



Final Report

Corporate Carbon Footprint Arla Foods amba

Commissioned by Arla Foods
Corporate Quality, Environment, Health & Safety





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Executive summary

Background

Global warming and climate change are the foremost environmental challenges facing the world today. They will only be tackled effectively if actors at all levels in society including governments, businesses, communities and individuals take responsibility for, and attempt to minimise, their greenhouse gas emissions.

Arla Foods is a market-leading producer of dairy products and climate change may have severe effects on its business at all levels, for example:

- Availability of raw materials – farm productivity may be affected by changing, and less predictable, climatic conditions and through the introduction of new pest species. This may also affect the availability and cost of fodder crops for dairy herds.
- Increased operating costs – fossil fuel use may be taxed more heavily with implications on the cost of manufacturing
- Changing consumer behaviour – the carbon intensity of products may come to affect consumers' purchasing decisions

Recognising the potentially important impact of climate change on its business, as well as its wider social responsibility to effectively manage its GHG emissions, Arla Foods has commissioned PE North West Europe to carry out a corporate carbon footprint analysis of its operations. This involves accounting for, and reporting on, the GHG emissions from all those activities for which the company is responsible.

Arla Foods will use this information to better understand the GHG emission “hot spots” in its operations and supply chain, and identify where the greatest capacity exists for reductions in GHG emissions. This will enable it to benchmark its activities and to develop an effective corporate carbon mitigation strategy and incorporate this in its existing “Closer to Nature” sustainability strategy.

This work will also help Arla Foods to present itself as a sustainable and environmentally aware company to its customers, current and future shareholders, employees, suppliers and other stakeholders.

Scope

Arla Foods' global operations have been assessed, with the exception of Rynkeby and Cocio as these two businesses are not considered part of the Arla Foods brand or of the overall “Closer to Nature” strategy.

The business activities covered in this assessment include:

- Farm processes
- Arla Foods' processing operations
- Transport
- Packaging



Activities that have not been included in the scope of the current study include:

- Business travel
- Non-processing operations (e.g. administrative offices)
- Advertising/marketing activities

A three year period from 2005 to 2007 has been assessed and results are reported separately for each year. Arla Foods will use the 2005 data as a benchmark against which to measure future performance.

Methodology

The GHG accounting and reporting approach undertaken in this study follows the guidance and principles set out in the “*Greenhouse Gas Protocol Corporate Accounting and Reporting Standard*” (hereafter referred to as the GHG Protocol) developed by the Greenhouse Gas Protocol Initiative. This is the most widely used and accepted methodology for conducting corporate carbon footprints.

The GHG Protocol requires emissions to be reported against the three different “scopes” described below:

Scope 1: Direct emissions from sources that are owned or controlled by the company (e.g. emissions from combustion of fuels in boilers, furnaces and turbines)

Scope 2: Indirect emissions associated with the generation of purchased electricity consumed by the company

Scope 3: All other indirect emissions as a consequence of the activities of the company that occur from sources neither owned nor controlled by the company (e.g. outsourced distribution).

Emissions covered under Scopes 1 and 2 are mandatory for reporting, while Scope 3 emissions can be reported on a voluntary basis.

Outside scope: Some activities fall outside these three scopes. An example is the combustion of biodiesel or other biomass-based fuels. GHG emissions associated with these activities are not derived from fossil sources and so are not adding to the net carbon dioxide load in the atmosphere. Emissions from burning biomass have been reported separately.

Another example is accounting for the selling of excess power or from energy recovery resulting from waste incineration. In such cases the users of this energy avoid having to generate it from other sources which would have their own associated GHG emissions. The GHG Protocol does not permit credits for “avoided energy production” to be included under Scopes 1-3, so these have been reported separately.

