LiveWell for LIFE

WORKING TOGETHER FOR HEALTHY PEOPLE AND A HEALTHY PLANET

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Life

A balance of healthy and sustainable food choices for France, Spain and Sweden

— Report summary

Healthy people, healthy planet.

The LiveWell for LIFE Plates were developed by WWF with Ribble Consultants and associates.
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For further information and the full report visit www.livewellforlife.eu or contact us infolivewell@wwf.org.uk

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Foreword

This publication summarises the main findings of the report *A Balance of Healthy and Sustainable food choices for France, Spain and Sweden*, and is the result of LiveWell for LIFE project's work to define country specific sustainable diets for the three European countries.

The purpose of this summary report is to enable the project stakeholders to easily understand the findings of the initial research, supporting further engagement in the next stages of the LiveWell for LIFE project. The summary draws a concise picture of our work so far; it defines sustainable, low-carbon diets by illustrating and highlighting the composition of the LiveWell Plates. It also provides some general guidance on how the research detailed in the report could be translated into practice.

The findings of our research were presented to the Network of European food stakeholders at our first project workshop – Appetite for change – which was held in Brussels 18 September 2012. Members of the Network were also invited to input and share their views on the report during a three week consultation period. We received a large number of contributions for which we are grateful.

Our responses to the Network's comments and queries collected during the consultation period, as well as changes and 'next steps' for the project, can be found in the *LiveWell Plate evaluation report.*

Impacts of food production and consumption

Food is at the heart of many key environmental issues. Growing, producing and importing food contributes substantially to climate change. It's a driving force behind habitat and biodiversity loss and it's a huge drain on water resources. The change in the Western diet – to one that's high in meat, dairy and processed food – is a recent phenomenon. It's developed since the 1940s and it's coincided with a growth in health problems such as obesity, type 2 diabetes and heart disease. At the same time agriculture has intensified and factory farming has become widespread, so the food system has driven environmental degradation.

The world's population has doubled since 1960, and it's predicted to increase to over nine billion by 2050. So the pressure that feeding the world is putting on the climate and ecosystems has never been so high.

Global access to food is not equally distributed: half the global population is either underfed or overfed:

Approximately 1 billion people are undernourished and a further billion suffer from 'hidden hunger' – nutritional deprivation even when the supply of food is plentiful. On the other side of the coin, 1.5–2 billion people are overweight or obese, and globally around 33% of the food that's grown is wasted.

The good news is that we already have some of the solutions needed to tackle these problems. Until recently, the UN's 'worst case scenario' suggested that we'd need to produce 70% more food by 2050 – based on a business as usual approach. However, the newest estimates from the Food and Agriculture Organisation of the UN (FAO) show that we'll only need to increase agricultural output by 60% to feed a growing population still based on business as usual approach[1].

If we tackle issues such as post-harvest losses and waste by consumers and industry, and improve matters like distribution and consumption, smallholder productivity and gender equality, we won't need to produce so much extra food. In fact, we already produce enough to feed a population in excess of nine billion people.

And, while production and technological changes are vital, we won't be able to feed the world without a change in food consumption patterns. Some of the major reports released by WWF during the past few years emphasise this[2].

30% **of global greenhouse gas emissions result from food production**

30% **of energy use is for agriculture and food production**

70% **of global freshwater is used for irrigation**

60% **of the world's land surface is used in agriculture and food production**

People in many parts of the world would need to eat less meat and highly-processed food, while sub-Saharan Africa and South Asia should see a per capita increase.

[1] FAO (2012) *Towards the future we want* – www.fao.org/docrep/015/an894e/an894e00.pdf

[2] WWF's *Living Planet Report* 2012 states there's a need to reduce meat consumption: "We can produce the food we need. Solutions lie in such areas as reducing waste; using better seeds and better cultivation techniques; bringing degraded lands back into production; and changing diets – particularly by lowering meat consumption in high income countries." In *The Energy Report* (2011) WWF maintains that the target of 100% renewable energy by 2050 is only achievable if Western diets become less resource intensive. In 2009, WWF-UK produced *How low can we go?* which looked at the role of the food system in meeting the UK government's 2050 carbon targets. In the report, WWF-UK recognised that meeting a target of zero net deforestation by 2020 would require a dietary shift.

What is a “sustainable” diet?

