



Briefing paper



**Friends of
the Earth
Europe**

Indicators for better resource use

The European Commission is currently consulting on what indicators to use as part of the *Roadmap to a Resource Efficient Europe*.

In the view of Friends of the Earth Europe and the European Environmental Bureau, the Commission needs to provide leadership on the following issues:

- **Indicators:** Europe must measure its global consumption of key natural resources, using effective and workable indicators: land footprint, water footprint, carbon footprint and overall material use.
- **Targets:** a commitment for Europe to develop targets to reduce its resource consumption by 2013, to ensure that effective resource reduction strategies are adopted.
- **Use of indicators:** include the indicators in impact assessments of all EU policies including Europe 2020 and other high-level policies.
- **Avoid paralysis by analysis:** start using the indicators now and build up a body of data.

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1. Introduction

The Commission is currently consulting on [Options for Resource Efficiency Indicators](#), with the consultation closing on 22 October 2012¹. We encourage citizens, decision-makers and organisations to respond to this consultation, so we have put this briefing together to provide some guidance on the main issues.

This consultation is your chance to tell the Commission that the EU needs to take urgent action to transform how Europe uses natural resources. As the highest importer of natural resources in the world, Europe's consumption levels are both damaging to the environment and expensive for the European economy.

The future looks even more challenging as global population increases and there is rising affluence in countries such as China and India. Europe's reckless use of resources is going to become more expensive, and more damaging. Damage to the global environment is already on the rise, while the

social impacts of increasing resource prices are substantial.

Europe needs to become much more resource efficient, and the key tool for this to happen is to measure and reduce our resource use. This consultation is an important step forward, and FoEE and the EEB welcome it. However, we do not agree with everything the Commission has proposed.

2. Consultation questions and answers

The section below explains what FoEE and the EEB believe to be the main issues for each question.

2.1 Question 1: What are the key issues that need to be addressed by indicators to support resource productivity?

The indicators need to cover the main categories of natural resources, specifically: water, land, materials and greenhouse gas emissions.

For the resource efficiency indicators to be useful for decision-making, the EU needs to address the following key issues:

- **Consumption-based indicators:** the only way to measure the overall quantity of resources that Europe is consuming is by using a consumption-based ‘footprint’ methodology. This has a life-cycle perspective, and therefore includes the embedded or indirect use of resources for the production of an item, wherever it is produced. As the continent is a net importer of resources, any other indicator will not provide a complete picture of the overall scale of the resources consumed by Europe.
- **Avoid aggregated indicators:** a set of different indicators is essential in order to avoid aggregated indicators (i.e. where different types of resources are added up into one number). Aggregated indicators are not robust, since unreliable assumptions are required in order to transform different types of data (e.g. GHG emissions, land use, water use, material flows, etc) into one common number, resulting in important information being lost in this procedure.
- **Reject the use of one overall indicator: The Commission is proposing a single, top-level indicator based on material use.** We believe that by having a set of different indicators, rather than one overall indicator, a clearer picture of the balance of resource use is given, and trade-offs are made visible. This is the only possible way to monitor shifts in environmental pressure (e.g. if we move from fossil fuels to biofuels and we only measure our material consumption, we will not be able to see the increase in land and water consumption), and provide a well-founded basis for policy making and target setting.
- **Avoid paralysis by analysis:** It is sometimes claimed that indicators cannot be put in place until data is in the EUROSTAT system. We would dispute this – it is important for indicators to be brought into use as soon as possible. Any metric for measuring resource use must involve a trade-off between the complexity of information gathering and the specificity of results. Therefore, the EU needs to agree on what set of indicators it will use, and take steps to collect good-quality data.

- **Transparency: We suggest that it is best to use a set of indicators that is based on real physical quantities, which is more transparent and strongly linked to the statistical system, making data collection straightforward.**
- **Link the indicators with social issues:** Resource use is an important social and development issue, and the indicators should enable these issues to be investigated. For example, resource poverty, the debate on land grabbing and the need for a fair distribution of global resources among the inhabitants of this planet.

It is essential that the indicators used are consumption-based, transparent and with a direct link to the statistical system. Aggregated indicators must be avoided at all costs. In addition, the use of one indicator to measure and monitor resources will result in an opaque system that will hide trade-offs and the increase of overall resource consumption.

2.2 Question 2: Are there other indicators that we should be using to monitor the economic and environmental impacts of resource efficiency policies by 2013 and for the future?

