

Viewpoint

Articles 4.8 and 4.9 of the UNFCCC: adverse effects and the  
impacts of response measures

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**Abstract**

Articles 4.8 and 4.9 of the United Nations Framework Convention on Climate Change (UNFCCC) and Article 3.14 of its Kyoto Protocol require parties to take measures to minimise the adverse effects of climate change on developing and least developed countries (LDCs). The Alliance of Small Island States (AOSIS) argue that this should mean assistance for capacity building to help them adapt to a changing climate. Articles 4.8 and 3.14 also require parties to take measures to minimise the impacts of emission reduction measures on energy exporting countries. The Organisation of Petroleum Exporting Countries (OPEC) countries argue that this should mean assistance to compensate for lost oil revenues. This paper explores the dimensions of the adverse effects/impacts issue. It explains how, in arguing that progress on Articles 4.8, 4.9 and 3.14 be equal to progress on the issue of assistance to compensate for lost oil revenues, OPEC countries obstruct progress on assistance to developing and LDCs for adaptation to climate change. This suggests that tacit G77/China support for OPEC's position may ultimately not be in their best interests. The paper discusses the outlook for the adverse effects/impacts of response measures issue. © 2002 Elsevier Science Ltd. All rights reserved.

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**1. Introduction**

The United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol received a major breakthrough with the adoption of the Bonn Agreement and the Marrakech Accords.

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Nonetheless, there are still tensions between means to minimise the adverse effects of climate change on vulnerable countries (adverse effects) and means to minimise the impacts of efforts to reduce emissions on the economies of energy exporting countries (impacts of response measures). This issue has been described by the first Executive Secretary of the UNFCCC as ‘one of the most critical aspects’ of the climate change negotiations (Capdevila, 2000).

Negotiations on the adverse effects/impacts issue revolve around Articles 4.8 and 4.9 of the UNFCCC and Article 3.14 of its Kyoto Protocol. This paper focuses on two key actor groups in these negotiations: the Alliance of Small Island States (AOSIS) and the Organisation of Petroleum Exporting Countries (OPEC). Both groups are members of the broader G77/China grouping which encompasses 130 developing and least developed countries (LDCs). AOSIS and LDCs are seeking assistance to help them to minimise the adverse effects of climate change. OPEC countries believe that policies and measures to implement the Kyoto Protocol in developed countries (such as a carbon tax) will reduce revenues from oil exports and so argue that they should receive assistance to compensate for these losses. This paper explores the dimensions of the adverse effects/impacts issue.

## **2. The adverse effects/impacts issue in the UNFCCC and the Kyoto Protocol**

Action to tackle the problem of climate change was formalised with the adoption of the UNFCCC in May 1992. As of 7 September 2000, all of the 43 AOSIS member countries (excluding the four observing countries) have ratified the UNFCCC, as have 10 of the 11 OPEC member countries (Iraq has not). The ultimate objective of the UNFCCC is the ‘stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’ in a time frame ‘sufficient to allow ecosystems to adapt naturally. . . and to enable economic development to proceed in a sustainable manner’ (Article 2).

The climate regime is for the most part based on the consensus of all parties. This stems from a lack of agreement about the rules of procedure with regard to decisions such that a de facto process has emerged whereby objections to a decision are frequently vetoes. At times, however, the regime has used a consensus minus-X voting procedure and there are examples where small dissident groups’ objections have been overridden in final agreements (Kassler and Paterson, 1997; Oberthur and Ott, 1999). Coalition building is, therefore, essential for efficacy in climate negotiations, but how many parties are required for a successful veto of an agreement remains unclear. In the case of the objections of OPEC countries discussed in this paper, it is the tacit support they receive from the larger G77/China grouping that allows OPEC, at times, to be an effective actor in the regime.

