

Are we on track?

Assessing the dynamics of
European sustainable development

rivm

National Institute
for Public Health and
the Environment

Assessing the dynamics of European sustainable development

Understanding the factors that influence sustainable development is a matter of urgency. Fortunately, a number of analytical approaches now make it possible to assess the prospects for achieving adequate livelihoods in Europe and around the world – and for maintaining them in generations to come. These include:

- *conceptual models based on the extended definition of wealth*
- *increasingly sophisticated environmental, economic and – to some extent – social assessment techniques*
- *experience of supporting policy makers and dealing with institutional aspects.*

We recommend setting up a carefully chosen network of authoritative organisations – across disciplines and regions – to start making European sustainable development assessments now.

1 | Not just an environmental issue

Assessments must address all forms of critical 'capital' and the essential linkages between them. These are the cornerstones of sustainable development.

The wealth of nations includes natural and human capital as well as man-made assets. The challenge is to track developments in the following key forms of 'capital', including assessment of uncertainties and risks:

- Man-made capital (*the economy*): here we need to take a broad view by assessing the long-term viability of the European economies and their impact on livelihoods around the world.
- Human capital (*people*) and social capital (*society*): here we can use aggregate measures, including the level of education and health indicators such as healthy life expectancy. Techniques for measuring social cohesion and governance are still in their infancy. Further development is necessary: after all, social capital is no less important than any other form of capital, and should be assessed accordingly. Increasingly powerful scenario techniques can be used to highlight important developments in social capital.
- Ecological capital (*the environment*): here we are relatively advanced – even at the global level – in using measures such as the Natural Capital Index in both historical and scenario-driven assessments. Such measures are continually being improved.

2 | Integrated assessments

The envisaged broad evaluations make it possible to identify dilemmas, synergies and trade-offs. They provide rich contextual information to policy makers and there is already ample experience of supplying this kind of information in a number of policy areas.

For instance, in the public domain, large-scale investment schemes can be analysed in advance in terms of their impacts on all forms of 'capital'. An example of this is the multi-disciplinary study carried out in the Netherlands some years ago analysing how best to invest the proceeds from natural gas sales worth 30 billion euros. This study combines the expertise of organisations that specialize in assessing the different forms of capital and illustrates the importance of out-of-the-box thinking.

In the domain of green accounting, one particularly successful indicator has been Genuine Savings, which is now one of the World Bank's country-level indicators.

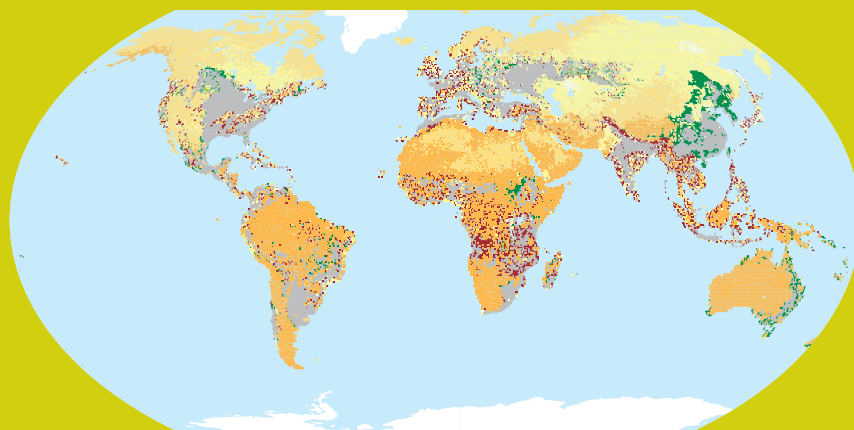
Richer analyses

An important enhancement in recent years, in particular for the forward-looking analyses, has been to combine quantitative and qualitative information. This approach was pioneered at the global level by Shell, among others. It has been applied in the environmental domain by IPCC and then expanded in the Global Environment Outlooks.

Further interesting approaches that may well prove beneficial in the years ahead are:

- the European Commission's new, broad impact assessments,
- national outlooks on sustainable development,
- the incorporation of environmental impact in the default indicator schemes of poverty reduction plans, and
- scientific efforts to base assessments on the vulnerability to change of sectors of society and of particular ecosystems.

Change in natural area and selected pressures on nature between 2002 - 2052, Markets First scenario



Selected pressures: density of human population, density of energy use, time lapsed since clear-cutting or abandonment of agriculture, rate of temperature change

- Substantial decrease
- Small decrease
- No change
- Small increase
- Substantial increase
- Strong increase
- From domesticated to natural area
- From natural area to domesticated area
- Remains domesticated
- Ice and polar area/No data

→ This shows the combined effect of changes in habitat areas and pressures.

The indicators may appear crude

In order to provide an overview of the wide range of concerns that the concept of sustainable development embraces, aggregate indicators are extremely useful, even though these may appear excessively aggregated or even downright crude to some experts. One example – in the field of biodiversity – is the Natural Capital Index. Other examples are Sustainable National Income and – in the field of human health – Disability Adjusted Life. Moreover, we should bear in mind that, on close inspection, such widely accepted and useful indicators as Gross Domestic Product have very similar characteristics.

