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TECHNICAL
REPORT

Accounting for the future

International examples

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Prepared for the National Audit Office

RAND EUROPE

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Summary

1. RAND Europe was commissioned by the National Audit Office (NAO) and the 'Accounting for Sustainability Group' chaired by His Royal Highness The Prince of Wales to undertake a brief study to identify global examples of interesting practice in the field of sustainability accounting. The aim of the report is to inform the 'Accounting for the Future' project of the Group and to support future work by the NAO in this field.
2. The report shows examples of initiatives taken in countries that encourage public and private sector actors to internalise the external costs or wider (environmental and social) impact of economic activity or change the behaviour of decision-makers and consumers towards the mitigation of the environmental and social impact of economic activity.[1] RAND Europe was asked by the Group to identify examples in Brazil, Canada, China, India, Mexico, South Africa, and the United States of America. The RAND Europe study team also included examples from Europe, Japan and Korea. These examples cover several different initiatives. These initiatives include: government policy (such as strategies on the measurement and monitoring of sustainable development, the development of new environmental accounting methods, green taxes, incentives, and enforcement); changes in accounting standards; accounting for sustainability initiatives in the private sector; and market mechanisms (e.g. certification, labelling, and market standardisation). The report does not aim to give a complete overview of the initiatives taken by these countries or of the different initiatives used globally. Rather, the report offers a flavour of the initiatives being used in the countries selected.
3. This research aimed to understand what the impact of sustainable development initiatives is likely to be in terms of the internalisation of costs by the private and public sectors and in terms of subsequent changes in the behaviour of decision-makers. This research also asked some further questions, which were raised as the desk research was undertaken.

[1] We defined internalisation as follows. A cost is internalised if it is 'felt' by decision makers. To make sure the 'correct' (efficient) decisions are taken, decision makers should bear the full marginal external cost of their activities. This does not necessarily mean full total cost, nor the imposition of costs on people who cannot change external costs. There is a risk of 'double-counting' as many externalities have many causes. Hence, external costs are not always singularly attributable. Where an externality has a single cause, it is possible to impose full liability on the 'polluter'. It is also useful to distinguish between 'ownable' resources (like oil, water, etc.) from common pool resources like air. The latter cannot be tied into property rights, so the accounting principles are different.

- How can the impact of initiatives be measured?
- How will progress on sustainability indicators be monitored, evaluated, and enforced?
- What are the unintended outcomes of the initiatives and how do they affect sustainability?

The main findings and themes drawn from the examples were (see Table 1 on page xii for an overview of the initiatives, examples, and findings):

The newness of many initiatives precludes in many cases an assessment of their longer-term impact on sustainable development.

4. The examples of the development of indicators and tax strategies in China show that many initiatives are still in the developmental stage and are not yet being used or implemented. This newness means that any discussion on the impact of these initiatives is mostly speculative or based on projections. Furthermore, some initiatives such as the environmental compensation scheme in Brazil do not yet provide for a systematic monitoring or evaluation of the initiative. A general observation is that more research attention needs to be given to the monitoring and evaluating of the impacts of initiatives.[2]

5. There are two further problems in evaluating and monitoring the impact of initiatives. Firstly, the development of high-level sustainable development indicators is ongoing, which means that the science of the measurement of impacts is also developing.[3] Initiatives of many countries such as the Korean Integrated System of Environmental and Economic Accounting (KORSEEA) and the initiatives of the National Round Table on the Environment and the Economy in Canada are aimed at devising high-level indicators to measure progress on sustainable development. These initiatives provide benchmarks for the measurement of the impact of policy interventions in these countries. The difficulty in designing such indicators is that many country initiatives look at the impact on global public goods, which means that the ability to attribute outcomes to actions is weak. Country initiatives should therefore not be seen in isolation or removed from global progress. Moreover, international standards are continuously developing (e.g. standards for greenhouse gases). Finally, it seems obvious that some impacts are easier to account for than others (e.g. easier to monetise), which means that a comprehensive measurement of the impacts in the sustainable development field is difficult. A contributing factor is that the concept of sustainable development is expanding to include a wider array of social and environmental impacts. Furthermore, initiatives can have unintended consequences that are not necessarily accounted for. For instance, it is unclear what the substitution effect (in terms of the external costs of the use of alternative energy sources) and income effects of China's energy conservation policy will be. In some cases, the mitigation of one externality may lead to the creation of others.