This project is only a *first step* towards defining a sustainable diet. It looks at health, nutrition, carbon and affordability. Its aim is to open the debate on this topic and to get key stakeholders from the food supply chain and EU and national policy makers to look at sustainable diets as part of a future policy agenda.

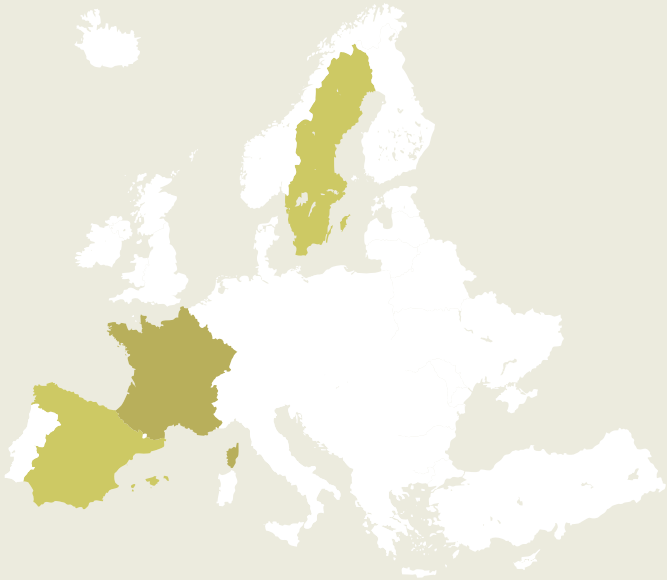
What we can say at this point is that the LiveWell diet is healthy, affordable and would lead to a 25% cut in greenhouse gas emissions from the pilot countries’ food supply chains by 2020. The main saving will be achieved by switching from high-impact foods such as meat or dairy to lower-impact food like vegetables. These foods require less land, water and fertilisers and as a result a switch to the LiveWell diet would benefit other environmental concerns.

To be truly sustainable we need to look at all the environmental, social and economic impacts of the food we eat[3]. This enormous task is beyond the scope of the report. Other areas – such as water, land, nitrogen and biodiversity – also fall outside the scope of the report. We recognise that these need to be included in the definition of a sustainable diet and we’d support others working on them.

[3] http://www.fao.org/food/human-nutrition/sustainable-diets-and-biodiversity/en/

The LiveWell Plate: good for people and the environment

The LiveWell Plate produced by WWF-UK in 2010 was a first step towards investigating more sustainable diets[4]. Building on these results, WWF now runs the LiveWell for low impact food in Europe (or LiveWell for LIFE) project, using the LiveWell Plate as a tool to define country-specific sustainable diets across the EU. We've adapted the LiveWell Plate around the traditional diets of three other countries – France, Spain, and Sweden – to outline a diet that can bring significant health benefits and contribute towards reducing greenhouse gas emissions from the EU food supply chain. We chose these countries for the range of dietary contexts they represent and their different levels of policy readiness to adopt a sustainable diet concept.



If the LiveWell Plate is adopted, we believe it can provide a 25% reduction in greenhouse gas emissions from the pilot countries' food supply chains by 2020. Because the pilot countries are large producers of food, this will contribute significantly to the EU's overall target of a 20% reduction in greenhouse gas emissions by 2020.

[4] The diet has the potential by 2020 to reduce greenhouse gas emissions from the UK food supply chain by 25% from1990 levels.

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Key findings

The report considers current diets in France, Spain and Sweden. It demonstrates that the LiveWell concept is transferable and that a more sustainable – or, more specifically, low-carbon – diet can be defined whatever the location, food culture and traditions.

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To produce the LiveWell Plates, we collected and analysed a variety of data, including information on current consumption patterns and nutritional recommendations (as detailed in the previous report *Food patterns and dietary recommendations in Spain, France and Sweden*[5]), public dietary guidance, greenhouse gas emissions of particular foods, and general price information. The quality and completeness of the data varied widely between the countries and, where necessary, assumptions were made in order to produce a response. More information regarding the limitations of the research can be found in the *A balance of healthy and sustainable food choices for France, Spain and Sweden* and the *LiveWell Plate evaluation report.*

The present report shows clearly, for all three countries, that healthier eating can be aligned with environmental objectives. It is possible to develop a LiveWell diet for each country that:

— Decreases greenhouse gas emissions by 25% from the current average diet.

— Costs no more than the current dietary patterns.

— Complies strictly with national nutritional requirements[6].

— Closely resembles the current dietary patterns.

