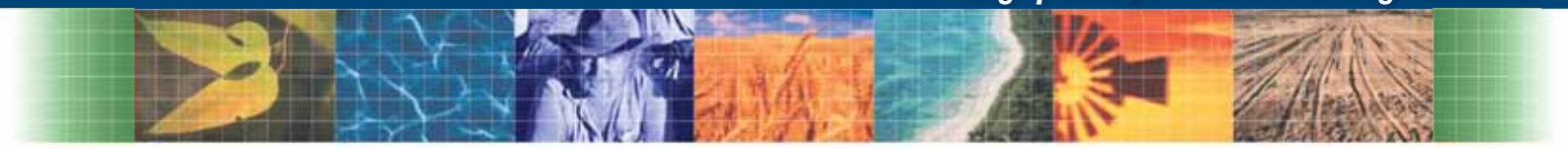
Australian Government
Department of Agriculture, Fisheries and Forestry
Bureau of Rural Sciences

National Land & Water Resources Audit
An Initiative of the Natural Heritage Trust

Signposts for Australian Agriculture



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# Assessing the environmental performance of the food value chain

## An extension of the Signposts for Australian Agriculture framework



### Environmental Reporting

The National Food Industry Council agreed in March 2005 that the Australian Government, in conjunction with industry, should develop consistent environmental reporting guidelines across all agrifood industries.

In response, the Department of Agriculture, Fisheries and Forestry funded a pilot project to assess the feasibility of extending the *Signposts for Australian Agriculture* (*Signposts*) framework beyond the primary production sector.

The project developed a framework and guidelines for environmental reporting using pilot studies of the confectionery industry and the bread sector of the baking industry.

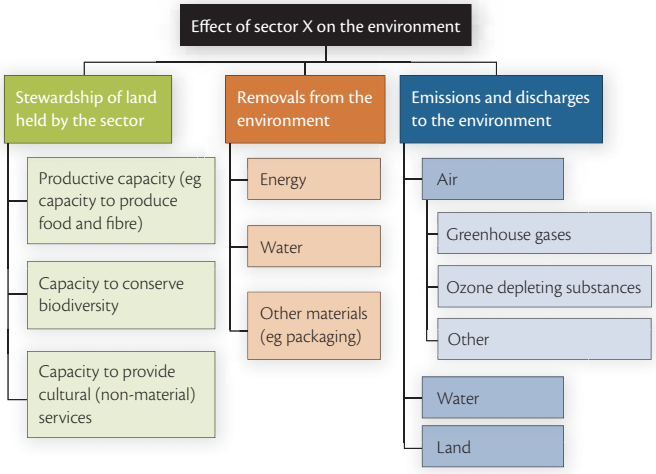
The framework can be applied to any sector of the food value chain – primary production, storage, transport, packaging and processing. It builds on existing industry initiatives and enables results to be combined along the food value chain, with each supplier providing the appropriate information to its customers.

To facilitate a consistent approach to environmental reporting the report recommends key actions for individual enterprises, industry organisations and governments.

There are a number of reasons why Australian agrifood industries should consider and report on their environmental performance. These include: demonstrating and improving environmental performance; possible cost savings; good corporate citizenship; regulatory compliance; market access; price premiums for some products in certain markets; and marketing benefits from a demonstrably 'clean and green' image.

Signposts is supported by the Australian Government's Natural Heritage Trust and the Department of Agriculture, Fisheries and Forestry (DAFF).

**Components of the proposed environmental reporting framework for the Australian food industry**




### Guidelines for Consistent Environmental Reporting

1. Decide on the subject of the report. For example, is it a specific product, a class of products such as 'white bread' or a broad category such as 'Australian confectionery'.
2. Identify the sectors that make up the food value chain for the chosen subject. Distinguish 'your' sector from those of your suppliers.
3. Generate data for your own sector for one or more of the components in the reporting framework (water, energy, greenhouse gas emissions etc.). This data can be used to prepare a report for an individual sector of the value chain. If you need to report for the whole chain up to and including your sector, continue to Step 4. Otherwise stop here.
4. Determine the amount of product or service you require from each of your suppliers to produce a unit of the chosen subject.

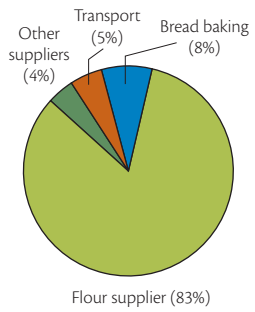
5. Ask each of your suppliers to provide data for the product or service they supply to you following these guidelines up to and including Step 6. You will need to specify the components (water, energy, greenhouse gas emissions, etc) for which you require information.
6. Combine the information obtained in Steps 3, 4 and 5 to generate an environmental report for the chosen subject from the start of the food value chain up to and including your sector.

## Generalised Framework for Reporting on any Sector of the Food Value Chain

The components shown in Table 1 are intended to apply to any sector of the food value chain although the relative importance of the components will vary. Suggested objectives and indicators are also listed in Table 1.

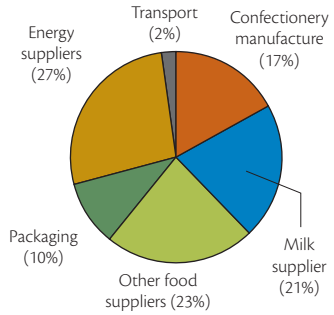
## Examples of Application of the Framework and Guidelines

As shown in examples 1 and 2, combining information from the food processing sector with information from each supplier can provide a result for the value chain up to the factory gate. This allows the environmental performance of each sector to be seen in perspective. 'Transport' refers to transport from each supplier to the factory.




**Example 1: Litres of water (L) used in the production of white bread**

The chart shows how the approximately 15 L of water used to produce a hypothetical kilogram of white bread are distributed across the value chain.




**Example 2: Energy (MJ) used in the production of milk chocolate**

The chart shows how the approximately 115 MJ of energy used to produce a hypothetical kilogram of milk chocolate are distributed across the value chain. The energy used in the production of cocoa is not included in this figure.

## Contact

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**Table 1: Components of the proposed environmental reporting framework for the Australian food industry**

| Component | Objective | Suggested Indicator[1] |
|---|---|---|
| **Stewardship of land** | Satisfy society's need for a mix of services | Amount of land 'held' combined with the three indicators below |
| **Productive capacity** | No reduction in productive capacity | Under development[2] |
| **Biodiversity conservation** | Maintain/enhance biodiversity | Proportion of land covered by native vegetation in 'good' condition |
| **Cultural services** | Maintain/enhance cultural (non-material) services | Under development[2] |
| **Removals from the environment** | | |
| **Energy** | Reduce/minimise | Direct energy use (joules) |
| **Water** | Reduce/minimise | Total water use (cubic metres) |
| **Other** | Reduce/minimise | Total material use (tonnes) |
| **Emissions and discharges to the environment** | | |
| Air | | |
| Greenhouse | Reduce/minimise | Total greenhouse gas emissions (tonnes of $CO_2$ equivalent) |
| Ozone depleting | Reduce/minimise | Total emissions of ozone depleting substances (tonnes of CFC-11 equiv.) |
| Other | Reduce/minimise | As appropriate |
| **Water** | Reduce/minimise | Significant discharges to water (tonnes) |
| **Land** | Reduce/minimise | Total amount of solid waste (tonnes) |

1 (Expressed as total and per unit of product or service). Each outcome indicator can be accompanied by a list of initiatives taken to address the component. The information will be useful for the sector in question but is not amenable to aggregation along the food value chain.
2 Suitable indicators for these components are being considered in the Signposts project. They can be added to the reporting framework as they become available.