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[2] Initiatives could include for instance balanced scorecards. For an overview of the uses and purposes of balanced scorecards, see http://www.balancedscorecard.org/basics/bsc1.html, accessed November 2006.

[3] Many indicators are difficult to measure, which makes monitoring progress difficult.

Government policy offers many approaches that can contribute to the mitigation of environmental and social impacts of economic activity, but sometimes lacks an integrated approach.

6. It seems clear that governments have a toolkit to address sustainability issues, which can offer measurement frameworks, strategies, taxes and incentives, regulation and enforcement. Chapter 2 offers various examples. However, the question remains of how well initiatives are integrated across government organisations, across aspects of sustainability (indicators and measurement), and with international initiatives across nations.[4]

   Integration is important in four ways. Firstly, as stated in paragraph 5, the mitigation of one externality might lead to the creation of others. Some of the initiatives outlined are geared to specific outcomes, for instance the examples of initiatives against deforestation in Brazil and Mexico in Chapter 2. Therefore initiatives have to be evaluated for unintended outcomes, which have an effect on sustainable development. Possible mitigation of one externality should be related to overall progress on sustainable development. Secondly, some of the initiatives can be somewhat isolated and ad hoc. It can be argued that the different and varied approaches to sustainability taken by Canadian government departments in response to the Auditor-General Act fall short of an integrated and comprehensive sustainability programme. Thirdly, government programmes can suffer from inconsistency and duplication. Fourthly, from the same Canadian example, lack of integration is also characteristic of the gap that still exists in many initiatives between devising a strategy or developing indicators and the actual implementation of sustainability initiatives. For instance, the Canada Revenue Agency was supposed to integrate sustainability criteria into guidelines and documents for partnership agreements. While the Agency had developed the criteria, it had done little to include them in the guidelines or documents. This raises questions of whether elevating sustainability up the political agenda helps or hurts in the promotion of sustainable development and which methods exist to make public sector organisations prioritise sustainability targets.

Accounting standards can be powerful instruments to encourage companies to internalise environmental costs or indeed to provide incentives to industry sectors.

7. The examples from Chapter 3 show that accounting standards can be powerful tools to encourage the private sector to internalise environmental costs, or indeed to provide incentives for industry sectors to make specific investments in renewable energy. However, the examples also show that standards need to be targeted and enforced. In the example of South Africa, the asset depreciation allowance extends to industries that should not benefit from it. This extension could mitigate the positive impact of the measure. In the American example, compliance with new standards was not enforced until pressure groups took up the cause.

8. However, in both examples there is limited evidence to suggest what the specific impacts of accounting standards on business decision-making are or are likely to be in the future. For

[4] It is likely that a common frame can facilitate integration. However, a possible disadvantage of a common frame is a loss of specificity.

instance, in the example of asset deprecation in South Africa will decision-makers opt for increased investment in renewable energy? Here, more research is required to understand the relationships between accounting standards, decision-making, and impact.

Private sector initiatives on how to account for and report on environmental and social impacts are becoming more sophisticated, but limitations remain.

9. There are 'good practice' examples of companies using environmental accounting to inform business practices and change decision-making. Chapter 4 offers four such examples from Brazil, Canada, Japan, and South Africa. The main motivations behind this use seem to be hedging for potential risks, new accounting standards, preparing to take advantage of new opportunities or gaining a competitive edge, the good standing of the company with investors, and a genuine growing sense of accountability for their impacts.

