



WWF

SUMMARY

UK

2011

Conservation

Climate Change

Sustainability

# Livewell



Healthy people, healthy planet

WWF is at the heart of global efforts to address the world's most important environmental challenges. We work with communities, businesses and governments to help people and nature thrive. Together, we're safeguarding the natural world, tackling climate change and enabling people to use only their fair share of natural resources.

Food production and distribution, along with deforestation and land-use change for agriculture, are responsible for 30% of the UK's CO<sub>2</sub> emissions. It's clear that we must change the way we produce food – and the way we consume it. So we're showing consumers how they can make a difference through simple changes to their diet.

Our development of the 'Livewell plate' is one aspect of this work.

Find out more at [wwf.org.uk/livewell](http://wwf.org.uk/livewell)

# WHY WWF CARES ABOUT FOOD

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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. That's why helping to develop a sustainable food system for healthy people and a healthy planet is one of our priorities.



But no one likes being told what they can and can't eat. And conflicting reports can leave consumers confused about how to make the best choices for their health and the environment.

Well – here's some good news! Things might be a great deal simpler than you think. What's healthy for people is – more or less – healthy for the planet too.

# FIVE SIMPLE RULES FOR A SUSTAINABLE DIET

By making small changes to your diet and following our five simple 'Livewell' sustainable diet principles, you can help the environment – and eat healthily too!



## EAT LESS PROCESSED FOOD

THEY TEND TO BE  
MORE RESOURCE-  
INTENSIVE TO PRODUCE  
AND OFTEN CONTAIN  
HIGH LEVELS OF SUGAR,  
SALT AND FAT



## WASTE LESS FOOD

UP TO 30% OF WHAT  
IS BROUGHT HOME IS  
WASTED





## BUY FOOD THAT MEETS A CREDIBLE CERTIFIED STANDARD

EXAMPLES INCLUDE  
FISH CERTIFIED BY THE  
MARINE STEWARDSHIP  
COUNCIL, FAIRTRADE  
COFFEE AND FRUIT, AND  
MEAT AND EGGS WITH  
AN RSPCA FREEDOM  
FOODS LABEL



## EAT LESS MEAT

WHETHER IT'S  
RED OR WHITE,  
MEAT CAN  
BE A TASTY  
COMPLEMENT  
RATHER THAN A  
CENTREPIECE OF  
A MEAL



## EAT MORE PLANTS

ENJOY FRUIT  
AND VEG!

# IMPACTS OF FOOD PRODUCTION AND CONSUMPTION

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According to the UN Food and Agricultural Organisation<sup>1</sup>, people in the UK each consume around 3,500 calories per day, which is 1,000 calories too many.

An average adult man needs 2,500 calories and an average adult woman needs 2,000 – and we tend to overeat food that has a highly

detrimental impact on our health and on the environment. The change in the Western diet – to one that's high in meat, dairy and processed food – is a recent phenomenon (our grandparents didn't eat like this). It's occurred at the same time as a growth in issues such as obesity, type two diabetes and heart disease.