We observed a number of overall similarities between these nutritious, low greenhouse gas emissions diets:

— All diets show a reduction in the total amount of meat consumed. This is inevitable since these are the foods with the highest GHGe. On the other hand, we demonstrate that for a 25% reduction it is still possible to have enough meat and/or fish in the diet to comply with nutritional recommendations and maintain some traditional dishes and meal patterns.

— All diets show an increase in the consumption of legumes as a source of protein. Again, this is inevitable owing to the lower greenhouse gas emissions of legumes relative to most other sources of protein – even if they're imported long distances. In addition, this may help to keep the food budget constant or even to decrease it because legumes are often not costly.

— All diets show an increase in cereals and starchy foods, typically bread, pasta and potatoes.

— Levels of consumption of dairy products remain relatively similar to current consumption.

[5] *Food patterns and dietary recommendations in Spain, France and Sweden* is a report previously released by the project that investigated the eating behaviours in Spain, France and Sweden – the project's pilot countries. It then compared these findings to what the people in these countries should be eating, according to their national dietary guidelines. http://www.livewellforlife.eu/wp-content/uploads/2012/05/LiveWell_A4-Food-Patterns-Report_web.pdf

[6] For Sweden we used the Swedish Nutritional Recommendations Objectified. For Spain we used recipes and guidelines from the Foundation for the Mediterranean Diet. For France, the dietary guidelines had been included in the nutritional constraints list. However, we note that the requirements for some items vary quite widely between countries.

What are the next steps?

Creating and demonstrating the LiveWell Plate is only the first step in our three-year project. The results of this report and the consultation on these findings will play a key role in framing the next stages of the project. Together with stakeholders we will:

- **Identify key social and economic challenges and opportunities for the adoption of sustainable diets across the EU**
- **Develop public policy options to help Europe to facilitate adoption of sustainable diets across the EU**
- **Find practical pathways for implementing the LiveWell Plate and sustainable diets in pilot countries and across the EU**
- **Disseminate the LiveWell Plates, policy options and implementation pathways in the pilot countries and across the EU**

What does this mean in practice?

Conflicting information can often leave people confused about how to make the best choices for their health and the environment. One truth we've found amid the myriad of misinformation is that a healthy diet, which contains fresh produce and not too much meat and dairy or processed foods, is a sustainable diet.

When it comes to what we eat, this project has shown that for all countries the first thing we all need to do is eat more fruit and vegetables and less meat and highly-processed food, which often contains high levels of salt, fat or sugar.

In the UK, we've used five principles to help communicate these key results. Our research shows these principles are universal and relevant to European-wide food consumption.

LiveWell principles for the UK

1) Eat more plants – enjoy fruit and vegetables. One of the key things we can do is eat more plants – fruit, vegetables, beans, nuts, grains as part of our diets.

2) Waste less food. 33% of food is lost or wasted in UK and the figures in many other European countries are equally alarming.

3) Eat less meat. Meat, be it red or white, can be a tasty complement rather than a centre piece of a good meal.

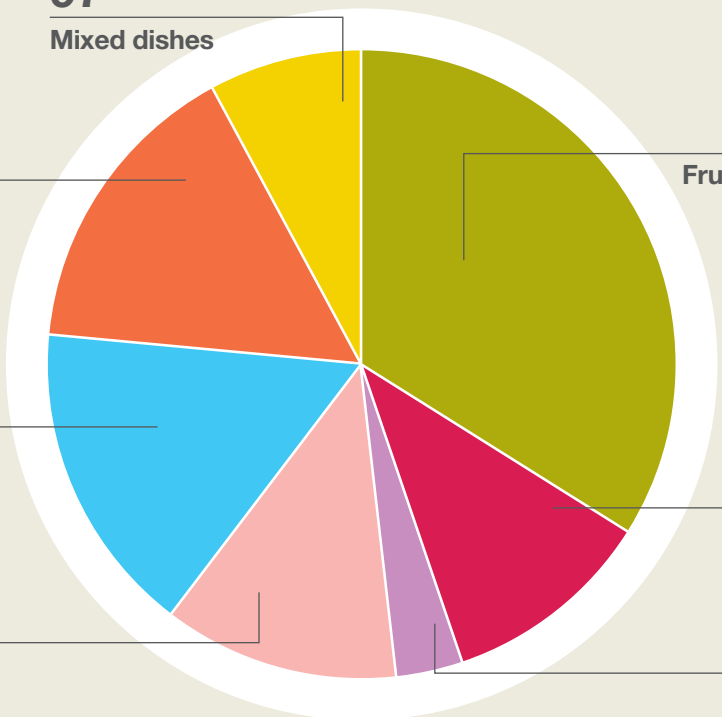
4) Eat less processed food. Processed food tends to be more resource intensive to produce and often contain high levels of sugar, fat and salt.

