

# FOOD FOR FOR THOUCHT...



SUSTAINABLE FOOD WORKBOOK · FACTS, FIGURES, ACTIVITIES



Ireland is fully committed to helping create a world without poverty and hunger. Despite the very difficult times being experienced now, our solidarity with those suffering from hunger and extreme poverty in other parts of the world remains strong. Our own history has taught us how devastating and long-term the effects of famine and poverty are, and this experience continues to guide how we respond to today's global development challenges.

World Food Day is an annual event which marks the anniversary of the setting up of the United Nations Food and Agriculture Organisation

(FAO) which seeks to ensure that all the people of the world have access to enough high-quality food to enable them to lead healthy and active lives.

The good news is that there has been major progress in recent years in the fight against Hunger and Poverty. Since 1990, the number of people suffering from hunger has fallen by 130 million. However, there are still some 870 million people who do not have enough food to eat.

I believe that Ireland, as a major food producer and a leading innovator in agriculture technologies, can make a significant contribution to tackling global hunger. Whether it is the continued production of sustainable products, enhanced cooperation with poorer countries, sharing expertise, partnerships between Irish companies and companies in developing countries, or through the government's overseas development programme, Irish Aid, there are many ways for Ireland to continue to make a valuable contribution.

One example of this is the Africa Agri-Food Development Fund (AADF) which is a joint initiative between my Department and the Department of Foreign Affairs and Trade focussed on developing partnerships between the Irish Agri-Food Sector and African countries to support sustainable growth of the local food industry, build markets for local produce and support mutual trade between Ireland and Africa.

I firmly believe that these types of collaborative measures will contribute to meeting the enormous challenges of achieving sustainable development of agriculture sectors around the world, and will help feed the world without irreparably depleting its resources.

I hope that this informative publication, produced in conjunction with Gorta (FAO's Irish partner) and other NGOs to mark World Food Day 2013, will raise awareness of the serious challenges faced by the world's poor while highlighting the real potential and opportunities in developing countries to develop their agriculture production in a sustainable manner.

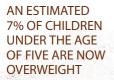


SIMON COVENEY TD Minister for Agriculture, Food and the Marine



ABOUT 700 MILLION FEWER PEOPLE LIVED IN CONDITIONS OF EXTREME POVERTY IN 2010 THAN IN 1990. HOWEVER... 1 IN 8 PEOPLE IN OUR WORLD WILL GO HUNGRY TODAY.

WOMEN DO 66% OF THE WORLD'S WORK, PRODUCE 50% OF THE WORLD'S FOOD BUT ONLY EARN 10% OF THE WORLD'S INCOME AND OWN 1% OF THE WORLD'S PROPERTY... AND 60% OF THE WORLD'S HUNGRY ARE WOMEN.



WHILE AT THE SAME TIME... NEARLY ONE IN SIX CHILDREN UNDER THE AGE OF FIVE ARE UNDERWEIGHT; ONE IN FOUR HAVE STUNTED GROWTH

ALMOST HALF OF ALL DEATHS IN CHILDREN UNDER THE AGE OF FIVE IN DEVELOPING COUNTRIES ARE LINKED TO UNDER-NUTRITION



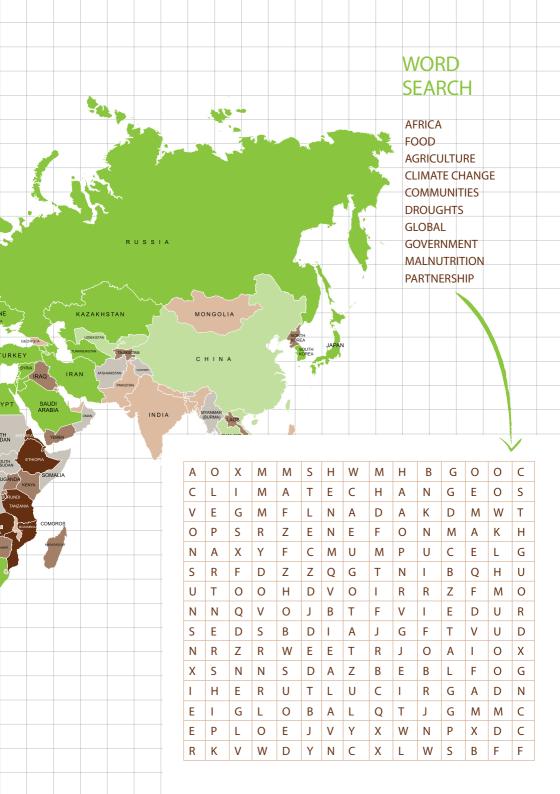
12 SEGS

A CHILD DIES EVERY 12 SECONDS FROM HUNGER-RELATED DISEASES

### THE WORLD PRODUCES ENOUGH FOOD FOR EVERYONE, BUT MILLIONS GO HUNGRY EACH YEAR.

The map shows which parts of the world are generally food-secure, and also those parts which are not – these are called food-insecure.