Since the UNFCCC entered into force, there have been seven meetings of its supreme body—the Conference of Parties (COP). At the third COP (COP-3) in 1997 the Kyoto Protocol was adopted. It sets legally binding targets for greenhouse gas emissions reductions or limitations on 38 developed and ‘economies-in-transition’ countries listed in its Annex B. The Kyoto Protocol will enter into force 90 days after 55 parties to the Convention, including parties accounting for 55% of Annex I 1990 emissions, have ratified it. As of 11 December 2001, 17 AOSIS member countries have signed and ratified the Kyoto Protocol. Of the OPEC countries, only Indonesia has signed the Kyoto Protocol and none have ratified. Thus, far negotiations on Articles 4.8, 4.9 and 3.14 have occurred in the same contact group convened by the subsidiary bodies to the UNFCCC. We next look at each article in more detail.

### 3. Article 4.8

Article 4.8 is the key to the adverse effect/impacts problem. It commits parties to give: “full consideration to what actions are necessary. . . including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures, especially on small island countries. . . . countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products”.

The salient features of this article are its reference to developing countries, its explicit mention of both small island developing states (SIDS) and energy exporting countries, and its compacting of the two issues of ‘adverse effects’ and ‘impacts of response measures’. Thus, there is a conflation of issues within Article 4.8 in that the Convention is necessary to avoid the adverse effects of climate change, but at the same time its implementation should not impact on energy exporting countries. The inclusion of Article 4.8 in the UNFCCC was required by OPEC countries in exchange for their support for the Convention.

#### 3.1. *Adverse effects on small island states*

There is a strong consensus among scientists that unless emissions of greenhouse gases are reduced SIDS will experience losses of land, economic losses, cultural disruptions and some may ultimately cease to be habitable (Nurse and Sem, 2001). There is also strong consensus that existing concentrations of greenhouse gases have already ‘committed’ the world to a certain degree of future change regardless of future efforts to reduce emissions (Jones, 1999).

The serious consequences climate change poses for SIDS gives them moral leverage in the climate regime; no less than their culture and sovereignty is at risk (Barnett and Adger, 2001). Under Article 4.8, AOSIS is seeking assistance for adaptation to the adverse effects of climate change, including:

- enhancing capacity for monitoring, systematic observation and vulnerability assessment;
- building capacity in environmental management and integrated assessment;
- building capacity in hazards planning and management;
- identifying and facilitating adaptation options when impacts are understood and measures are feasible;
- funding and technology transfer to LDCs to help manage adverse effects.

(ENB 12[159], FCCC/SB/2000/12, FCCC/SB/1999/MISC.13).

#### 3.2. *Impacts of response measures on OPEC*

Oil consumption is responsible for some 25% of greenhouse gas emissions, so efforts to reduce emissions would seem likely to effect the market for oil. It is thought that implementing the Kyoto Protocol will require a carbon tax (or equivalent) in Annex B countries which account for more than 60% of world oil consumption and this will raise the price of oil and therefore, reduce demand there. Further, if the principle mechanism by which Annex B countries reduce emissions is through a carbon tax, then this tax wedge may increase the ‘rent’ that governments in energy importing countries have in the oil

market, transferring wealth from oil producers to consumers (Mabey et al., 1997; p. 274). To put this in perspective, the G7 countries (US, Canada, Japan, Germany, Italy, Britain and France) already earn some 70% more income from oil taxes than OPEC countries earn from petroleum exports (OPEC, 2001). So, both through reduced demand, reduced price and reduced market rent it is thought that implementation of the Kyoto Protocol will reduce oil export revenues.

OPEC argues that, among a variety of impact-minimising measures, the text on Article 4.8 should include monetary compensation for lost oil revenues. They advocate ‘equal progress’ in negotiations on both aspects of Article 4.8, effectively reducing progress on measures to avoid adverse effects to the same level of progress on assistance to compensate for the impacts of response measures. As a result, Annex B parties approach both issues with much caution.

In addition to monetary compensation, specific impact-minimising measures that OPEC countries seek to have implemented through the Convention and Protocol include:

- removal of subsidies on coal production and of taxes on oil consumption in developed countries;
- tax restructuring in developed countries to reflect the carbon content of fuels;
- measures to discourage the production of fossil fuels within developed countries;
- investment to help oil exporting economies to diversify sources of income;
- increased use of carbon ‘sinks’ to offset the reductions required through less fossil fuel use;
- finance and technology to support projects related to CO<sub>2</sub> storage and less wastage in energy extraction and delivery.