Results

Given the wealth of information generated in this study it is possible to examine the data from a number of different angles. Results are presented by:

- Scope
- Business Group
- Activity

Results presented by scope

Table 1: Arla Foods overall corporate carbon footprint reported by scope

Scope	Unit	Year		
		2005	2006	2007
Scope 1	t CO ₂ -e	395,754	368,751	353,694
Scope 2	t CO ₂ -e	247,368	255,511	252,969
Scope 3	t CO ₂ -e	9,474,534	9,464,855	9,227,037
Total	t CO₂-e	10,117,656	10,089,117	9,833,700

Figure 1: Arla Foods overall corporate carbon footprint reported by scope

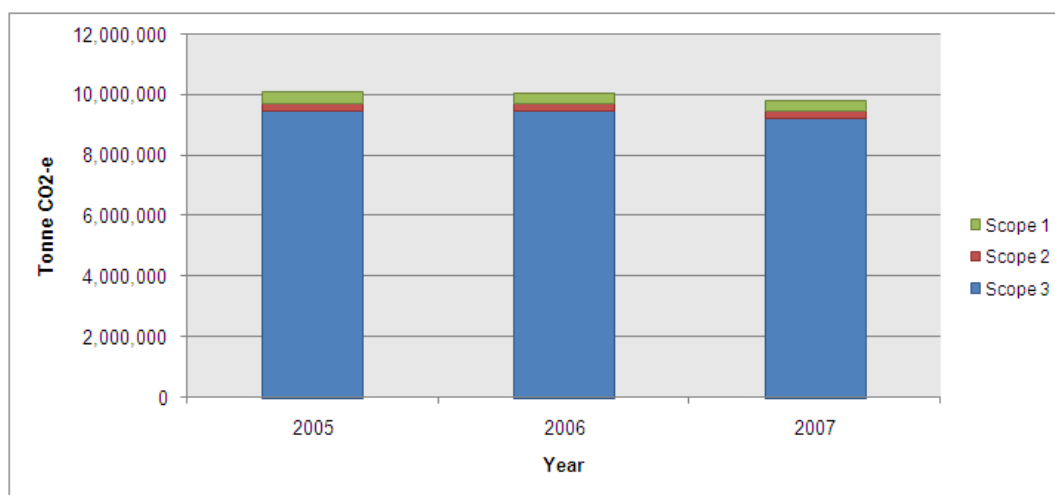


Table 2: Arla Foods GHG emissions outside the scopes defined in the GHG Protocol

Activity	Unit	Year		
		2005	2006	2007
Biodiesel combustion	t CO ₂ -e	368	354	394
Sold power*	t CO ₂ -e	-112,559	-95,879	-95,698
Waste incineraton*	t CO ₂ -e	-15,634	-11,004	-9,378

* Result in avoided impacts – hence negative values



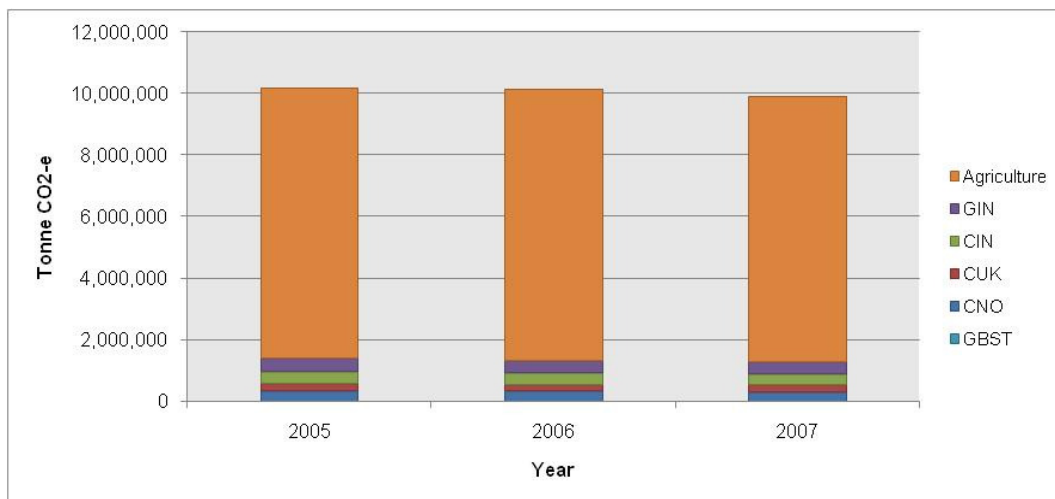
Results presented by Business Group

Table 3: Arla Foods overall corporate carbon footprint reported by Business Group