### NAME: JULIET NAMUTEBI AGE: 10 LIVES: JUMBA—KIBONE, UGANDA

### JULIET'S STORY

Juliet Namutebi is ten years old and lives with her mum and dad in Jumba-Kibone, a small village in Masulita Subcounty in Uganda, East Africa. She is in 3rd class at Kalongelo Junior Boarding School.

So that Juliet can attend a boarding school, her parents have to work very hard all year round. Juliet is very grateful for her mum and dad's hard work, otherwise Juliet would have to walk ten kilometres to and from school every morning and evening. School fees can cost up to 5,000 Ugandan Shillings (less than  $\in$ 2) per school term not including school materials such as uniform, books etc. This is an awful lot of money in Juliet's village, but it's the price of two fizzy drinks in Ireland!

When each school term begins, Juliet walks the ten kilometres to school and at the end of each school term she walks back to her home. Each school term lasts for three months; she really misses her mum and dad during this time.





Juliet's school day starts at 7am and finishes at 4pm. Juliet has to get up at 6am every school morning to wash and clean the school. She then has to wash herself before school starts. There are no showers or washing facilities inside and she must wash outside each morning. This can be very cold on dark winter mornings.

Juliet's breakfast each morning is porridge; there is no jam or sugar available in her school.

Juliet is very lucky; she has three meals per day. The breakfast (porridge) is provided by the school and the school fees paid by her mum and dad ensure that she eats lunch and dinner every day.

Juliet's mum and dad sometimes bring her some small snacks such as roasted nuts and mandazi, these are Juliet's favourite and are like pancakes that are made from fried bread.

Juliet and the other girls are only allowed one visit per month from their parents, this can be difficult for her sometimes, and she misses her parents. But she knows that school is very important and one day she would like to go to University to become a nurse.





She studies six subjects including, Maths, English, Luganda (her local language), Social Studies, Religion and Science. She says her favourite subject is Social Studies but that she likes trying to learn English too.

Juliet gets two breaks in her school day, a 20 minute break at 10am and a one hour lunch break at 1pm. She likes to spend some of her lunch time playing jumping games with her friends. After school, she washes her uniform and does her homework before going to bed.

Juliet's future is bright; she is going to school every day and learning what she needs for her career path. She is delighted that Gorta through its partner Agency For Integrated Rural Development (AFIRD), is providing farming and education training to her village. It means that Juliet's parents will have well paid work, allowing her to attend school.

Gorta was established in 1965 on request of the UN Foodand Agriculture Organization to the Irish Government to create a hunger related agency tasked with long term development. Gorta's vision is a world where there is no hunger or poverty and where the poorest communities have the means to create more prosperous futures for themselves and their children. Find out more at gorta.org This will also mean that they will have more crops to grow, more bread to eat and more to sell at market with what's left over. Gorta will also teach Juliet and her friends how important clean fresh water is. This means that Juliet will stay healthy. Juliet knows that Gorta is there to help her family and she is very happy.

### UCANDA

## HOW DOES JULIET'S STORY COMPARE TO YOURS?

JULIET'S DAY	YOUR DAY
Three meals per day:	
Breakfast @ 7am	
Lunch @1pm	
Dinner @ 8pm	
Breakfast would consist of the following:	
Small amount of cassava (staple food) Sweet potato Small cup of ground nuts Tea (made from tea leaves and some hot water)	
Lunch would consist of the following:	
Bean/Vegetable sauce 1-2 grams of Cassava Some water	
Dinner would consist of the following:	
Same as lunch (if bean sauce was eaten at lunch it would be vegetable sauce for dinner and vice versa)	

### A TYPICAL DAY IN EAST AFRICA.

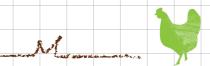
In East Africa a ten year old child's day will be as follows:

They often get up before school to tidy the compound/living area, wash any plates, dishes or pots that need to be cleaned. This is before they head off to school on a walk that could be anything up to 5km long.