(ENB 12[159], FCCC/SB/1999/9, FCCC/SB/1999/MISC.13).

Knowing that monetary recompense by Annex B parties is infeasible, OPEC have maximised assistance of other kinds. For example, they have gained assistance for economic diversification and for energy taxes at the source of production rather than at the point of consumption. Such alternative options are more likely to be accepted by the developed country parties.

OPEC has strategic support for its position from within G77/China. It is not only SIDS’ and LDCs’ adaptation needs that OPEC’s negotiating tactics obstruct, but also the adaptation needs of all developing countries, especially those identified in Article 4.8, including: countries prone to natural disasters and those liable to drought and desertification, and countries with low-lying coastal areas, arid and semi-arid areas, forested areas and fragile ecosystems including mountainous ecosystems. This encompasses nearly all countries within G77/China. Thus, the G77/China countries’ support for OPEC’s demands comes at a direct cost to themselves through the loss of potential funding and technology to assist with adaptation.

The issue is not entirely a function of intra-G77/China differences. The EU and Umbrella Group countries need to show demonstrable progress on assistance to Article 4.8 (and 4.9) countries. The prospect of genuine assistance may catalyse a firmer position from G77/China on the adverse effects/impacts of response measures issue.

#### **4. Article 4.9**

Article 4.9 commits parties to ‘take full account of the specific needs and special situations of the LDCs in their actions with regard to funding and transfer of technology’. This article, therefore, explicitly refers to least developed nations as distinct from ‘developing’ nations mentioned in Article 4.8. The inclusion

of Article 4.9 was at the insistence of the LDCs (of which 10 are SIDS), particularly those in Africa, as a means to distinguish their particular circumstances from other developing countries.

## **5. Article 3.14**

Article 3.14 is the major adverse effect/impacts clause of the Kyoto Protocol. This article clearly demonstrates the global nature of the agreement, which takes developing countries' concerns into account, particularly those of OPEC. Article 3.14 goes beyond Articles 4.8 and 4.9 in that it requires developed countries to 'strive to implement' their Kyoto commitments 'in such a way so as to minimise adverse social, environmental and economic impacts on developing country parties', particularly those identified in Articles 4.8 and 4.9 of the Convention. It commits Annex I parties to 'consider' actions to minimise the adverse effects and the impacts of measures and policies they pursue to implement their Kyoto targets.

Although Article 3.14 is contained within a separate legal document from the UNFCCC, traditionally negotiations have addressed both. The particular identification of developed countries as the source of minimising activities in Article 3.14 makes it more important to OPEC countries because it is these countries that are required by the Protocol to reduce emissions and these countries are the largest consumers of OPEC oil.

Neither Articles 4.8 and 4.9, nor 3.14 mention the issue of monetary compensation. There is no obligation on parties to pay compensation for any losses arising from the impact of response measures, nor, by the same token, is there any obligation for payment of compensation for losses resulting from the adverse effects of climate change. It is not impossible that under the provisions for further action and review in both the Convention and the Protocol compensation could formally be put on the agenda. However, it is questionable that compensation exists as a general principle of international law as argued by OPEC (Brack et al., 2000; Kassler and Paterson, 1997). Further, the extent of lost revenues to be compensated would be impossible to define with certainty. This is because to ascertain how much was lost requires knowledge of how the world oil market would have operated without implementation of the Protocol—this is unknowable in detail (Kassler and Paterson, 1997). One outcome of the 13th meeting of the subsidiary bodies is a cursory discussion of the methodology necessary for assessing the impact of response measures on oil export revenues (FCCC/SB/2000/CRP.18: 9).

## **6. The state of negotiations**

At the COP-3, when the Protocol was adopted, the parties decided to launch a process to identify actions needed to meet the needs of those developing countries specified in Articles 4.8 and 4.9 (UNFCCC, 2000). A work programme was adopted at COP-4 which was intended to culminate at COP-6, at which time Article 3.14 was also to be considered, effectively creating a convergence of action on all three articles. In March 2000, there were two separate UNFCCC subsidiary body workshops on Articles 4.8 and 4.9—one on adverse effects and one on the impact of response measures (ENB 12[125])—to the reluctance of many OPEC members who wanted a single workshop.