Business Group	Unit	Year		
		2005	2006	2007
Agriculture*	t CO ₂ -e	8,790,059	8,838,386	8,631,845
CNO	t CO ₂ -e	293,841	280,634	274,904
CUK	t CO ₂ -e	233,581	228,267	204,605
CIN	t CO ₂ -e	383,508	383,062	376,455
GIN	t CO ₂ -e	395,402	338,019	325,483
GBST	t CO ₂ -e	21,264	20,750	20,407
Total	t CO₂-e	10,117,656	10,089,117	9,833,700

* Agricultural emissions have not been allocated by Business Group so are presented separately

Figure 2: Arla Foods overall corporate carbon footprint reported by Business Group

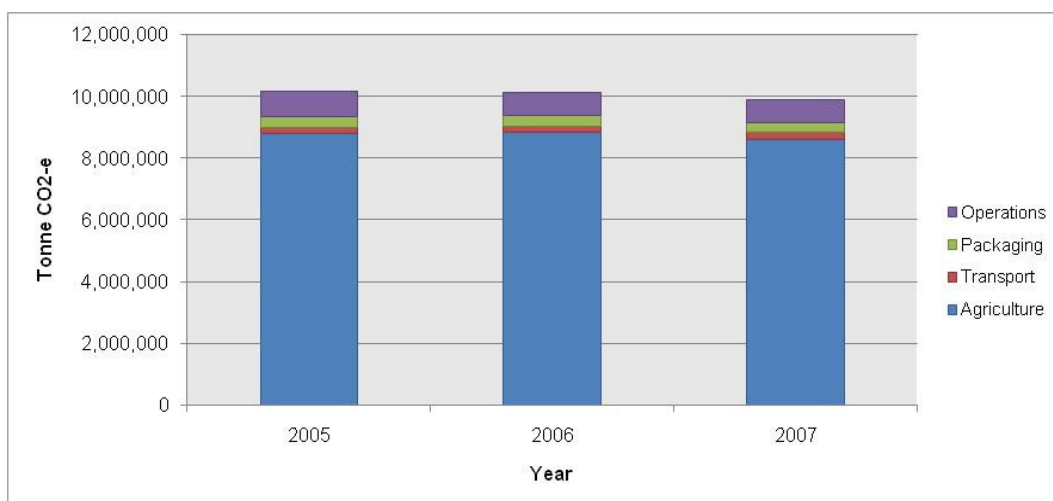


Results presented by activity

Table 4: Arla Foods overall corporate carbon footprint reported by activity

Activity	Unit	Year		
		2005	2006	2007
Operations	t CO ₂ -e	839,884	772,604	735,937
Transport	t CO ₂ -e	153,305	145,121	142,306
Agriculture	t CO ₂ -e	8,790,059	8,838,386	8,631,845
Packaging	t CO ₂ -e	334,409	333,007	323,612
Total	t CO₂-e	10,117,656	10,089,117	9,833,700

Figure 3: Arla Foods overall corporate carbon footprint reported by activity



Discussion

With this corporate carbon footprint analysis Arla Foods has taken the first step in an iterative cycle of activity to measure, understand and take action to reduce its GHG emissions.

Measurement is the necessary first step and one of the main goals of the study was to allow Arla Foods to select a baseline year (chosen to be 2005) against which to measure progress in future. The results from the three years studied already show some improvements with a 2.8% decline in GHG emissions from Arla Foods' global operations, from 10.12 Mt CO₂-e in 2005 to 9.83 Mt CO₂-e in 2007.

This reduction is largely due to lower raw material consumption and so may be a result of lower total product sales. It may be interesting and informative to develop some ratio indicators to assess e.g. GHG emissions/production volume to help understand this in more detail.



Considered by scope, the greatest impacts occur in Scope 3, and this is dominated by agriculture linked to milk production. Scope 1 & 2 emissions (those arising as a direct result of Arla Foods' operations and from electricity consumption at company sites) amount to only about 6% total emissions.

Considered by Business Group, agriculture is still seen to dominate (and is not separated by Business Group), and while contributions from Business Group-specific activities reflect the size of each division.

Considered by activity, agriculture is again seen to be the major contributor to overall GHG emissions. Energy, packaging, transport and waste all have relatively small contributions in comparison.