5) Eat certified food. Buy, whenever possible, food that meets a credible certified standard - like MSC for fish or RSPO for palm oil.

Case study — France

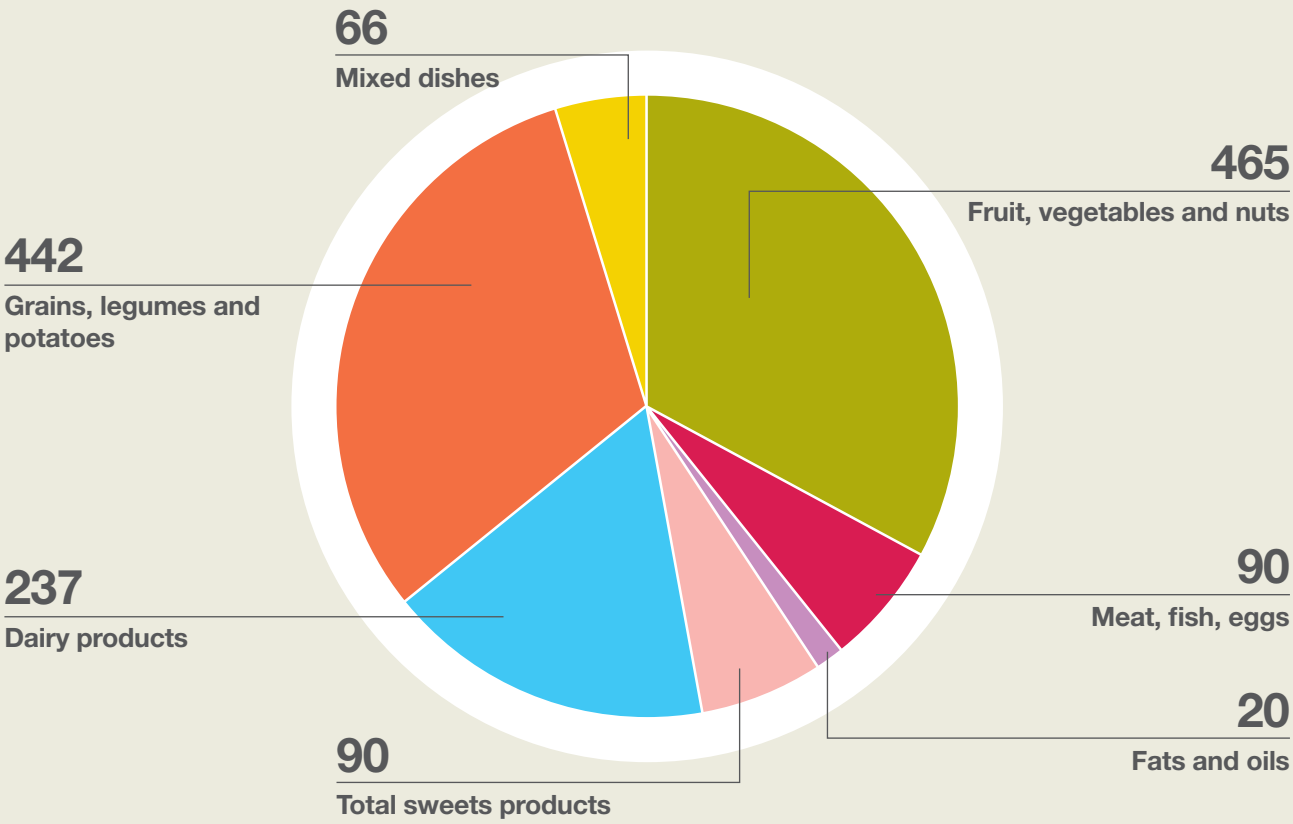
The LiveWell diet for France would reduce greenhouse gas emissions from the current average by 25% and decrease an average person's daily expenditure on food from €4.90 to €4.36 a day. The biggest increases shown in the LiveWell Plate, compared to the current French diet, are in the consumption of legumes and cereals. The biggest decreases are in meat and meat products, as well as in highly-processed sweets, such as cakes. Consumption of dairy foods increases, but only modestly.