In the lead-up to COP-6 at the 12th meeting of the UNFCCC subsidiary bodies (SB-12) in June 2000, negotiations in the adverse effects/impacts contact group were tense, with Annex B countries arguing

against the demands of OPEC countries. This tension spilled over into the working group on mechanisms where Saudi Arabia sought adjournment of the meeting as a reprisal for the obstructive position of Annex B countries on the compensation issue (ENB 12 [133]). The *Earth Negotiations Bulletin* reported that the delegates saw this as a manifestation of “the difficulties in moving forward on a ‘package’ given some parties’ insistence on simultaneous progress on all issues” (12 [133]: 2).

The issue of adverse effect/impacts was seen as a ‘crunch issue’ for COP-6 (ENB 12[159]). However, little progress was made. The UN’s legal advisers recommended that separate decisions be taken on Articles 4.8 and 4.9 as distinct from Article 3.14, but the parties were unable to agree whether one or two decisions should be taken (ENB 12[154]). Discussion on an adaptation fund linked to Articles 4.8 and 4.9 was passed on to the working group on financial mechanisms. OPEC argued that Article 3.14 be enforceable, a move resisted by most developed countries and small island states (ENB 12[154]). In essence, the OPEC countries were seeking not just compensation, but that this payment be legally enforceable through the Protocol. On most of these issue the negotiations were described as ‘deadlocked’ (ENB 12[162]). Other outstanding issues on the adverse effects/impacts relate to funding, the issue of other measures to reduce the impacts of response measures on energy exporting countries and linkages between Article 3.14 and other articles on reporting, review and accounting within the Protocol (ENB 12[163]: 8).

At COP-6.5 in Bonn, considerable progress on these articles was achieved. Under much political pressure and in the absence of the US, parties managed to adopt the Bonn Agreement (Decision 5/CP.6 in FCCC/CP/2001/L.6), which contains several adverse effects/impacts provisions. These include the establishment of a special climate change fund that will fund inter alia adaptation, technology transfer and activities to assist developing countries to diversify their economies as in Article 4.8. It decided that COP-8 will consider the implementation of insurance related actions to meet the specific needs of developing countries with respect to adverse effects/impacts. Also relevant is the establishment of a LDC fund (under the Convention) and an Adaptation fund (under the Kyoto Protocol; financed by 2% of the share of proceeds on Clean Development Mechanism projects), which will support the preparation of National Adaptation Programmes of Action (NAPA) as well as concrete adaptation projects in developing countries. These three new funds will be managed by the Global Environment Facility, much to the discontent of the G77/China. The EU, Canada, Iceland, New Zealand, Norway and Switzerland pledged to contribute US\$ 450 million annually by 2005 (with this level to be reviewed in 2008) for the three funds.

With respect to Article 3.14, a significant victory was achieved by OPEC. Under the Bonn Agreement, Annex I parties will be required to provide annual information on how they are striving to minimise adverse social, environmental and economic impacts on developing countries as they seek to fulfil their Kyoto commitments. It was also decided that this information would be considered by the facilitative branch of the compliance committee of the COP/MOP. OPEC countries, headed by Saudi Arabia, wanted this matter to be dealt with by the enforcement branch of the COP/MOP making it an eligibility requirement to use the Kyoto mechanisms. However, developed countries did not allow OPEC to go this far. Annex I parties in a position to do so will perform inter alia some of the actions sought by OPEC and described earlier. Most of the details regarding the adverse effect/impacts issues were settled in Bonn, but it was only at COP-7 in Marrakech that the legal decisions were adopted. While adverse effects/impacts issues were not a central focus at Marrakech, some Umbrella Group members have argued against a legally binding compliance system because it would mean they would be bound by Article 3.14. This issue was postponed until the Kyoto Protocol enters into force (Dessai, 2001).

## 7. Outlook

Though negotiations over Articles 4.8, 4.9 and 3.14 advanced substantially in the last COP, we suspect it will remain a sticking point for years to come. OPEC's claims, particularly for compensation, are opposed because they could entail financial payments for losses which will be virtually impossible to quantify and by AOSIS because they potentially divert funding and technology transfer away from developing and LDCs, as well as stalling progress on implementation of the Kyoto Protocol.