School typically starts at 7am and finishes at 5pm. There is then the return walk home from school. The child will often be responsible for cooking the dinner for the family before starting their homework.

The child will often have to fetch some water from the nearest water source. If the village is lucky enough, there will be a bore hole within the grounds of the community which will mean a much shorter walk, but if not, the walk could be anything up to 10km (maybe even more). Fetching water will involve carrying a 20 litre jerry can to fill with water. Water may not come from a clean water source which means that diseases such as typhoid can occur regularly.

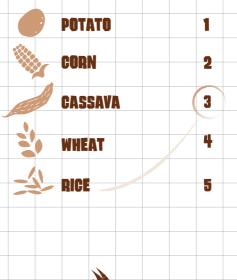
School holidays are in April, August and December. However, a child doesn't spend the holidays playing, rather they will be given jobs such as cooking or weeding the land, especially if the parents are out trying to make money on the local markets (selling any surplus foods that they may have).



### ONE CHICKEN PER WEEK Would Usually be shared Between a family.

A goat can be slaughtered but only at festive times or celebrations. A person can earn up to 300,000 Ugandan Shillings (€88) from selling a goat. Families cannot afford to miss out on such potential income.

Put the crops below in order of their importance in the world today.



Learn more about Gorta at gorta.org

## FARMING IN IRELAND

On an Irish farm, you will find many different types of animals including cows, beef cattle, sheep, pigs, poultry and goats. All of these farm animals are cared for by the farmer. The farmer also looks after the beautiful green landscape and our rivers, ensuring that they are kept clean and safe, for both people and animals to enjoy. The food that we enjoy each day for our breakfast, lunch and dinner comes from farms across Ireland. Our meat, eggs, milk, butter, bread and cheese all come from the farm.

Farming life is go go go! A farmer has lots of important work to do each day, such as caring for the animals, ensuring that they are healthy and happy and have lots of food, water and shelter. In winter time, when it gets colder, animals are housed in sheds. Farmers harvest grass and crops during the year to feed the animals during the winter.

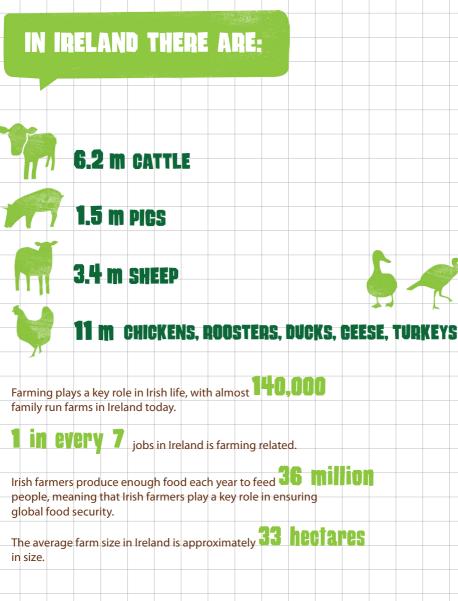
In addition to caring for their animals and looking after their crops, farmers also have a responsibility to care for and protect the Irish landscape. Farmers are caretakers of the countryside, working to keep our environment safe, clean and green and to conserve the natural habitats that exist in Irish fields, hedgerows and rivers.

Farms in Ireland are very important to the community as the food produced on farms goes to the shops and markets for local people to buy. Bigger farms provide jobs for people living in the local community as there is often too much work to do for one farmer. Visitors to a farm include vets who check on the animals and delivery people, who transport the fruit, vegetables and milk from the farm to factories and supermarkets.

Traceability of food is particularly important for the people who buy it. In Ireland, all sheep, cattle and pigs must wear a special tag in their ears. These tags act like a passport for the animals, allowing us to monitor when an animal moves from farm to farm. For example, it is important to know how and when meat moves from one place to another, especially when it is being exported to lots of countries across the world.

### FARM = FOOD what would we do without it?

Some 40% of all the land on earth is farming land. There are 7 billion people in the world today, and this is expected to grow to 9 billion people by 2050. As such, food supply is more important than ever and farmers have a really important role to play in feeding a growing population. Ireland has long been a very important producer of world food with 66% of Irish land used for agriculture. The Irish countryside is green due to the high level of rainfall and mild temperatures experienced in Ireland. This makes Ireland a perfect place for growing green grass, which is very healthy for the animals to eat. Food produced from the animals that eat this healthy green grass is also very healthy for us.