10. Nonetheless, limitations remain. Firstly, the impact of such decision-making on sustainable development is not always clear. In the example of Suncor, a Canadian oil firm, the impacts varied. Though environmental accounting contributed to the reduction of the per-unit cost of production, the overall level of company emissions has continued to rise. Furthermore, one could also find examples of companies where a divergence exists between reporting and accounting on sustainability, and the actual use of sustainability indicators in the day-to-day management and performance evaluation, i.e. organisations might be aggregating information on their impact without using it to promote sustainability or mitigate possible negative impacts. Sustainability accounting in this way can remain isolated from business governance, especially if investments in the company are not made upon the basis of whether or not the company accounts for environmental or social impacts.[5] This raises the question of the type of instrument that can best promote the mitigation of environmental and social impacts, such as taxes, subsidies, voluntary regulation, mandatory regulation, leaving it to the market, or a mix of these. Finally, the accounting for sustainability field has to address several issues which are normal practice in financial accounting, for instance how to account for opportunity costs, alternatives, and depreciation.

Standardisation, well-informed consumers, and pressure groups can influence private sector decision-making.

11. The creation of market standards can allow consumers to make informed choices between products and influence how companies report and account for environmental impacts (see the example of Tata Steel in Chapter 5). The examples of forestry certification in Mexico and energy labelling in China indicate that providing the market with information on the origin of products or the efficiency of products is a direct way to change consumer behaviour. This can have a knock-on effect in terms of how products are produced (see the example forestry certification in Mexico) and the type of products that are being produced (potentially more energy efficient appliances in China) with their associated respective impacts on forest cover and more environmentally friendly production methods in Mexico and energy savings in China. Again, the specific and wider impact of labelling and certification schemes need to be studied further. For instance, one could ask what

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[5] Identified also as 'business as usual' by Bebbington and Gray (2001). See also OECD (2002) on governance.

standards produce the most optimal impacts and in what contexts industry-specific, country-wide or international standards are more advisable. For instance, in the context of the World Trade Organisation sustainability is increasingly part of international trade standards. Forest certification is very much tied into international development agendas.

Table 1: Preliminary taxonomy and observations for examples of accounting for sustainability

Instigator	Type of initiative	Examples	Preliminary observations
Government	Strategic initiatives	Korean Integrated System of Environmental and Economic Accounting (KORSEEA)	The newness of many initiatives precludes in many cases an assessment of their longer-term impact on sustainable development Government policy offers many approaches that can contribute to the mitigation of environmental and social impacts of economic activity, but sometimes lacks an integrated approach
		Indicator development in Canada	
		Natural resource accounting in China	
	Green tax policy	Energy conservation taxes in China	
		Environmental compensation in Brazil	
	Internalising benefits	Payments for Hydrological Environmental services Program (PSAH) in Mexico	
		Ecological value added tax in Brazil	
		Green Accounting for India's States and Union Territories (GAISP)	
	Litigation	Actions taken against polluters by the State Attorney General of New York, USA	
	Organisation and service–level sustainability	Auditor General Act in Canada	
Accounting standards	Asset retirement	Depreciation allowance in South Africa	Accounting standards can be powerful instruments to encourage companies to internalise environmental costs or indeed to provide incentives to industry sectors
		Asset retirement in the United States	
Private sector innovations	Environmental accounting Corporate responsibility reporting	Eskom Sustainability indices in South Africa	Private sector initiatives on how to account for and report on environmental and social impacts are becoming more sophisticated, but limitations remain
		Natura corporate sustainability matrix in Brazil	
		Suncor in Canada	
		Konica Minolta risk measurement in Japan	
Impact of markets	Market standardisation, labelling, and certification	Tata steel and greenhouse gas accounting and reporting in India	Standardisation, well-informed consumers, and pressure groups can influence private sector decision-making
		Energy labelling in China	
		Forest certification in Mexico	
		Socially responsible investors in the United States	