Current consumption[7] in France



[7] Data for Sweden is based on the intake of foods in the Food Circle recorded in Riksmaten 2010-11..

LiveWell Plate in France



Unit: grams (per person per day)

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Carbon emissions
The table shows the greenhouse gas emissions for the LiveWell Plate compared to those of the current average diet in France.

Country	Current average diet gCO_2 equivalent/day	LiveWell Plate gCO_2 equivalent/day
France	**3,478**	**2,609**

Cost
The costs for the LiveWell Plate compared with the costs of the average current diet in France.

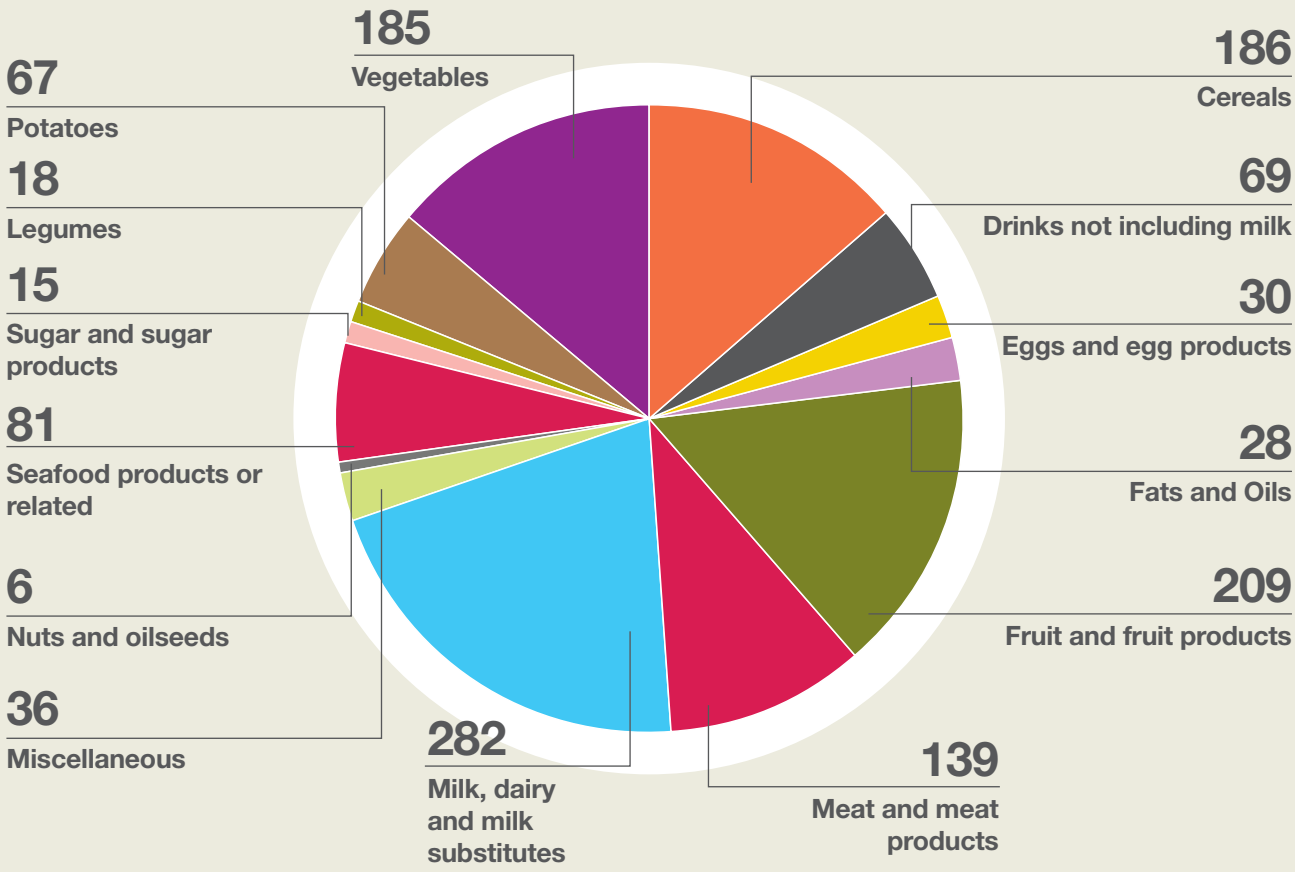
Country	Average cost per day	LiveWell Plate cost
France	**€4.90**	**€4.36**