HALF THE GLOBAL  
POPULATION IS  
EITHER UNDERFED  
OR OVERFED

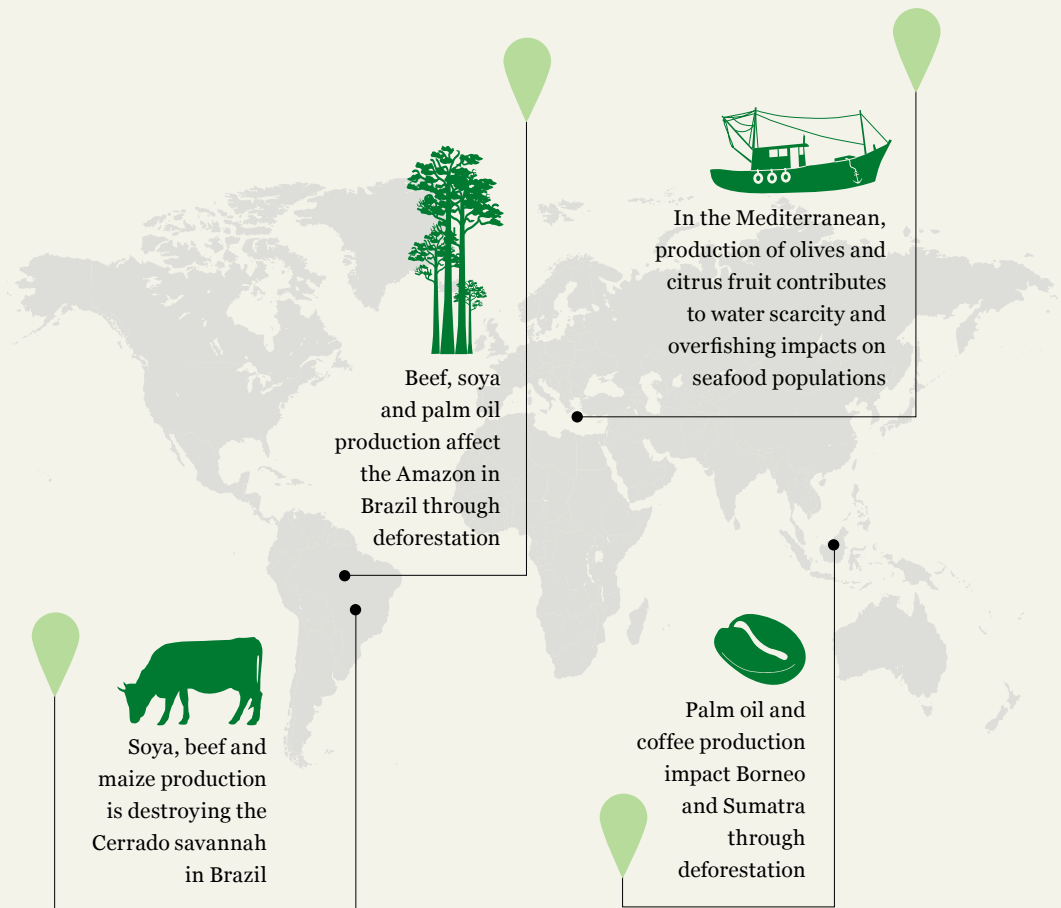
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If humanity continues to produce and consume food as we currently do, we might be able to feed ourselves for another 40 years – but there'll be nothing left for nature. As the government's chief scientific adviser, John Beddington<sup>2</sup>, has put it: "The perfect storm of food shortages, scarce water and insufficient energy resources is coming and threatens to unleash public unrest, cross-border conflicts and mass migration as people flee from the worst-affected regions."

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

Access to food is not equally distributed throughout the world. Approximately one billion people are undernourished and a further one billion suffer from 'hidden hunger' – suffering some form of nutritional deprivation even when the supply of food is plentiful. On the other side of the coin, approximately 1.5 billion people are overweight or clinically obese. And in the UK, around 40% of the food that's planted is wasted, and 30% of what we buy we throw away.

## THE FOOD WE EAT AFFECTS SOME OF THE PLANET'S MOST IMPORTANT AND SENSITIVE ECOSYSTEMS



Practices such as land clearance and land conversion for food and agricultural production in these areas endanger wildlife including orang-utans, armadillos, Iberian lynx and tigers. Bluefin tuna is now critically endangered because of overfishing in the Mediterranean.

# WWF'S LIVEWELL SUSTAINABLE DIET

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**THE LIVEWELL PLATE  
IS OUR FIRST STEP  
TOWARDS DEFINING  
A SUSTAINABLE,  
HEALTHY DIET**

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a sustainable diet that's nutritionally viable: the Livewell plate. It's our first step towards defining a sustainable, healthy diet.

Livewell is based on the best available information in the public domain. There may be some debate about the detail of our report, but we firmly believe that the overall story (the need to eat more plants, less meat, and less processed food) won't change.

## **Livewell – the science**

The Food Standards Agency's Eatwell plate illustrates the proportions of major food groups that should be included in a healthy diet. We've extended this advice so it considers sustainability too.