- **Economic impacts:** Resource efficiency will bring economic benefits to the European continent. However, measuring the productivity levels of resources (by using the resource productivity indicator) will provide a distorted picture (see section 2.3). In order to measure the benefits that resource efficiency brings, indicators such as job creation, the adoption of new business models such as leasing, cost savings or competitiveness levels should be measured.
- **Environmental impacts:** the overall amount of resources consumed measured by using the :
 - Water footprint (in litres);
 - Land footprint (in hectares);
 - Carbon footprint (in tonnes CO₂ equivalent);
 - Material footprint (in tonnes).

This set of indicators is complementary to indicators measuring the environmental impacts related to resource use. In fact, in several situations, this set of indicators provides the physical basis for calculating the impact indicators².

- **Social impacts:** The transparency of the water, land, carbon and material footprint indicators ensure that there is a direct link between the indicators and social issues, since it allows you to see whether an increase on imported land is the root cause of displacements, or the consumption of textiles from a water stressed country is having negative effects on local people and biodiversity.

The impact indicators should include a section on social indicators, measuring impacts both in Europe and outside. The economic indicators should have job creation and new business models (such as leasing or upgradability of products) at their core.

2.3 Question 2a: Is the proposed lead indicator, resource productivity (GDP/DMC), an appropriate indicator for measuring resource efficiency?

Resource productivity is not an appropriate indicator for measuring Europe's resource use. This indicator cannot be used to achieve the Commission's vision for 2050, whereby "the EU's economy respects constraints and planetary boundaries", since it does not accurately show whether an economy has improved or worsened its resource use. We believe it is therefore not suitable for use.

- **It is an aggregated indicator**, and it combines economic and environmental information. By adding different statistical data using weights and proxy converting factors, the result of this indicator is an artificial one that does not reflect Europe's use of resources.
- **It does not include all of the materials used for consumption, since it excludes indirect flows.** In other words, it only considers the weight of finished goods entering the EU economy, rather than the material required to produce these goods. The indicator therefore promotes imports over domestically produced goods.
- **This productivity indicator only measures the materials used by an**

economy (excluding water, land or carbon emissions), providing an incomplete picture of the total quantity of resources used. For example, it might indicate that a move to a bio-based economy will increase productivity, but in reality this move will result in much more land and water being used, and this increase in use will not be made apparent by the indicator.

- **Because it is linked to GDP, the results imply that richer countries are more sustainable**, despite their higher levels of resource use.
- **Adopting a productivity approach rewards business as usual (simultaneous economic growth and resource consumption growth).** For example, between 1980 and 2005, the world economy increased its resource productivity, due to the fact that it increased the amount of economic value created per unit of material consumption by 30%. Despite this progress, global material extraction has increased by almost 80% since 1980 and is currently around 70 billion tonnes³.

It is essential that the European Commission move away from using a misleading headline indicator. If resource productivity is the indicator used to measure Europe's use of resources, the EU will maintain the current system of high natural resource consumption. This is not the transformation that is proposed in the Resource Efficiency Roadmap.

If the Commission still wants to adopt a leading indicator, we would advocate that this is used together with the indicators in the dashboard. In that case, the leading indicator would need to measure the overall amount of materials needed for the economy, including indirect flows and embedded materials. Therefore, we would advocate that the Commission adopts the Total Material Consumption (TMC) indicator.

We realise that the TMC indicator is not readily available from the EUROSTAT. The nearest available indicator is the Raw Material Consumption (RMC). However, the RMC does not incorporate the indirect flows (in other words, the unused material needed across the supply chain).

Despite the fact that RMC is far from perfect, Friends of the Earth Europe and the EEB would argue that the RMC could be used for a maximum

of two years, while data for the right indicators is being collected.

The Commission should not use only one indicator to measure Europe's use of resources. A set of indicators needs to be used, covering water, land, carbon and materials. Due to the current unavailability of data, the RMC could be used for a maximum of two years, while data is collected to calculate the TMC. The resource productivity indicator does not meet the needs of the EU and should be abandoned.

2.4 Are the appropriate indicators included in the dashboard of macro-indicators? Are there any other indicators that should be considered?

The Commission is proposing to measure the overall amount of water, land and carbon used. To do that, we agree that the carbon footprint, the water footprint and the land footprint indicators need to be used.