We present a modest proposal that could potentially ease future negotiations on the adverse effects/impacts of response measures issue. First, there could be some consideration by the COP as to the way the ultimate aim of the Convention and its principles might inform the adverse effects/impacts problem. That both kinds of adverse effects are mentioned in Articles 4.8 and 3.14 does not necessarily mean that they are of equal importance. The ultimate aim of the convention is to stabilise greenhouse gas concentrations to avoid danger—it is, therefore, ultimately about emission reductions to avoid 'adverse effects'. So, while it is reasonable that parties give full consideration to minimise the impacts of such action on energy exporters as Article 4.8 requires, this is arguably secondary to the Convention and Protocol's ultimate objective. This is a matter that the COP might give some consideration to and it is a principle that could guide G77/China in its deliberations on Articles 4.8, 4.9 and 3.14.

Second, a principle that informs the UNFCCC is that more capable states shall accept more duties (Biermann, 1999), this is reflected in Article 3's reference to common but differentiated responsibilities and respective capabilities. This principle stems from the desire of developing countries for Annex B countries to accept more of the mitigation burden because they are more capable of doing so. However, the principle might also be applied to the adverse effects/impacts issue. Whereas SIDS and LDCs have little financial and technological capacity to manage the impacts of climate change, OPEC countries have the means to manage the impacts of response measures through their ability to act as a cartel and the potential for self-supported economic diversification to ease losses in the oil sector. So, if the principle of more capable states was applied to the adverse effects/impacts case, OPEC countries' greater capabilities to manage their burden implies that they might give ground to accommodate progress on issues of concern to SIDS and LDCs. This consideration could guide G77/China's deliberation on the adverse effects/impacts of response measures issue.

Ultimately, however, the solution to the problems with Articles 4.8, 4.9 and 3.14 rests mostly with G77/China. In the past, this heterogeneous group has had to find compromises amongst the extreme positions of its AOSIS and OPEC subgroups. It is not clear whether G77/China acts as a restraining force, leading OPEC to compromise or whether it legitimises their concerns. We suggest that G77/China revisit its stance in light of many long-term aspects of the climate regime, which in our opinion could potentially and harmfully disaggregate the group in the future. The issue of funding is most important here. It is still not clear how the financial pledge by some developed countries will be divided amongst the different funds. OPEC will surely support the special climate change fund, while LDCs and SIDS will be supportive of the Adaptation and LCD funds. This is likely to create a major battle within G77/China which our modest proposal could lessen by prioritising the funding according to the two criteria described. Furthermore, G77/China has to acknowledge that some of its members will have to join the Kyoto regime in subsequent commitment periods. Further efforts by OPEC to push for monetary compensation for the impacts of response measures will likely encounter increased resistance from these members of G77/China in addition to the current resistance of developed countries.

Even though recent developments of the adverse effect/impacts of response measures issue have the potential to create an impasse at a future date, credit must be given to OPEC and AOSIS negotiators. At times, it seems surprising how a small coalition of countries has forced powerful developed countries to adopt provisions that they find uncomfortable. This clearly shows that the climate regime is a result of a complex multilateral global process.

The outcomes of the Marrakech meeting will surely keep researchers occupied for years to come. Methods and tools to evaluate impacts and adaptations will have to continually be improved, while methodologies on the assessment of adverse social, environmental and economic impacts on developing countries will have to be developed. IPCC and SBSTA will carry out much of the review work, which will likely become highly politicised.

## **8. Conclusions**

Recent developments in the climate negotiations have advanced considerably the issue of adverse effect/impacts of response measures. Nevertheless, potentially dangerous problems are eminent for the regime and in particular for G77/China. OPEC's demands for assistance to compensate for lost oil revenues and their strategy of equal progress on all issues under negotiation impedes progress on adaptation in developing and LDCs. G77/China needs to rethink its strategy in light of its long-term goals by prioritising adverse effects over the impact of response measures and considering the relative capabilities of countries included in Articles 4.8, 4.9 and 3.14. Only they can resolve the impasse.

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