Our Livewell report addresses two key questions:

1. What's the nutrient intake of the UK population's diet? And what volume of greenhouse gas emissions results from our current food choices?
2. What would WWF's Livewell plate look like if it met both current dietary recommendations and the 2020 target of a 25% reduction in greenhouse gas emissions from the UK food supply chain?

To answer the first question, we compared dietary intake data from the National Diet and Nutrition Survey for adults aged 19-64 years (2000/01) with nutrient recommendations and the Eatwell plate.

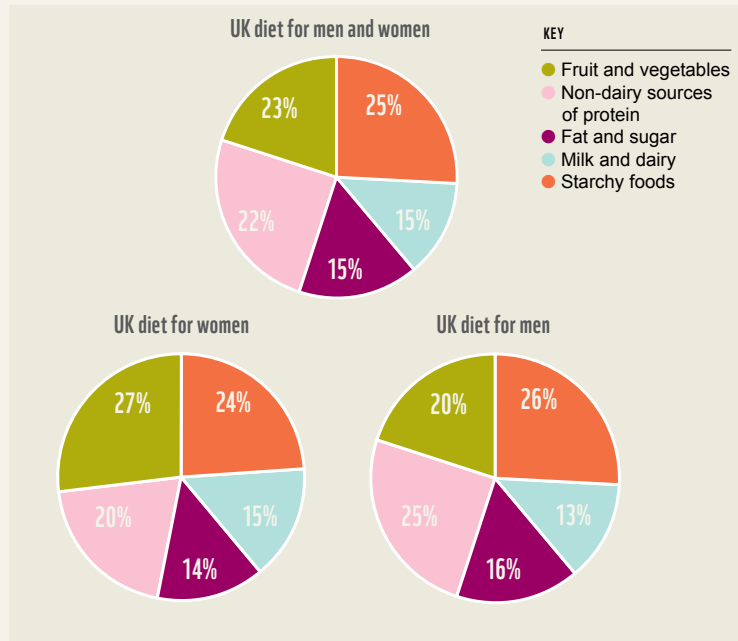
To avoid adding to the maelstrom of food messages, we've adapted the government's advice on eating – the Eatwell plate<sup>3</sup> – so it also considers the environment.

We've produced a definition of



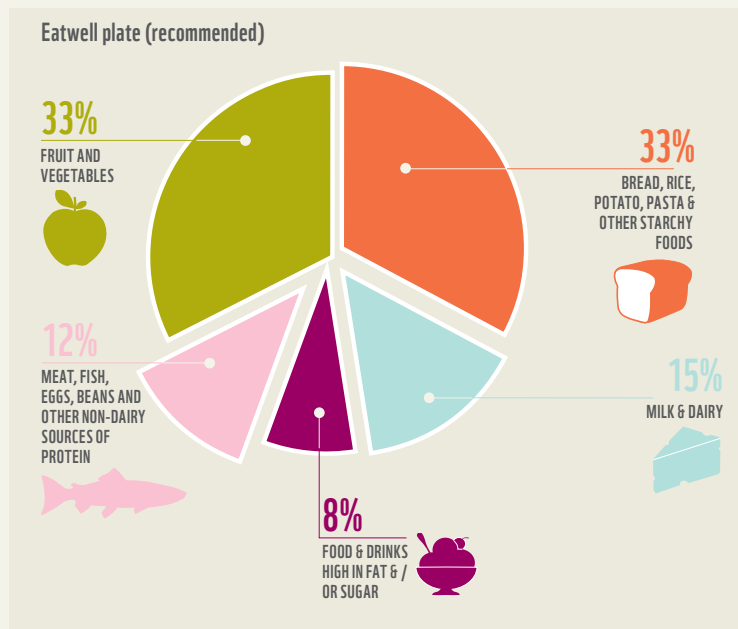
**Figure 1.**

Current UK eating habits. The average diet contains higher than recommended levels of saturated fat, sugar, salt and fibre.



**Figure 2.**

The Eatwell plate – showing the ideal proportions of food types for a healthy diet in the UK.