We also think that it is important to measure overall material use, but this may be covered if the Raw Materials Consumption indicator is used.

We are concerned that there is currently no clear timeline for adopting the footprint indicators – in our view it is important to commit to a rapid adoption timeline. Delivery of the initial estimates of the footprints should happen simultaneously with data and method development aimed at improving data quality over time.

Note that we believe that Carbon Footprint (an impact indicator) is more useful than Energy Footprint, as it includes non-energy related global warming emissions such as methane and N₂O.

In addition, it is important that work on the environmental impact indicators that are also listed in the dashboard does not lead to delays in the delivery of the resource use footprint indicators.

We support the proposal of a dashboard of land, water and carbon footprint indicators. However it is important that initial estimates of these indicators are published rapidly, with data and methodological improvements happening in tandem with publishing the results.

2.5 Are the appropriate indicators included in the third tier of thematic indicators? Are there any other indicators that should be considered?

Key points on the third tier:

- An indicator of jobs in green sectors should be added – e.g. jobs in waste and resource management, renewable energy etc.
- The top-level waste indicator should be residual waste, echoing the desire for “residual waste close to zero” in the resource efficiency roadmap
- Under Natural Capital and Ecosystem Services, two new indicators should be added, the number of species and habitats in a favourable conservation status and the number of water bodies in good status. Relevant data for these indicators are held by the EEA.

2.6 Are the appropriate indicators included in the scoreboard? Are there any other indicators that should be considered?

Under the waste section, we suggest the addition of the following indicators to ensure that there is a complete picture of waste recycling rates per sector:

- Recycling rate of Commercial and Industrial waste
- Recycling rate of construction waste
- Residual waste

These three indicators are collected by Eurostat.

Also, an effort should be made to capture reuse and preparation for reuse practices as well as leasing.

2.7 Which indicators would be best suited for potentially setting targets by 2013 and for the future?

Targets are essential for ensuring that resource-use reduction takes place, thereby avoiding the ‘rebound’ that occurs due to increased demand for a resource.

For this reason, it is imperative that the Commission does not use any aggregated indicator, such as resource productivity, to set targets. This would cause negative effects such as the promotion of policies that increase Europe's use of water and land. For example, a resource productivity target will have undesired effects such as promoting a move to a bio-based economy, which will require an increase in the use of land and water.

The best-suited indicators for setting targets are the ones to be used in the dashboard:

- Water footprint (in litres);
- Land footprint (in hectares);
- Carbon footprint (in tonnes CO₂ equivalent); and
- Material footprint (in tonnes).

These indicators can be used as an effective method of monitoring and setting targets for resource use, not only at the country level, but also at the organisation level and for individual products.

The dashboard of indicators will allow decision-makers to have transparent data from which analysis is easy to draw. Also, the rebound effect can be avoided since the overall use of all resource categories will be equally monitored.

Furthermore, a well-designed strategy for better resource use needs to have the water, carbon, land and material footprints integrated into all EU policies so that the EU can move to an absolute decoupling of resources.

- **The four indicators should be part of all EU impact assessments**, which will provide a proper analysis of whether any new policy will result in an increase in resource use. Had a proper resource measurement system already been in place, the impact assessment of the biofuel targets in the Renewable Energy Directive would have highlighted the massive increase in land and water use created by these targets.
- **The indicators should be part of the Europe 2020 headline indicators used in the Commission's Annual Growth Survey**. This would give a powerful signal to member states about the link between resource efficiency and the overall economic, environmental and social success of the EU.
- **The indicators should underpin any decision on subsidies, VAT reductions, etc.** so that the right economic tools promote a real reduction in resource use, at the same time as promoting investment in innovative solutions and new business models.

The Commission needs to use the land, water, carbon and material footprints to set EU-wide targets. These also need to be used in impact assessments, Europe 2020 and other high-level policies.

3. Contacts and web sites

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4. References

¹http://ec.europa.eu/environment/resource_efficiency/haveyoursay/current_consultations/26072012_en.htm

² For example, material footprint is one of the data bases for calculating the DMC and EMC of countries. SERI (2009) *How to measure Europe's resource use*

http://www.foeeurope.org/sites/default/files/publications/FoEE_SERI_measuring_europes_resource_use_0609.pdf

³ SERI (2012) *Green economies around the world?* http://seri.at/wp-content/uploads/2012/06/green_economies_around_the_world.pdf

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