributional consequences of Danish CO_2 taxes on industry and households. It differs from other studies by using an input–output analysis combined with a tax matrix and information about household characteristics, estimating the actual direct and indirect tax payments by households for different types of commodities. The distributional effect of energy taxes were examined as the tax payments relative to annual disposable income. The authors concluded that tax payments increased with income, but constituted a smaller share of the disposable income as income grew, characterizing a regressive tax.

Speck (1999) reviewed several studies which analysed the distributional implications of implementing energy/carbon taxes and concluded that the effects tend to be at least mildly regressive in many OECD countries, although there was some evidence that such effects could be progressive in developing countries. Repetto and Austin (1997) claimed that '… the disproportionate impact of a carbon tax on