



*footprint support  
for local authorities*



Local Footprints is a joint project between WWF Scotland and the Sustainable Scotland Network, with funding and support from Eco-Schools Scotland, the Improvement Service, the Scottish Government and ScottishPower.

# Local Footprints Briefing

## Using Ecological and Carbon Footprint Data in Single Outcome Agreements

**Local Footprints**  
Islay House  
Livilands Lane  
Stirling FK8 2BG

t: 01786 433083  
[www.localfootprints.org](http://www.localfootprints.org)

### Introduction to the Local Footprints Project (LFP)

The purpose of the Local Footprints Project is to help local authorities and schools make an effective contribution to reducing Scotland's footprint through the use of analysis to inform policy, to raise awareness and to change behaviour. It is a joint project between WWF Scotland and the Sustainable Scotland Network (SSN), with funding and support from Eco-Schools Scotland, the Improvement Service, the Scottish Government and ScottishPower.

Local Footprints provides advice and training to local authorities using the footprint data for awareness raising and policy development. Local authorities have asked the LFP to provide a briefing note and training event on the appropriate use of both the ecological and carbon footprint indicators.

The following sections provide detail on using the ecological and carbon footprint data in your Partnership Single Outcome Agreements (SOA).

### Footprints and 2008 Single Outcome Agreements

In November 2007, COSLA and the Scottish Government signed a concordat setting out a framework for local government to contribute to the delivery of the national Strategic Objectives, outcomes and targets, and in this way to support the Scottish Government in the delivery of its overarching Purpose.

Councils and Community Planning Partnerships (CPP) produce the SOA based on local outcomes and indicators to demonstrate progress in delivering national priorities while reflecting local priorities and circumstances. National Outcome 14 states: "We reduce the local and global environmental impact of our consumption and production". The national target and indicator that contributes to this outcome is to: "reduce overall Ecological Footprint".

Several local authorities have contacted the Local Footprints Project for advice on using the footprint as an indicator, in line with the national indicators. In November 2008, Local Footprints provided a training course on using the data – all presentations from the event are available on [www.localfootprints.org](http://www.localfootprints.org). Twenty-one local authorities used ecological and/or carbon footprint terminology, data, and/or outcomes in the 2008 SOAs.

The following sections provide more detailed information on the footprint data, frequency and updates. Table 2 provides an example of using the footprint data in the SOA template issued by the Scottish Government and COSLA.

## **Using footprint indicator in 2009 Single Outcome Agreements**

The footprint data reflects the geography and the characteristics of the local authority area and population, as well as local and national policies implemented at that time. The data is therefore useful as part of the **Local Area Profile** within SOAs. To further interrogate the footprint data, a software tool called Resource Energy Analysis Programme (REAP) was developed by the Stockholm Environment Institute at York University (SEI-Y). Community Planning Partners can use REAP to test policy changes driven locally and nationally in reducing footprint.

According to **Scottish Government and COSLA guidance** published in October 2008, the key lessons learned from the first SOAs was that the agreements require the components outlined below. This section provides information on how using the footprint as an outcome and data set can achieve these goals and provide robust information for the CPP SOA.

- **strategic focus** – with a manageable and meaningful number of outcomes and robust and measurable indicators – rather than being a compilation of unprioritised plans and activities;

**Footprint data provides high level area-wide environmental impact data on transport, housing energy, food and more. The footprint data provides an average (per capita) figure that can be used to provide a baseline from which to monitor the direction of travel in future. Footprint is an aggregate indicator, and a useful high level compass to measure progress towards environmental sustainability. Underpinning this strategic outcome with service plans and projects across the partnership (below the waterline) is critical to footprint reduction.**

- **actual outcomes** – it should clearly focus on people’s quality of life and opportunities, and on the supporting social, economic and environmental conditions;

**Footprint data and the indicators of ecological and carbon footprint are outcome indicators. This data can be used and modelled to identify how policies and plans are impacting outcomes related to natural resource use and CO2 emissions in the area. The footprint data is provided on a per head basis and can therefore be easily related and described to a variety of community audiences.**