**FRUIT AND VEG  
ARE GOOD FOR  
US. WE NEED TO  
EAT MORE OF  
THESE TYPES OF  
FOODS**

To address the second question, we developed a diet that meets the UK's 2020 target for reductions in greenhouse gas emissions, and recommendations for a healthy diet. We assumed emissions reductions were needed on both the supply and demand sides of the food chain.

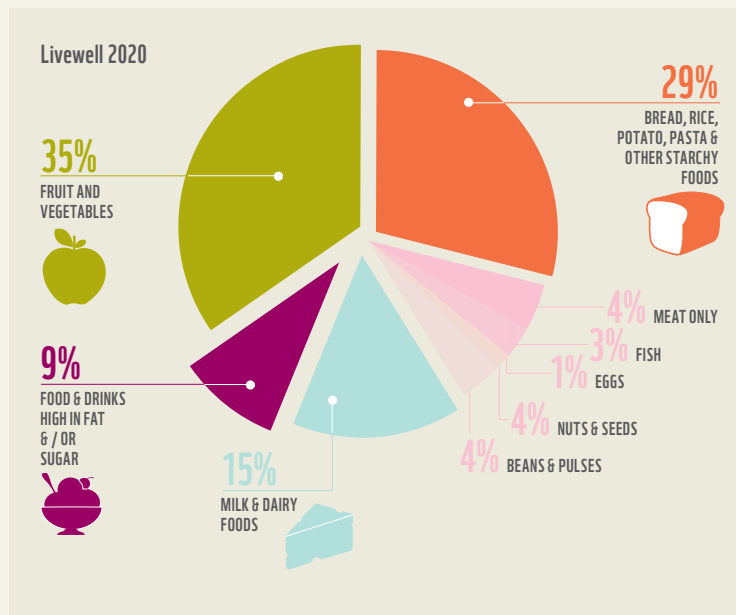
The result demonstrates that you don't have to eliminate any food groups – such as meat or dairy – to follow a healthy, sustainable diet.

Meat and dairy are higher in saturated fat, and their production is emissions-intensive, so, as Figure 3 shows, we need to consume smaller portions of them. Fruit and veg are good for us, and their production is less emissions-intensive, so we need to eat more of these types of food.

This is a first step towards developing a diet that meets both dietary recommendations and UK emissions targets. The real challenges will be to develop a clear, consistent message for the public and to find ways of supporting change towards a diet for a healthy population and environment.

**Figure 3.**

The Livewell plate 2020 – showing the proportions of the different food groups we should consume to achieve a sustainable and healthy diet.



## KEY POINTS



Livewell shows that by reducing, but not eliminating, animal-based proteins from our diet we can meet recommendations for health and emissions reduction targets for 2020.



Technological efficiencies in food production won't be sufficient to reduce the UK diet's share of greenhouse gas emissions by 80% by 2050 – we must change our food consumption habits too.



Livewell illustrates that our choices must be about balancing the proportions of different foodstuffs in our diet. This flexible approach allows different cultural, religious and individual dietary needs or preferences to be taken into account.



Livewell is a starting point for understanding healthy, sustainable diets. Further work will be needed to integrate other environmental issues such as water use, and to help inform and refine broader dietary advice.

## STORE-CUPBOARD SUGGESTIONS

Your store cupboard will vary depending on what type of food you cook. The ingredients below are just a sample of some staple foods that will allow you to cook many different meals. If you like cooking a variety of cuisines, such as Indian or Chinese, you'll need to add other spices and sauces as you see fit.

There's a lot more information on our website – [wwf.org.uk/livewell](http://wwf.org.uk/livewell). You'll find some delicious recipes from celebrity chef Valentine Warner, as well as our suggestions for a seven-day Livewell menu, and a shopping list.