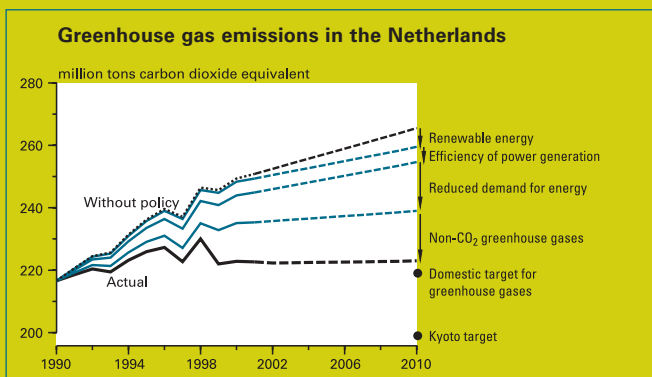
3 | Support for a broad range of governance processes

Sustainable development assessments have to cater for a wide variety of governance processes, ranging from agenda-setting strategic exercises to the fine-tuning of burden sharing.

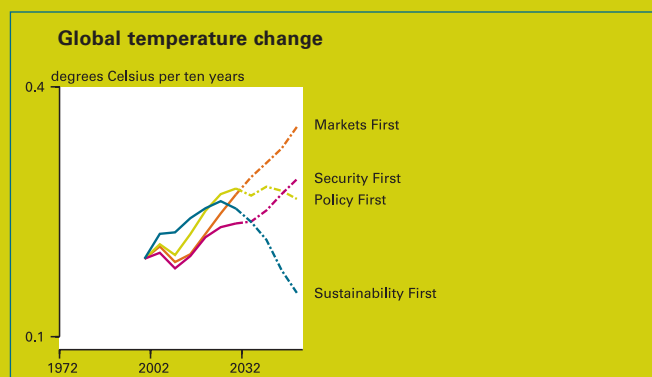
There is now considerable experience of forward-looking studies as well as annual appraisals of progress made. We can build on successful examples such as those carried out by UNEP in its Global Environment Outlook (GEO), by the International Panel for Climate Change (IPCC) and the RIVM's integrated assessments and outlooks on environment and health, including the integrated economic and environmental assessment study on European Environmental Priorities.

If the key aspects of sustainable development are addressed in these assessments, this will help policy makers to keep their sights on the long-term goals of sustainable development. Moreover, it enables them to compare actual developments against these goals. This is especially useful when there is a considerable time lag between action and impact. Impacts on the rest of the world should also be included.

The experience of assessing climate change provides a very useful paradigm to build on. Climate change policies, by their very nature, need to consider the long term and global connections. IPCC has led the way in dealing with scientific controversy and conflicting interests in its assessments. Subsequent assessments have developed useful ways of exploring the effects and mutual benefits of various options for burden sharing between countries.



→ The contribution of various policies to the end result is shown here as an element in progress appraisals and mid-term outlooks.



→ Long-term projections of the rate of temperature change differ markedly between scenarios.

4 | A range of perspectives

Our vision of sustainable development will always entail an element of compromise. It's not surprising that a variety of actors, each with their worldview and vital interests, will perceive the key issues differently.

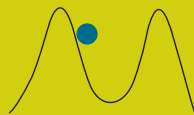
We have seen this recently in world trade negotiations. Even within the developed world, perceptions differ on how vulnerable the environment and human societies are, how quickly and effectively innovations can come to the rescue, and the need to exercise the precautionary principle.

One of the areas on which research is currently focusing is how these differences in perspective can best be included in assessments of sustainable development for specific purposes. Innovative approaches range from compiling assessments with regionally and disciplinary balanced networks of experts to computer-assisted gaming. They include modern perspective-based uncertainty analysis and assessments that explore the spectrum of perspectives before offering advice on how robust policy can be.

Optimist
The system is benign



Hierarchist
Staying within limits



Risk avoider
The system is vulnerable



Fatalist
It makes no difference



- Different groups have varying perceptions of trends and how 'the world works'. They also have different concerns and different preferences with regard to policies and who should take the initiative.

5 | The role of the messenger

Deciding precisely what each assessment should cover depends on policy, both at the national and European level.

However, in a complex governance situation it's helpful to have quasi-independent assessment organisations, because governments tend to get locked into their own priorities. Some of the lessons learned at the RIVM from ambitious assessments it has helped to set up are that:

- assessment institutes should work at arm's length from government
- such organisations need to be able to cover a wide range of issues affecting sustainable development and concentrate some of their resources on developing improved tools and methods
- regional and other broad-based expertise networks add substantial authority to assessment reports and generate trust among policy makers
- we have to keep pushing the limits of existing tools.

6 | Learning by doing

Sufficient data, knowledge and experience are now available to cover most issues with a sustainable development dimension, taking a step-by-step approach.

It's now time to start providing policy makers with real, albeit imperfect, assessments to support their decisions and consultations.

The usefulness of developing periodic assessments in a learning-by-doing mode has been demonstrated on every scale: locally, regionally, nationally and globally.

Experience over the past 15 years in the environmental field – even judging by RIVM's experience alone – shows the advantages of such broad, integrated assessments and of the network model. We need to be both pragmatic and ambitious in pursuing this goal.

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RIVM and the Netherlands Environmental Assessment Agency

RIVM, the National Institute for Public Health and the Environment in Bilthoven, the Netherlands, is a scientific organisation, which supports the national ministries that deal with public health, the environment and nature. The Environmental Assessment Agency at RIVM carries out its legal assessment tasks relating to environment and nature.

Since the late 1980s, a core task of RIVM has been integrated assessment in environment and public health, on the basis of extensive monitoring, modelling, scenario analysis and an active dialogue with the scientific community and those using the assessments in policy making. RIVM performs specific roles in its relations with various international organisations and is developing a system of Sustainable Development outlooks in support of the Dutch government.

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