- **evidence-based** – it should be based on an integrated area profile of social, economic and environmental conditions and trends, and

consideration of future challenges and opportunities;

**All local authority areas in Scotland can access (for free) their ecological and carbon footprints providing a baseline from which to assess progress in future. To access you LA data visit [www.sei.se/reap](http://www.sei.se/reap)**

- **capable of delivery** – it should show a clear line of sight to the supporting plans and activities which should lie ‘below the waterline’;

**Making footprint reductions will be difficult. Reducing footprint is a long term outcome that will require partnership working and delivery. Partnerships across Scotland can deliver footprint reductions through the community plan, local plans, transport strategies, local housing strategies and more. By using the footprint data in SOAs, partnerships can ensure that their plans and policies are working together in a joined-up and strategic manner to reduce environmental impact. By using the footprint data, partnerships can assess the probable environmental impact, resource use and CO2 emissions of their strategic policies. For example, councils are using footprint data to assess developments outlined in local plans. Using footprint reduction as a local outcome can provide a strategic framework under which environmental priorities can sit.**

- **continuous improvement** – should identify the further work needed, including arrangements to secure full ownership from all local partners and communities.

**Footprint reductions will require partnership working, and using footprint as a local outcome will encourage continuous improvement by providing a robust benchmark to monitor plans, policies and projects.**

**Table 1 Footprint Data Details**

<p><b>Definition</b></p>	<p>An Ecological Footprint <b>represents the area of land and water required to produce the resources we use and absorb the wastes we produce.</b></p> <p>A Carbon Footprint <b>represents the total amount of carbon dioxide emissions that are directly and indirectly caused by human activities.</b></p>
<p><b>Unit of measurement</b></p>	<p><b>Ecological Footprint - Global hectares / capita (gha).</b>          The footprint is measured in a standardised area unit equivalent to a world average productive hectare (abbreviated to global hectares or gha). This permits comparisons between countries and regions.</p> <p>Gha/capita can be translated into a <i>number of planets</i> (earths). This simple equation can be used to help partnerships relate this robust and complex data into a useful metaphor for environmental limits.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">= Scotland Ecological Footprint ÷ world bioproductive land = No. of Planets              = 5.34 gha/capita ÷ 1.8 gha/capita = <b>3 planets</b></p> </div> <p><b>Carbon Footprint - CO2 tonnes/capita (not CO2e)</b></p>
<p><b>Data sources</b></p>	<p>SEI-Y used the data below to update the footprint data in the REAP model. REAP houses the database with Carbon and Ecological Footprints for all Scottish local authorities. Local authorities can use this database to develop scenarios and input more local data to provide more detailed local footprints.</p> <ul style="list-style-type: none"> <li>● <b>2004 National Environmental Accounts</b> - direct GHG emissions/industrial activity .</li> <li>● <b>2003 National Footprint Accounts provided by the Global Footprint Network</b></li> <li>● <b>UK Trade data in input-output tables</b> = interactions between industrial sectors</li> <li>● <b>Map output by 123 industrial sectors</b> to product groups and services that people and government consume</li> <li>● <b>Mosaic UK profiles</b> of EFS expenditure</li> <li>● <b>Experian mid-year household estimates</b> by Mosaic UK type at local authority level</li> <li>● <b>National Travel Survey and Transport Statistics</b> Great Britain by the Department for Transport and the Office of National Statistics.</li> <li>● <b>Household energy consumption data</b> by local authority area provided by AEA and published on the Department for Business, Enterprise and Regulatory Reform (BERR) website.</li> </ul> <p>Full details and technical reports on the data are available on the Local Footprints website <a href="http://www.localfootprints.org/index.asp?pg=21">http://www.localfootprints.org/index.asp?pg=21</a></p>
<p><b>Geography</b></p>	<p>local authority and national level</p>
<p><b>Base Data</b></p>	<p><b>2004</b> - SEI will publish the 2006 data in May 2009. From May 2009, SEI will provide updates annually. Therefore 2007 data will be available May 2010. Due to the number of datasets required (listed above) the data will always incur a time lag of 2-3 years.</p> <p>From 2009, the data will be comparable with all future data updates. However, due to funding constraints SEI-Y are currently unable to provide back cast time series data for previous years. Local Footprints is working with SEI-Y to alleviate this issue, and hopes to find the one-off funding required to ensure that any future methodological advances allow back casting and time series information to be available.</p>
<p><b>National Comparison</b></p>	<p>21 local authorities used this measure and terminology in the 2008 SOAs. The Welsh Assembly Government uses EF as a national headline indicator. Living Planet Report produced by WWF reports national Ecological Footprints.</p>

