

Appendix C: International Climate Change Regime Simulation Proposal

CMRA Research Project Proposal

We propose creating a multi-player simulation of the international climate change regime. In this simulation, groups of individuals representing the range of actors engaged in the regime would interact both directly and through a network of computers to replicate the decision-making processes each would go through given the opportunities presented by and the set of rules in place or being considered for various regime institutions. The purpose of this simulation is to create a laboratory setting in which the ramifications of and interactions among various sets of rules being considered under the FCCC and the KP could be examined.

The simulation could be developed as a series of modules, each of which would replicate the processes occurring within the major FCCC/KP institutions and some of the major developed and developing countries (Fig. 1). These modules could include:

- The proposed emissions trading mechanism,
- The proposed Clean Development Mechanism board,
- The proposed compliance mechanism (enforcement and facilitation branches),
- The Conference of the Parties itself,
- A number of Annex 1 countries (e.g., the United States, Japan, Netherlands, Germany, Australia),
- Regional bodies such as the European Commission,
- A number of large developing countries (e.g., China, India, Brazil), and
- A number of small developing countries (e.g., Zimbabwe, Marshall Islands).

Within each module, roles would be created for the major actors or sets of actors participating in the various processes taking place within that module. For example, as shown in Figure 2, a module for a large OECD country might contain roles for:

- Large and small energy companies,
- The headquarters or a subsidiary of a multinational corporation,
- Manufacturing companies,
- The national legislative body, and
- The administrative agency overseeing the national climate change program.

Using guidance and decision-making criteria developed specifically for their role, players within each module would simulate the interactions and decision-making processes that would occur under various scenarios for the climate regime. They would also interact as appropriate with players in other modules using a network of computers set up for this purpose. For example, under an Emissions Trading/Joint Implementation Scenario, players representing various national industries would need to decide whether to reduce emissions, buy or sell emissions permits domestically or internationally, engage in JI projects, or work with others to change the rules through their national legislatures or administrative agencies. Under a Non-Compliance Scenario, the group of players representing the enforcement branch of the FCCC compliance mechanism could be

presented with a situation of non-compliance by a country such as the United States and would be asked to decide on a sanction. The other players would then be asked to incorporate their reactions to this sanction as they to make decisions on reduction activities and emissions permit trades.

For added realism, large companies, national agencies and legislatures, and international bodies would be represented by multiple players, each of whom would have different interests and objectives. For example, the range of actors in the United States might be represented by twenty to thirty players, while those in a country such as Zimbabwe might be represented by only three or four. This would add the critical "political" element to the simulation, as decisions reached through compromise among multiple actors tend to differ substantially from those made by individuals working alone.

Fig. 1 Possible Modules in the Climate Regime Simulation

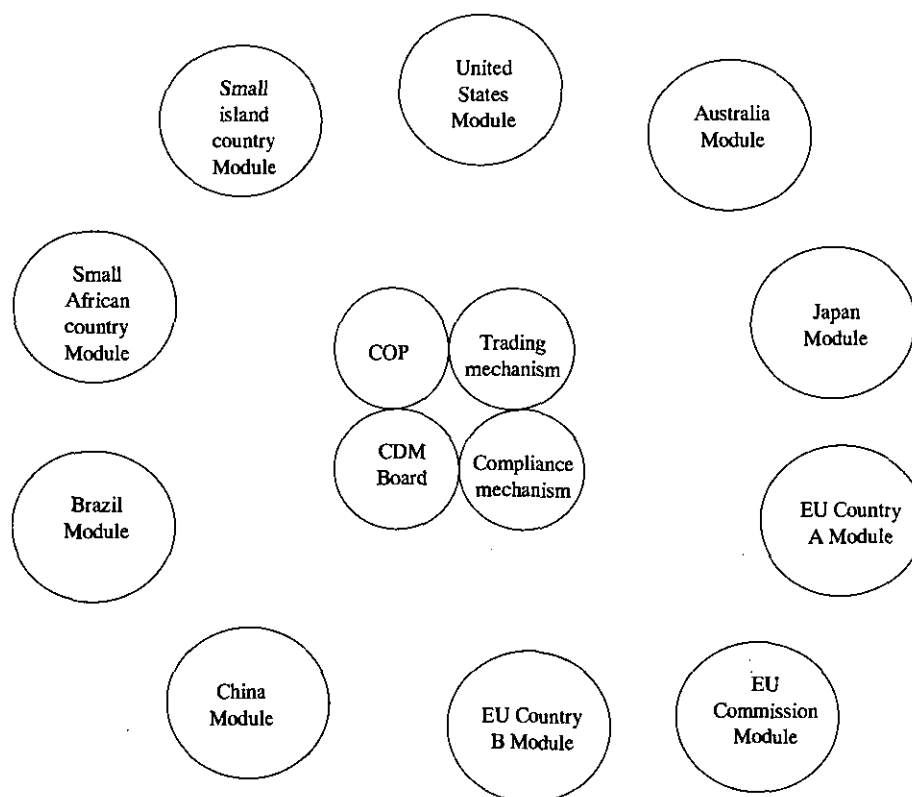


Fig. 2 Example of a National Module

