

# FORESTRY, AFRICA AND CLIMATE CHANGE PROTOCOL

*by Margaret M Skutsch*

Joint Implementation (JI) was a concept developed by the Conference of Parties (CoP) to the UN Framework Convention on Climate Change (UNFCCC) to help reduce the level of greenhouse gases, particularly CO<sub>2</sub>, in the global atmosphere. In JI projects, an organisation in a developed country invests in an organisation in a less developed country with the aim of reducing atmospheric greenhouse gases. It is seen as a commercial transaction in which both parties stand to benefit. The recipient country organisation obtains modern technology which would otherwise be unaffordable, but which may have other advantages, e.g. it may reduce energy consumption and thus production costs. The developed country organisation gains in respect of the obligations under which it is put, by its own government, to reduce greenhouse gases.

The motivation for the deal is that it is usually much cheaper, per tonne of carbon reduced, for an organisation in a developed economy to invest in improving technology in a developing country organisation rather than in its own equipment. This is because levels of energy and production efficiency are relatively higher in developed countries, and the marginal costs of further increases is great. Furthermore, when carbon emission trading becomes widespread, the certificates demonstrating 'carbon savings' will have good market value in themselves, bringing an additional source of income to the investing organisation (although the investments costs, and the share of the carbon certificates, can be negotiated between the parties as they choose). The governments of the developed countries meanwhile stand to gain by moving towards their sworn emission reduction targets and governments of developing countries, by gaining investment for development.

In principle, afforestation is a possible investment for JI, as it reduces the global amount of atmospheric CO<sub>2</sub> by creating a 'sink', sequestering carbon in the increased biomass of the trees on the earth's surface. For example, a power generating company in an OECD (Organisation for Economic Cooperation and Development) country, which needs to show carbon savings, may make a deal with a government party in a developing country and provide most of the capital for an afforestation project there, passing the costs of this on, via the price of electricity, to its consumers, on 'the polluter pays' principle.

The first attempts at operationalising JI were called 'Activities Implemented Jointly' (AIJ) and were supported to a greater (full costs) or lesser (transaction costs only) extent by subsidies from the major OECD donors. This was to encourage a 'demonstration effect'. Carbon credits were not to be issued in this first phase, thus reducing the incentive for commercial investment considerably. The motor for the system must eventually be (a) stringent limits on allowable emission levels in the developed countries and (b) a flourishing market in carbon certificates. The former were agreed at the Kyoto CoP in 1997, although the question of what sanctions can be taken against those who fail to adhere to their targets is not answered, and the latter is slowly developing (carbon was floated on the New York stock exchange in late 1997, and certification procedures are being worked out). There is not yet an official link between

emissions trading and JI mechanisms in the international protocol, but this is expected before long.

Africa is generally lagging behind as regards uptake of AIJ, and at the same time, the range of projects implemented is more limited than in other continents. Of the more than 200 AIJ projects implemented worldwide, only 5 are in Africa, and it is significant that two of these are forestry projects: the Netherlands' financed FACE project in Uganda, and one in Burkina Faso financed by Norway. Two out of 5 is considerably more than the world average (the Dutch programme for example has been responsible worldwide for a total of 24 projects, of which of which only 5 concern forestry). (For information on FACE see p. 25). There are many reasons for slow uptake in Africa, including lack of industrial opportunities (Africa has a very small industrial base compared to other continents), lack of entrepreneurial development, and lack of confidence of potential investors, especially when there are so many lucrative opportunities for JI investment in Eastern Europe, Asia and Latin America. The forestry projects have been achieved by heavy government subsidies, and cannot really be considered commercial ventures. But afforestation is a relatively cheap way of reducing atmospheric CO<sub>2</sub>, at between \$5 and \$10 per tonne of carbon in developing country situations, compared to \$75-100 for photovoltaic production of electricity replacing electricity from oil fired power plants. Forestry has much to offer in a continent where there is still considerable land availability and where labour is relatively cheap, and many government officials, at least, see forestry as the carbon sector in which Africa may have the edge over other parts of the world.