### TINS

Sweetcorn  
Tinned tomatoes  
Baked beans  
Tinned beans and pulses – chickpeas, kidney beans, etc  
Tinned fruit

### JARS & BOTTLES

Vinegar  
Tomato puree  
Jam  
Yeast extract  
Tomato ketchup  
Olive oil  
Sunflower or rapeseed oil  
Soy sauce  
Chilli sauce

### DRIED

Rice  
Pasta – two types  
Baking powder  
Flour – plain and self-raising  
Sugar  
Porridge oats  
Noodles  
Couscous  
Dried beans and pulses – chickpeas, lentils, haricot beans, etc

### HERBS & SPICES

Dried mixed herbs  
Dried oregano  
Salt  
Spices – e.g. paprika, cumin, curry leaves  
Dried chillies  
Stock cubes  
Black pepper  
Basil



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Our Livewell plate encourages people to increase the proportion of their diet that's made up of fruit and veg – from the current level of 23%, to 35%.

## TIPS FOR A LIVEWELL LIFESTYLE

**1.** For your 'five a day', aim for a minimum of three portions of vegetables and two of fruit. Not all fruit and veg are uniform and identical: nobbly and dirty ones are just as tasty, can be cheaper, and don't take long to clean.

**2.** Plan your meals, and write a shopping list. This reduces cost and waste and allows you to use ingredients better and ensure you have the right things in your shopping basket. Check use-by dates and take this into account with your meal planning to minimise wastage. And use a smaller plate: plates have got bigger, yet we still tend to fill them.

**3.** Eat meat creatively. You can use meat in smaller portions as a complementary ingredient and increase the proportion of vegetables or carbohydrates such as pasta or potatoes. Or have some meat-free meals and one or two meat-based meals.

**4.** When possible, use good quality ingredients produced to a higher standard. These may cost a little more but are worth it for the difference in taste. And by purchasing 'mature' foods, you'll need less to get the same taste – you only need a small amount of vintage cheddar compared to a large chunk of a mild one.

**5.** We suggest you don't swap meat for dairy as this won't reduce your impact on the environment, and may well increase your intake of saturated fat. Instead, substitute meat for vegetables, or carbohydrates such as pasta or potatoes.

**6.** Use leftovers. It's an obvious but often forgotten point. Incorporate leftovers into your meal plans. The remains of a roast chicken can be used in a curry, stir fry or stew, and the bones can be boiled up to make stock or soup.

**7.** Eat fish. But make sure it's from a sustainable source, ideally MSC (Marine Stewardship Council) certified. Try different varieties as they become available through the ASC (Aquaculture Stewardship Council) early in 2012.

**8.** Livewell includes a moderate amount of food types classed as 'unhealthy', and food that's responsible for higher levels of greenhouse gas emissions. Try to make that huge bowl of ice cream an occasional treat. It's all about balance.

**9.** Experiment with food. Nine out of 10 people cook the same nine meals again and again – and only three of these are served with veg.

**10.** Grow your own! If you have a garden or even just a windowsill, grow your own veg or herbs. It's easy, and herbs add lots of flavour, making them a good substitute for salt.

## FOOD MYTHS

### **‘Carbohydrates should be avoided and make you put on weight.’**

This isn't true. In the short term, a reduction in carbs helps you lose weight, but a nutritionally-sound diet normally contains about a third carbohydrates. And eliminating any food groups from your diet (other than on medical grounds) can lead to deficiencies of vitamins and minerals essential for a healthy, balanced diet.

### **‘Healthy food is expensive.’**

Our report shows this isn't the case. You just need what's in season. To make meat go further, cook a large batch and freeze it.

### **‘Food from overseas is bad because of the food miles (the distance food is transported by land, sea or air).’**

‘Food miles’ is a misused term both environmentally and socially: the majority of food miles actually come from people driving to and from the shops, rather than importing food to the UK. We're unlikely to stop consuming tea, coffee, chocolate or bananas so these must be imported – and many of the countries that supply these products rely on us to support their economy.

### **‘Juice can make up my five a day.’**

It doesn't matter how much juice you drink, it'll only ever count as one portion. Juicing causes a breakdown of the sugars contained in fruit and vegetables, increasing the sugar content. And juice contains less fibre than whole fruit or vegetables. Smoothies can count as two of your five a day but must contain at least 150ml of pure juice and 80g of whole fruit or veg.