Unit: grams (per person per day)

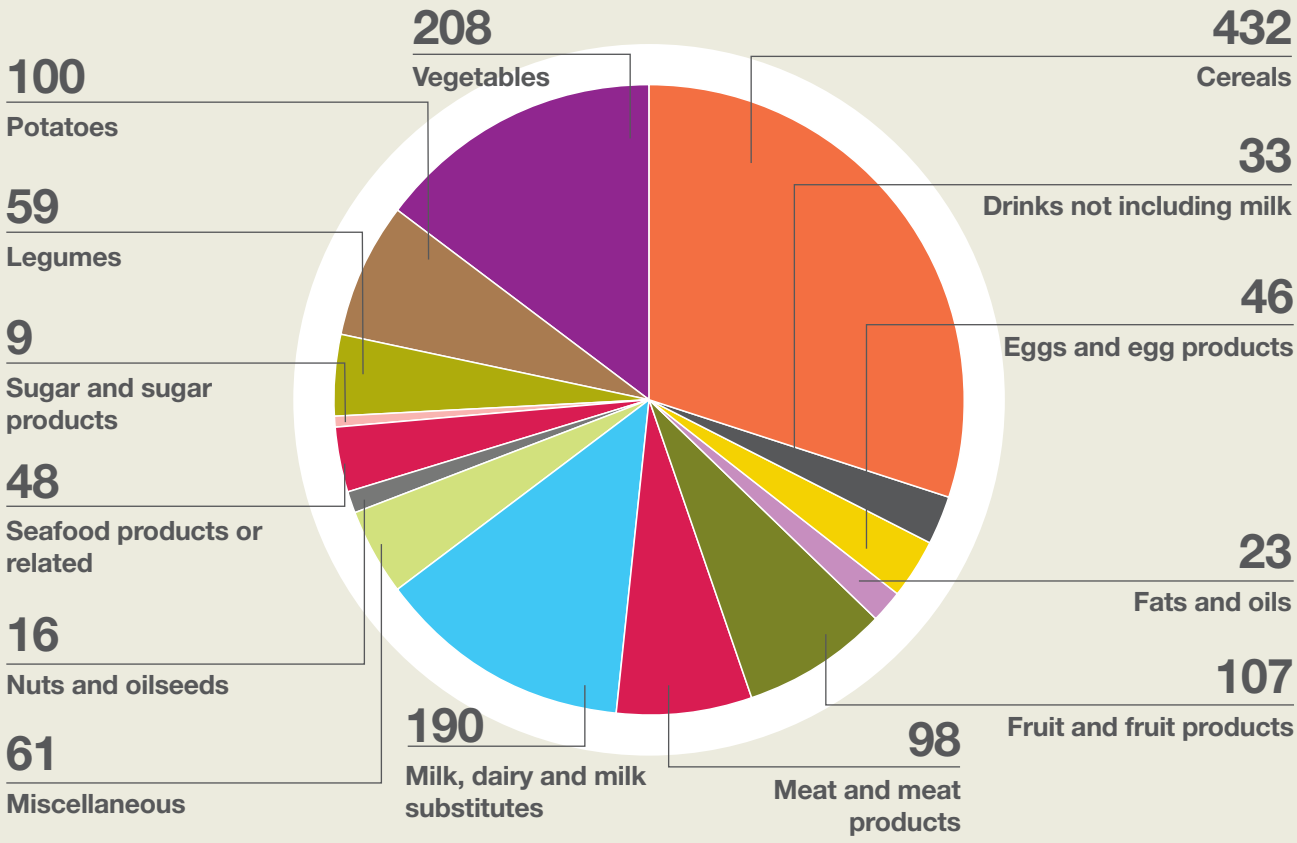
Case study — Spain

The LiveWell diet for Spain would reduce greenhouse gas emissions from the current average by approximately 27%, and it would cost about the same as the current diet. To move towards a LiveWell diet, habits need to change. People need to eat less meat, dairy, sugar, sweets and – surprisingly – less fruit and fruit products. On the other hand, the Spanish need to eat more vegetables, cereals and nuts.

Current consumption in Spain



LiveWell Plate in Spain



Unit: grams (per person per day)

Carbon emissions
The table shows the greenhouse gas emissions for the LiveWell Plate compared to those of the current average diet in Spain.

