



eco footprint[©]

Ecological Footprint Analysis and Reporting Process



Making Environments Work for People!

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What is Ecological Footprinting?



Every business uses the ecosystem services produced by the natural environment. This includes providing inputs for the things your business consumes, such as natural materials and water to make the paper, equipment and products that you use or manufacture. The natural environment also receives, processes and treats your outputs - such as wastewater and greenhouse gas emissions.

The amount of ecosystem services used by your business can be analysed and reported on in an “ecological footprint”. This “ecological footprint” is a

statement of the amount of biologically productive land and sea area necessary to supply the resources that your business consumes, and to assimilate associated waste. It is a key indicator of sustainability, particularly in the context of “environmental carrying capacity” limits.

An ecological footprint is a measure of demand on the Earth's ecosystems. It is a standardised measure of demand for natural capital that may be contrasted with a region's, or the planet's ecological capacity to regenerate.

Why should my Business do Ecological Footprinting?



While many businesses are now reporting on their carbon and water footprints – this is essentially only a statement of the amount of water consumed and carbon dioxide equivalent emitted – such footprint reporting doesn't give any idea of how this consumption / emissions relates to the ability of regional ecosystems to meet these demands.

Internationally – environmental reporting is now moving towards an integrated **ecological footprint disclosure framework**, in which the carbon and water footprints of the business are integrated into one reporting framework along with other aspects of ecosystem service use. This Ecological Footprinting disclosure framework reports resource use and emissions outputs, but also explains how this relates to demand for land and sea-based ecosystems. All other aspects of ecosystem service use (e.g. natural materials consumed) by a business is also transparently reported in this framework.

Businesses that are committed to sustainability need tools to help them identify what types of impacts they are having on the environment to properly inform them as to how they can reduce these impacts. The ecological footprinting process not only allows businesses to quantify their resource-use impacts, it also provides the detail necessary to direct how different choices in resource inputs and outputs affect their level of impact on the environment.

Because the ecological footprinting approach provides information on what types of ecosystems are being used by the business, it can use its ecological footprint information to **invest its corporate social and environmental responsibility funds in the communities, areas or types of ecosystems / agricultural production systems that underpin the business's natural resource consumption.** **The ecological footprinting process can also support the development of water and carbon offsets** through providing clear estimates of the land areas which need to be conserved or restored to achieve water production or carbon sequestration and storage.

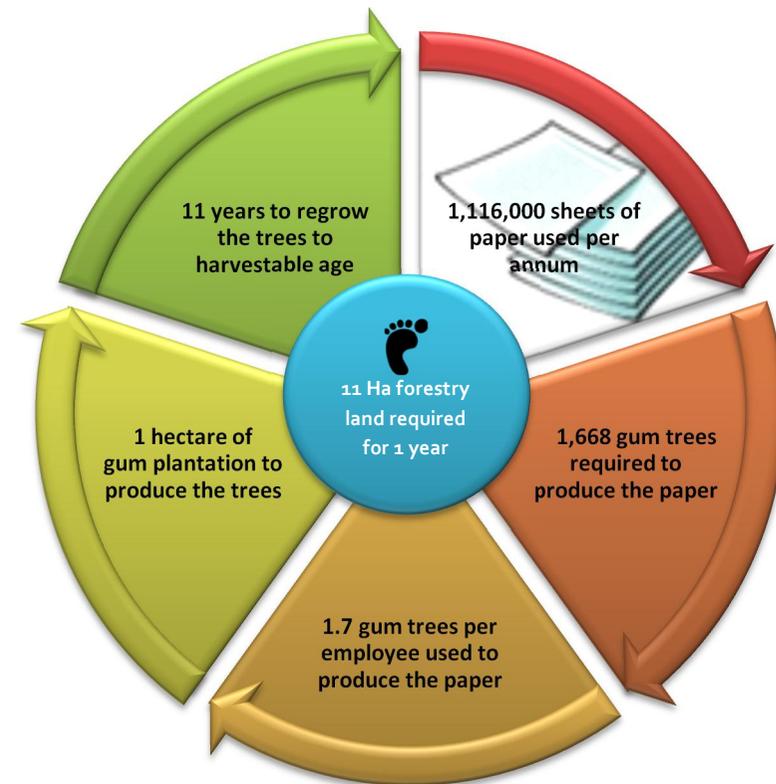
What is the eco-footprint Analysis and Reporting Process?

FutureWorks! has developed an 'open-box' ecological footprint analysis tool, which can be used to analyse and report on the ecological footprint of your business. This accounting method differs from other widely utilised ecological footprinting methodologies in that it is transparent, allowing one access to the assumptions or formulae used in the calculations (at present none of the other available methodologies are transparent). Furthermore, the ecological footprint is not only expressed as a single value i.e. total land area required to support your business, but also the areas of land required for each of the inputs or outputs measured and the period of time required to produce that particular resource or service.

How does it Work?

The eco-footprint analysis and reporting process uses a spreadsheet model that records total input and output volumes of resources to calculate the area of land, water and sea needed to produce the resources and treat wastes. The calculation factors are adjusted to the region in which the ecosystem services are being consumed, as the ecosystems in different areas have differing productivity. Key aspects that the model reports on include water, wastewater, carbon emissions, fossil fuel storage, natural materials inputs, food consumption, paper consulting, solid waste and physical use of land.

These aspects are converted to areas of functional natural and agricultural ecosystems needed to produce the resources consumed, and to treat / process the waste outputs and emissions. For example, if your business uses 225 reams of paper per annum, and has 1,000 employees, the land-based ecological footprint for your paper use would be 11 hectares of forestry land locked up for 1 year to produce the paper consumed:



Why Should I use eco⁺footprint?

The Eco-Footprint Ecological Footprint Accounting Framework is the only ecological footprinting approach available in South Africa that is “open-box”.

This allows flexibility in the information that can be analysed, and allows the model to be tailored to suit the specific regional context of your businesses resource consumption and waste / emissions outputs. This is important, particularly if you want to use the information to direct carbon and water neutrality programmes that are implemented locally, or if you want to use the information to adapt your supply chain to reduce your ecological footprint.

By using Eco-Footprint, you will develop a deep understanding of which natural resources and ecosystems your business depends on:

- ✓ This is critical for early identification of increasing resource scarcity issues, and possible future regulatory risks that may affect your supply chain.

- ✓ This will help you be more targeted in your Corporate Social Responsibility and Environmental Investment schemes, allowing you to invest in the protection of the agricultural areas and ecosystems that you depend on and have the greatest impact on.
- ✓ You will be able to modify your supply chain to limit inputs which have a high ecological footprint. Our process can be used to model how different resource use choices will affect your ecological footprint.

The ecological footprint can be used for **setting your business’s sustainability targets and for measuring the effectiveness of interventions to reduce your business’s impacts on ecosystems and the environment.**

Ecological Footprint Reporting will enhance your reputation and brand, to enhance your social licence to operate, and to improve relations with regulating authorities.

Applications

The Eco-Footprint Ecological Accounting Framework can be used for:

- ✓ Business and Corporate Ecological Footprint Accounting and Reporting
- ✓ Event Ecological Footprinting
- ✓ Carbon Footprint Reporting
- ✓ Water Footprint Reporting
- ✓ Informing CSR expenditure
- ✓ Informing carbon and water neutrality programmes
- ✓ Directing supply chain efficiency / improvement to minimise ecological impacts



When used with the Eco-Futures Process (www.futureworks/eco-futures), Eco-Footprint can be used to undertake all your business’s Ecosystem Services Reporting requirements, evaluate scenario’s and alternatives for your business that will assist you in setting and meeting your sustainability targets.