

Carbon-neutrality policy: Risk and Sustainable Management Group

Background

Emissions of greenhouse gases, most notably carbon dioxide are the main cause of anthropogenic climate change. Among other effects, climate change is likely to lead to higher evaporation, reduced rainfall and reduced runoff in the Murray-Darling Basin, which is the main area of study for the Risk and Sustainable Management Group (RSMG).

Currently, Australian government policy is focused on voluntary approaches to mitigation of greenhouse gas emissions. Australia has not ratified the Kyoto Protocol, but achievement of the emissions reductions targets set out in the Protocol is an objective of government policy.

In these circumstances, it is appropriate that the Risk and Sustainable Management Group should seek to undertake its research program in an environmentally sustainable fashion. In particular, the Group seeks to achieve carbon-neutrality, that is, zero net emissions of carbon dioxide (CO₂).

Aims of the policy

The aims of the policy are:

- by reducing activities that generate emissions, and offsetting unavoidable emissions, to ensure that RSMG makes a zero net contribution to emissions of greenhouse gases, so that the Group's activities are carbon-neutral;
- by identifying efficiency improvements, to achieve savings sufficient to finance all offset costs, so that the policy is budget-neutral; and
- provide experience and information that will assist the Group's research into climate change and related issues.

Approach

The design of the policy began with an audit of the Group's activities and their implications for emissions. Air travel was identified as the primary source of emissions. However several other sources of emissions were identified, as shown below.

The analysis of the Group's activities led to the adoption of a strategy with two main elements:

- reduce unnecessary travel, particularly air travel, by
 - more careful scheduling to combine multiple engagements in a single trip;
 - and, where possible, replacing meetings involving interstate travel with electronic communication; and
- identify economically and environmentally efficient options for purchase of offsets, using the financial savings generated from reduced travel;

The Audit was then revised to take account of identified savings, yielding an unavoidable cost of 50 tonnes of CO₂ per year.

Implementation

Improved scheduling and replacement of travel with electronic communications have yielded savings of five domestic flights for 2006-07, implying a savings of 10 tons of CO₂ emissions and budget savings of \$2500 (including accommodation and incidental costs).

The identified budget savings were used, in part, to finance the purchase of carbon credits from CarbonPlanet.com. The credits were derived from a tree-planting program undertaken by NSW Forests, one of the first sequestration programs to achieve certification under an accreditation scheme meeting international standards, in this case the NSW Greenhouse Gas Abatement Scheme.

Additional savings will be allocated to a research project on the

operation of markets for carbon credits. The direct experience of participating in the market will also be a valuable input to research.

Assessment and evaluation

A preliminary assessment suggests that adoption of the carbon-neutrality policy will yield benefits in three areas: reduction of CO₂ emissions, budgetary saving, and research opportunities. The only net cost is that of increased managerial effort required to identify efficiencies and acquire offsets.

As with all projects, experience may indicate unforeseen difficulties. An interim evaluation is planned for mid-2007 to review experience after one year. Assuming that the interim review supports maintenance of the policy, a more detailed evaluation will be undertaken after five years.

Broader implications for emissions policy

The most striking feature of the policy process undertaken by RSMG was the ease with which options that are both budget-neutral and carbon-neutral could be identified. This experience suggests that, for Australian society as a whole, significant reductions in CO₂ emissions could be achieved at negligible economic cost. Global reductions in emissions sufficient to stabilise atmospheric concentrations of CO₂ at a sustainable level will undoubtedly be more expensive, but it seems likely that the cost will be modest in relation to growing global incomes.

Future directions

Emissions trading markets are in their infancy, but will need to grow rapidly in the near future if the global climate is to be stabilised in an effective and cost-efficient manner. The Risk and Sustainable Management Group will take an active interest in emissions markets both as a participant and as a centre of research on policy options for sustainable management of environmental risks.

Appendix - Carbon Audit

Carbon Audit			
Risk and Sustainable Management Group			
Standard	Tonnes CO2 equivalent/unit	Units	Total Tonnes CO2 Equiv.
<u>International flights</u>			
Medium return (eg Brisbane-Tokyo)	5	2	10
Long return (eg Brisbane-Rome)	10	1	10
<u>Domestic flights</u>			
Short return (eg Brisbane-Sydney)	1	10	10
Medium return (Brisbane-Melbourne)	2	2	4
Long return (eg Brisbane-Perth)	3	1	3
<u>Other travel</u>			
Car and taxi use (20000km/year)	5	0.3	1.5
<u>Office</u>			
Air conditioner	0.25	2	0.5
Computer electricity	0.25	10	2.5
Other electricity	0.1	5	0.5
			50
<u>Total cost @ \$23 per tonne</u>			\$1,150