Country	Current average diet gCO_2 equivalent/day	LiveWell Plate gCO_2 equivalent/day
Spain	**3,753**	**2,710**

Cost
The costs for the LiveWell Plate compared with the costs of the average current diet in Spain.

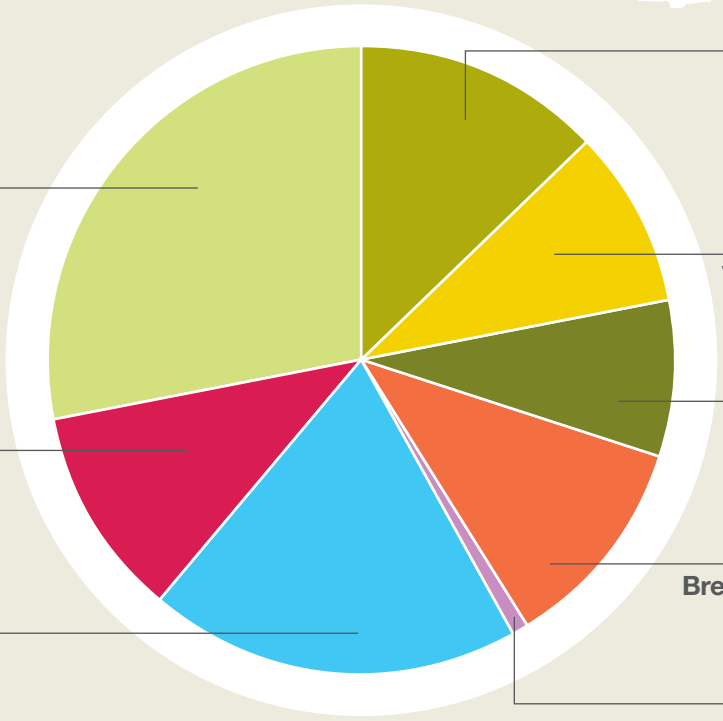
Country	Average cost per day	LiveWell Plate cost
Spain	**€3.479**	**€3.479**

Unit: grams (per person per day)

Case study — Sweden

The Swedish LiveWell diet would reduce greenhouse emissions from the current average by 25% at a slightly lower cost than that of the current diet. We based our comparison on the categories used for Sweden's Food Circle 17 – which recommends eating at least one item from every sector each day. The LiveWell diet shows a decrease in meat and an increase in vegetables. There is a notable change in the composition of the categories, with big increases in lentils and carrots and a shift in meat consumption from beef and pork towards chicken. Increases would be needed in fish and egg consumption to source correct levels of protein while reducing greenhouse gas emissions. There's a decrease in cheese in the LiveWell diet, but increases in other dairy products, particularly yoghurt.

Current consumption in Sweden



201
Fruit, berries, juice

143
Vegetables incl. pulses

126
Potatoes and root vegetables

175
Bread, cereals, pasta, rice

12
Fats

301
Milk and cheese

171
Meat, fish, eggs

436
Leeway

LiveWell Plate in Sweden

287
Vegetables incl. pulses

286
Bread, cereals, pasta, rice

190
Potatoes and root vegetables

42
Fats

384
Milk and cheese

328
Fruit and berries

220
Meat, fish, eggs

117
Leeway

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Carbon emissions
The table shows the greenhouse gas emissions for the LiveWell Plate compared to those of the current average diet in Sweden.

Country	Current average diet gCO_2 equivalent/day	LiveWell Plate gCO_2 equivalent/day
Sweden	**5,728**	**4,295**

Cost
The costs for the LiveWell Plate compared with the costs of the average current diet in Sweden.

Country	Average cost per day	LiveWell Plate cost
Sweden	**44.64 SEK**	**44.07 SEK**

Unit: grams (per person per day)

Frequently asked questions

- **Can a healthy diet be more environmentally sustainable, in terms of greenhouse gas emissions?**

  Yes. It was relatively easy to construct a healthy diet that meets national nutritional guidelines and that reduces greenhouse gas emissions.

- **Can a healthy, environmentally sustainable diet be economical?**

  Yes. Cost was never a binding constraint. This report shows that a healthy and low-carbon diet is not necessarily an expensive one.