There are however a host of technical problems associated with forestry as a JI strategy. It is only by increasing net standing biomass that carbon can be sequestered, and this can be achieved by planting forest where there was earlier a less voluminous form of vegetation, or by conserving forest which otherwise would have been felled (which can be seen as mitigation of potential carbon emissions).

Projects will only qualify for 'carbon certification' if they can be shown genuinely to reduce overall atmospheric carbon, for which a baseline has to be established against which carbon saving can be compared. While this may appear relatively simple in the case of afforestation, in practice there are many areas of uncertainty, and even more so in the case of conservation. If, for example, a given area of a degraded forest is subjected to enrichment planting such that its total standing biomass is increased, this looks like a gain. But if the uses of the original area are simply transferred to another part of the forest, the net result may approach zero. Assessments of the extent to which a forest would have been destroyed in the future, had it not been brought under conservation today, are also fraught with subjectivity. Compared to industrial projects where boundaries are relatively clear and future outcomes relatively predictable, forestry gives the JI accountants a real headache. Moreover, there is heavy debate concerning whether countries which have been profligate in the past in destroying their forests for economic gain (including most OECD countries, but also some developing countries) should not be penalised against countries which have kept more of their forest: in which year should the baseline be drawn? The baseline for carbon emissions generally is 1990, but whether this is 'fair' as regards forest sinks can always be disputed, since most of the countries which have retained their forests, have large land areas and low population densities, and were therefore not driven to destruction of forests by alternative land use needs at an earlier period.

Further, it can be argued that developed countries may rush to invest in 'cheap' afforestation schemes in developing countries now, to achieve their required carbon reduction targets, leaving the developing countries, when their own emissions build up and have to be reduced, only the more expensive clean technology options. For these reasons, and because forestry does not bring with it access to new technology, a 1995 meeting in Kadoma of six Southern African countries strongly rejected afforestation as a joint implementation instrument, even though it is acknowledged that it may bring local environmental benefits in addition to carbon reduction.

At Kyoto a decision was made to launch two different mechanisms: Joint Implementation for projects between OECD countries and Eastern European, Central Asian and Middle Eastern countries, and Clean Development Mechanism for projects between OECD countries and developing countries, to come on board around 2001. The distinction is that CDM projects are designed, through a number of safeguards, to satisfy the needs for sustainable development of the host countries as well as to reduce CO<sub>2</sub>, which is primarily the goal and responsibility of developed countries. But there is confusion as to whether forestry will be considered an option under CDM; indeed initially it seemed that under the protocols developed in Kyoto, no sinks will be considered at all (thus, also not water-based sinks), not least because of the measurement and monitoring problems referred to earlier. There was stark disagreement on this point however with some representatives arguing that forestry may be the best option for the participation of development countries in the whole fight against climate change. The strongly articulated wish of the US for rapid inclusion of sinks in the CDM protocol, however, is interpreted by many in terms of its own desire to utilise all the cheapest options before anyone else has the chance to. Therefore, many developing country representatives are taking a much more cautious line. A detailed scientific study on land use change and forestry is to be prepared, with a view to resolving some of the contentious issues, but this is unlikely to be ready before late 2000.

Meanwhile the next round of negotiations will be the CoP in Buenos Aires in November 1998 and the matter of forestry as a CDM strategy will certainly be debated, although not decided. The final outcome of the international negotiations will be awaited with great interest, particularly by parties in Africa with an interest in tropical forestry.

For further information, please contact:

Margaret M Skutsch

Technology and Development Group University of Twente, PO Box 217

7500 AE Enschede, The Netherlands

Tel: +31 53 4893538, Fax: +31 53 4893087

Email: [M.M.Skutsch@tdg.utwente.nl](mailto:M.M.Skutsch@tdg.utwente.nl)