**Table 2 Example of using the footprint in the SOA template**

**National Outcome 14** *We will reduce our local and global environmental impact of our production and consumption*

**Local Outcome**

**To stabilise (and reduce in future) the Ecological Footprint and CO2 emissions of the local authority area.**

Local context

ABC local authority area has a **population of 200,000** and growing. ABC Partnership has targets to increase our population, and as our population grows, our resource demands will also increase. ABC area will require more homes and need to increase the capacity of all the partner's services. Currently, the ABC **area's ecological footprint** – or the measurement of our global natural resource use - is 5.3 global hectares/capita. This means that if everyone in the world consumed resources as we do in ABC area, we would require 3 planets to supply all the resources and consume all of our waste. The **ABC area's carbon footprint** – or the measurement of the carbon dioxide pollution resulting from our consumption - is 11 tonnes CO2/capita. The largest contributors to both our EF and CF are housing, transport and food – comprising nearly 70% of the footprint(s).

The ABC **Council carbon dioxide emissions** have been calculated based on the Local Authority Carbon Management Programme (LACMP) protocol. The ABC Council emissions are 160,000 tonnes of carbon dioxide equivalents/year. These emissions account for all of our council buildings and properties, the collection and disposal of the area's residential and commercial waste, and the emissions produced by our council's fleet vehicles.

**Links to other National Outcomes**

This Outcome links robustly to the **National Purpose Targets** on reducing emissions, **National Outcomes 14, 12 and 10**, the national indicator 32 on ecological footprint and the local indicator on ecological/carbon footprint identified by the Improvement Service.

<b>Local Outcome/s</b>	Indicator/s <i>(noting frequency / type / source)</i>	Baseline at 2006-07	'Progress' target/s to 2010-11	'End' target/s & timescale/s
<b>To stabilize (and reduce in future) the ABC area's ecological footprint and CO2 emissions.</b>	ABC Area Ecological Footprint Source: SEI-Y REAP tool	5.3 gha/capita (2004)	To target Priority Areas of the EF through the LHS and LTS: Housing 1.5 gha Transport 1.1 gha	To stabilise the EF by 2020
	ABC Area Carbon Footprint Source: SEI-Y REAP tool	11.12 CO2t/capita (2004)	To target Priority Areas of the CF through the LHS and LTS : Housing 4.0 CO2t/capita Transport 3.0 CO2t/capita	To stabilise the CF by 2020
<p>Brief links to relevant plans or other commitments of the local partners to support delivery of these outcome/s (with hyperlinks if possible)</p> <p><b>Local Housing Strategy</b> - In developing the LHS, ABC Council completed ecological and carbon footprint scenarios to identify policies and interventions to reduce housing energy consumption and footprint.</p> <p><b>Local Transport Strategy</b> In developing the LTS, ABC Council completed ecological and carbon footprint scenarios to identify policies and interventions to encourage modal shift and improved access to services through active transport (walking and cycling)</p>				
<p><b>Scottish Government Ask</b> To continue to encourage &amp; support LAs and CPPs in building capacity to use footprint data.</p>				