- **What's the lowest level of greenhouse gas emissions that may be reached while fulfilling nutritional recommendations?**

  It's possible to have a diet that fulfils current dietary recommendations and reduces greenhouse gas emissions by at least 50%. However, this would result in a diet that would be unrecognisable to most consumers. Typically it would rely on legumes as the main source of protein, a much larger amount of vegetables, and much less meat.

- **Are there any further research recommendations?**

  A balance of healthy and sustainable food choices for France, Spain and Sweden demonstrates that healthy sustainable food choices are possible in a variety of different countries, and the LiveWell Plate can be adapted and acceptable in a variety of different contexts. But, it also points to further research and analysis needs which should be done to make this work more precise and help guide stakeholders.

These include:

- Research to collate better GHG and life cycle assessment (LCA) data to improve modelling and guidance for stakeholders.
- Research into other factors which can affect the degree to which GHG emissions can be reduced – such as eating seasonal foods, and different ways of preparing food – including the effect of this on bioavailability of nutrients. These are complex factors which our modelling could not take into account.
- Further research into the effect of sustainable diets on supply and pricing, including subsidy systems for farmers. We note that there are connections between supply of different items – for example meat and dairy production – which would need to be taken into account.
- Consideration of minority and regional diets, or even individual diets, rather than looking at a single sample diet for each country.

Research into the consequences of including wider sustainability criteria – for example water and biodiversity – and possible technological approaches in areas such as the production and distribution of food.

- **Why not compare the three countries?**

  There is an inevitable temptation to try to compare the LiveWell diets in the three countries and derive conclusions form this. Who has the most sustainable diet? Why do people in one country eat more fruit than another? Why does the other country have more meat in the diet? And so on.

However, comparison between the three countries can be invidious and can easily become a comparison of cuisine and eating habits rather than balancing health, cost and sustainability. We would like to urge caution in terms of comparisons for a number of reasons:

- We have tried to develop the diets with national acceptability in mind and the cuisine of the three countries is quite different. We have for example more potatoes in Sweden and more cereal or legumes in Spain, but this is more a matter of preference than a critical difference in the diet and its sustainability or nutritional content.
- The models work with slightly different data. The French model was produced with women only data (as with the original Livewell UK), but because of availability of data, Spain and Sweden are presented for an "average" person. Nutritional recommendations are averaged accordingly where they are different for men and women.
- We highlight that nutritional recommendations vary considerably between countries. We have sought to comply with these national recommendations, which in turn have an effect on the foods selected for each Plate. Running a model for Spain with Swedish nutritional recommendations would inevitably produce an inappropriate LiveWell Plate for Spain.
- The degree to which food-based dietary guidelines are used as a constraint varies between countries. For France, we interpreted the principles and used these within the model. For Sweden, the general principle of variety within the Food Circle was used, keeping variety similar to that of the current diet. For Spain, food-based dietary guidelines were found to be too difficult to quantify and therefore constraints were chiefly based on acceptability criteria.
- Absolute figures are not comparable. The selection of foods and quantities in the model is based on relative values, not absolute ones. So, we spent time adjusting the data (particularly for carbon, but also for cost) for Sweden and Spain to ensure the figures are

Frequently asked questions

consistent. Moreover, the GHG emission figures we used for Sweden is an estimate of the figure for the life cycle to the consumer, whereas for France and Spain the figure used is to retail only.

- Owing to the detail coming from dietary surveys, the number of different foods in the model varies between countries (68 for France, 277 for Spain, and 88 for Sweden). This affects the development of the different diets: a greater number of foods produce a wider number of different solutions.

For more FAQs, please visit

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- Is it feasible to eat well, be healthy and have a smaller impact on the environment?
- What would a LiveWell diet look like in France, Spain or Sweden?
- What is the LiveWell Plate about? Food, environment or health?
- Is a low-carbon diet a costly one?
- Can we ensure that there's enough food to feed 9 billion people without putting too much pressure on the planet?

Our new report ***A balance of healthy and sustainable food choices for France, Spain, and Sweden*** tackles these questions, and lots more. The report shows that it's possible to produce a LiveWell diet for three very different western European countries. This implies that the same exercise could be done for other European countries, and a diet could be developed for each. It seems likely that by making judicious adjustments to the diet (for example, eating local and seasonal foods in preference to imported ones, and accepting a lower amount of meat) it would be possible to decrease greenhouse gas emissions.

For more information about **LiveWell for LIFE** and how to be involved, please visit:
www.livewellforlife.eu

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