Submission to the European Commission on Resource Efficiency Indicators

INTRODUCTION

The European Commission (EC) is consulting on proposals to develop a suite of **Resource Efficiency Indicators**, which were initially set out in its Roadmap to a Resource Efficient Europe. The EC suggests that indicators are needed to monitor progress and to allow for benchmarking and comparison between Member States.

The EC has suggested that this consultation aims to:

- inform stakeholders about their analysis on resource efficiency indicators;
- stimulate responses and ideas from individuals and organisations; and
- allow for informed discussion.

The Commission's aim is to gather a wide range of options and ideas on how it can best measure, monitor and communicate the inter-linkages between the economy and natural resources.

Information about the consultation can be accessed here:

http://ec.europa.eu/environment/consultations/resource_en.htm

This document sets out the **European Compost Network's** response to this consultation.

Submission to the EC was made using the online form on **19 October 2012.**

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SUMMARY OF PROPOSALS

The aim of the work is to develop indicators that monitor the status of resource efficiency across Europe, specifically covering the following elements:

- Natural capital base
- Production and consumption perspective
- Growth and competitiveness
- Risks and sustainability thresholds

The selection of indicators has been made using "RACER" (Relevance, Acceptability, Credibility, Easiness and Robustness) methodology. In addition, other factors were considered, including: timeliness, suitability for policy making, consistency and coverage.

The EC has proposed a three-tiered pyramid of indicators, namely:

1) **One lead indicator on material use** – it is proposed that this will be the ratio of Gross Domestic Product[1] (GDP) to Domestic Material Consumption[2] (DMC). The higher the GDP/DMC ratio, the better the economy performs.
2) A dashboard of **macro-indicators on water, land and carbon**. The following are proposed:

	Production / territory perspective	*Consumption / global supply chain perspective*
Land	Artificial land or built-up area (km²) – available with restrictions in time series	Indirect land use / embodied land for agricultural and forestry products (km²) – to be developed
Water	Water exploitation index[12] (WEI, %) – available with restrictions on completeness of data and regional/temporal resolution (river basin/intra-annual variations)	Water footprint – to be updated and improved or Embodied water – to be developed
Carbon	GHG emissions (t) – available	Carbon footprint – estimates available from scientific sources

[1] **Gross domestic product** is the market value of all officially recognized final goods and services produced within a country in a given period. It is the most frequently used measure for the overall size of an economy.

[2] **Domestic Material Consumption** measures the total amount of materials directly used by an economy and is defined as the annual quantity of raw materials extracted from the domestic territory, plus all physical imports minus all physical exports. The DMC indicator provides an assessment of the absolute level of the use of resources, and allows distinguishing consumption driven by domestic demand from consumption driven by the export market.

3) A base of **theme specific indicators**. These include:

THEMATIC INDICATORS		
TRANSFORMING THE ECONOMY		
Turning waste into a resource		
2.1.1 Total waste generation	Eurostat	2008
2.1.2 Municipal waste	Eurostat	2010
2.1.3 Recycling rate (of municipal waste)	Eurostat	2010
2.1.4 Landfill rate (of municipal waste)	Eurostat	2010

and

Land and soils		
3.2.1 Soil erosion by water	JRC	2012
3.2.2 Gross nutrient balance (nitrogen and phosphorus)	Eurostat	2008

QUESTIONS POSED BY THE EC

The EC has posed a number of specific questions, requesting that comments be submitted through an online form:

1) What are the key issues that need to be addressed by indicators to support resource policy?
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? More specifically:
    a) Is the proposed lead indicator, GDP/DMC an appropriate indicator to measure resource efficiency? Are there any better alternatives that should be considered?
    b) Are the appropriate indicators included in the dashboard of macro-indicators? Are there any alternatives that should be considered?
    c) Are the appropriate indicators included in the third tier of thematic indicators? Are there any other indicators that should be considered?
    d) Are the appropriate indicators included in the Scoreboard? Are there any other indicators that should be considered?
3) Which indicators would be best suited for potentially setting targets, by 2013 and for the future?

1 What are the key issues that need to be addressed by indicators to support resource policy?

The European Compost Network ECN e.V. (EU transparency register identification number 26513411360-51) is the leading European membership organisation promoting sustainable recycling practices in composting, anaerobic digestion and other biological treatment processes of organic resources. Our purpose is to work with practitioners, researchers, technicians and policy makers to deliver integrated organic waste recycling solutions that generate high quality products for the benefit of the environment and users of the recycled products. We serve as a central resource and network for the organic waste recycling sector in Europe, as well as the emerging bio-based economy.

ECN's vision is a Europe in which all organic resources are recycled to land sustainably and/or used to generate renewable energy to benefit the global and local environment, to contribute towards sustainable agriculture, improve human health and benefit the European market. To achieve this, effective recycling in all member states should be built on separately collected organic wastes, using trained operators for biological processing. Biological treatment processes should be monitored within an independent quality assurance scheme in order to manufacture quality compost and digestate that can be applied to land safely.