### **‘Vegetables are boring.’**

The vast majority of people only eat meat from four animals: sheep, pigs, chicken and cows – or often even fewer. Vegetables don't restrict choice – they add to it. There are hundreds to choose from all year round, so why limit yourself? Start experimenting with different veg.

### **‘Frozen and canned fruit and veg are less nutritious than fresh.’**

This isn't true. Food processors quick-freeze freshly picked produce. This preserves much of its vitamin and mineral content which is lost when fresh produce is shipped and stored, as natural enzymes are released in fresh fruit and vegetables that cause nutrients to be lost.

### **‘All calories are equal.’**

It's not just about the calories. Think about 500 calories of fresh steamed vegetables and 500 calories of chips: it may be the same number, but the chips are much higher in fat and contain fewer of the nutrients.





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Experiment with veg! You can help the environment by eating more fruit, vegetables and cereals – and less meat and processed food. It's better for you, too.







# HEALTHY PEOPLE, HEALTHY PLANET

The food we eat is the easiest thing we can change and influence in our lives. Doing so will enable us to move towards becoming healthy people on a healthy planet.



# CONCLUSION

Our Livewell plate is a guide to the proportions of different food groups you should eat for a healthy, sustainable diet. What makes up the components of each group depends on you and your preferences. For that reason we're not being prescriptive and favouring organic, seasonal, free range or Fairtrade. We support these initiatives, but we're aware many people don't have the funds, inclination or knowledge to traverse the minefield of confusing, sometimes conflicting, different certification and farming practices out there.

Our full report, *Livewell: a balance of healthy and sustainable food choices*, produced a shopping list and a menu which show how easy and delicious a sustainable diet can be. It's by no means the only option: your diet will change according to the seasons, food availability, location, personal likes and dislikes, and cultural traditions. You can adapt the menu to match what you can cook, what's in your store cupboard, the foods you like, the leftovers you have, and how fertile your imagination is.

We're not saying people should become vegetarians or eliminate any food groups. You can still have a Sunday roast – just use the leftovers up during the week. Experiment with different styles: some of the most popular cuisines – Italian, Chinese, Turkish and Thai – use small quantities of meat but make great use of herbs and spices for flavourings.

The really positive finding of Livewell is that what's good for the planet also turns out to be good for us. So, if you want to reduce your impact on the environment and improve your health, adapting your diet to our Livewell recommendations is a great place to start.

[wwf.org.uk/livewell](http://wwf.org.uk/livewell)

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## References

- 1 FAOSTAT, table D1 - Dietary energy protein and fat consumption [www.fao.org/economic/ess/publications-studies/statistical-yearbook/fao-statistical-yearbook-2009/d-consumption/en/](http://www.fao.org/economic/ess/publications-studies/statistical-yearbook/fao-statistical-yearbook-2009/d-consumption/en/)
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- 3 [www.dh.gov.uk/en/PublicHealth/Nutrition/DH\\_126493](http://www.dh.gov.uk/en/PublicHealth/Nutrition/DH_126493)

The Livewell Plate was developed by WWF together with the Rowett Institute of Nutrition and Health at the University of Aberdeen.

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Visit our website to read the full *Livewell* report. You'll also find more information about sustainable diets, recipes by Valentine Warner, a Livewell menu and shopping list, and more tips on living sustainably.  
[wwf.org.uk/livewell](http://wwf.org.uk/livewell)

**Author**  
Duncan Williamson

100%  
RECYCLED



# Livewell in numbers

40%

40% of food planted worldwide is wasted, between harvest and kitchen

3+2

Eating three portions of fresh veg and two of fruit a day is a healthy, tasty and 'green' addition to your diet

3.5 BILLION

1.5 billion people are overweight, 1 billion are malnourished, and 1 billion suffer from 'hidden' hunger

30%

30% of global biodiversity loss is attributable to livestock production, primarily through clearing land to grow animal feed



## Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

[wwf.org.uk](http://wwf.org.uk)