ECN's activities thus cut across a number of resource areas, including:

- Carbon applied to soils in the form of compost, which has implications for reducing soil erosion (thereby improving soil structure, improving water infiltration and water holding capacity), increasing soil organic carbon (thereby increasing carbon sequestration and reducing greenhouse gas release).
- Returning plant nutrients (especially Nitrogen, Phosphorus and Potassium, as well as micro-nutrients) to soils. Without effective organics recycling these nutrients will be lost to agricultural land, due to their disposal in either landfill or loss to the air following thermal treatment (e.g. incineration). In particular, ECN's activities directly affect:
    - Phosphorous re-use – this is a finite resource, with a Green Paper from the Commission expected later this year.
    - Nitrogen losses – As most of the nitrogen in composted products is available in slow release form (typically 10 – 15% will be available for plant uptake in the first year following application), this reduces losses from soils compared with inorganic nitrogen fertilisers. The use of composted materials therefore has the potential to reduce the Gross Nutrient Balance.
- Offsetting the use of peat in horticultural growing media. Peat use is widely recognised as environmentally detrimental due to associated effects of ecological habitat destruction and greenhouse gas emissions. Compost can partially replace peat in growing media blends, therefore contributing towards biodiversity targets and reducing greenhouse gas emissions.
- Creating renewable energy sources (electricity and/or heat derived from biogas) through anaerobic digestion plants for distribution through centralised networks.

Therefore, from ECN's perspective, the key resource issues are:

- Conserving soils, in particular soil organic matter;
- Effective and efficient nutrient and organic carbon recycling;
- Reducing greenhouse gas emissions;
- Safeguarding finite natural resources (i.e. peat); and
- Creating renewable energy through biological treatment processes (bioenergy)

2 (a) Is the proposed lead indicator, GDP/DMC an appropriate indicator to measure resource efficiency? Are there any better alternatives that should be considered?

This question has been left intentionally blank, as ECN is unable to answer it in a meaningful way.

2 (b) Are the appropriate indicators included in the dashboard of macro-indicators? Are there any alternatives that should be considered?

BIOENERGY

ECN suggests that the Commission considers incorporating a bioenergy-related indicator into this category. Much has been said in recent years about the potentially detrimental effects of biofuel manufacture through competition with food production and intensive production methods leading to a decline of soil fertility, whilst the potential for bioenergy generation of waste through anaerobic digestion (e.g. of food wastes) offers an environmentally promising alternative.

It is estimated that in 2007, manufacture of biogas was in the region of 5.9 M tonnes of oil equivalent (toe), with a theoretical potential of around 40 M toe by 2020 (source: European Biomass Association, 2007). We therefore suggest that the boundary between resources and bioenergy be explored further, with a view to developing a bioenergy-related target balanced with a target for organic carbon (humus) and nutrient recycling via composting (discussed below).

RECYCLING PLANT NUTRIENTS

ECN also suggests that the Commission considers the possibility of developing an indicator that tracks the recycling of organic carbon into humus (compost) and plant nutrients (organic fertilisers). In particular, phosphorous is acknowledged to be a finite resource, with a Green Paper from the Commission expected later this year. Organics recycling processes have a unique role to play in recycling nutrients such as phosphorous; therefore we recommend that a target addressing this issue be developed.

2 (c) Are the appropriate indicators included in the third tier of thematic indicators? Are there any other indicators that should be considered?

ECN believes that an additional target should be included under the section "Turning Waste into a Resource", namely "Composting and Anaerobic Digestion Rate (of municipal waste)". This could form a new indicator 2.1.5. We agree that municipal waste offers the best data source.

Data are publicly available on the extent of composting and anaerobic digestion (combined activities) of municipal waste from Eurostat. By establishing this new indicator, it would provide a useful benchmark to consider potential impacts on soil, greenhouse gas emissions, nutrient recycling, biodiversity and bioenergy, in addition to resource recycling. It therefore has potential to be a multi-faceted target, due to its impact on a number of resource policy areas.

2 (d) Are the appropriate indicators included in the Scoreboard? Are there any other indicators that should be considered?

A target for "Composting and Anaerobic Digestion Rate (of municipal waste)" as discussed above in 2 (c).

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

Data on municipal waste arisings and its treatment (recycling and disposal) are well established and provided by member states annually. However, we wish to point out that the definition of municipal solid waste does differ between different member states. This is an issue that requires resolution at some stage in the future.

Notwithstanding, as Eurostat data exist, ECN therefore recommends that the proposed targets "Turning Waste into a Resource", including a new indicator on composting and anaerobic digestion, be considered for the 2013 targets.

ECN firmly believes that European bio-waste recycling targets, as suggested in the 2008 Waste Framework Directive (2008/98/EC), need to be established so that the environmental and economic benefits described elsewhere in this response are realised. We strongly **urge the Commission to establish a bio-waste recycling target for separately collected biowaste, in line with Article 22 of the Waste Framework Directive by 2013**.