Agri Aware is the independent Irish agri-food educational body working to improve the image and understanding of farming and the agri-food industry among the general public. Agri Aware delivers educational projects for students at primary, second and third level and for the general public. agriaware.ie Family Farm – developed by Agri Aware and Dublin Zoo is Ireland's smallest farm. Visitors to Family Farm learn about life on a farm, food origin and the importance of the farming and agri-food industry in Ireland. thefamilyfarm.ie

### AGE: 25 LIVES: ZAMBIA JOB: FARMER



### **MEET CATHERINE MWEENE**

Catherine is aged 25 years old and she is a farmer in a village in Mumbwa in Zambia. She is a mother of two children and is expecting her third child.

In Zambia, more than half of the rural population are affected by extreme levels of poverty, which sometimes means that people can go for long periods without any food. The time known as the 'hunger gap' is the period after last year's food supply has run out but this year's crop is not ready to harvest. In some areas it can be as long as nine months. Families sometimes have to survive on one meal per day to get through this time.

Catherine took part in a Concern programme (named RAIN) that encourages people to grow and eat nutritious food. Before the programme, she grew maize, groundnuts and sweet potatoes on her plot of 7 hectares. Now she also grows watermelons, pumpkins, cabbage, beans and cowpeas, and uses the milk from a goat that was given to her by Concern for her children.

She is part of a group of 16 female farmers who hold classes and visit one member's farm each week. Catherine teaches her group about the best way to grow new crops, and what to feed their children and themselves especially when they are pregnant.

Find out more about people Concern works with at concern.net/foodrightnow

She says "I talk a lot about malnutrition... and how to prevent it." During her first two pregnancies, she would have eaten fewer meals per day and ate from fewer food groups. Now she is careful to eat often.

"I try to eat four to five times per day. I have added sweet potato, vegetables, cabbage and pumpkin leaves. I tell this also to the women who I teach in their home gardens. They know the importance of their home gardens. I like that I have this extra knowledge and I am happy that I can teach them. They are giving their children the right foods that they are growing themselves and are becoming better at looking after their gardens, which is making them proud."

### SCRABBLE CHALLENCE

Capital of Zambia:

Two crops Catherine grows: NIKSPUMP + RATSONLEWME

Catherine talks a lot about this:

The kind of food Catherine now eats: **ROUTSITIUN** 

### AGRI-FOOD TRADE BETWEEN IRELAND AND AFRICA HAS BEEN GROWING IN RECENT YEARS.

- The three main products sent from African countries into Ireland are:
- 1 Tea, coffee, cocoa and spices
- 2 Fruit and vegetables
- 3 Forestry and timber products

The five African countries which export the most produce to Ireland are:

- South Africa
- 2 Kenya
- 3 Ghana
- 4 Cameroon
- 5 Mauritius

Mauritius

The three main products exported from

- 1 Dairy produce
- 2 Prepared food ingredients



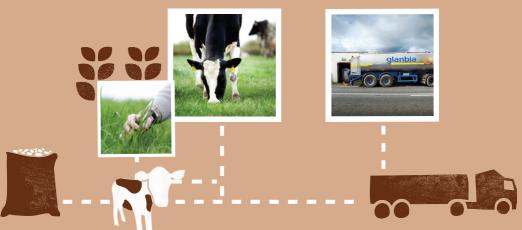
### The five African countries which receive the most Irish exports are:

- 1 Nigeria
- 2 South Africa
- 3 Senegal
- 🕈 Egypt
- 5 Ghana

### ? QUESTIONS ?

- Can you find the countries mentioned above on the map of Africa?
- 2 Why do you think Kenya has the second highest level of imports into Ireland?
- 3 What is the main product Mauritius sends to Ireland?

### MILK JOURNEY FROM IRELAND TO AFRICA



The farmer purchases grain to feed the cows and fertiliser to keep the ground fertile. Ireland's pastures provide good quality grass to keep the cows healthy. Dairy cows are milked every day. The fresh raw milk is collected by tanker and delivered to the processing plant in Virgina, Co.Cavan.



### NOTE

In Ireland Bord Bia have the Origin Green initiative, which promotes sustainable food production aimed at making a contribution to meeting the ever increasing food and nutritional needs of the expanding global population. origingreen.ie

28 days later the ship arrives in Dakar Port, in Senegal and is transported to a factory. IRISH BUSINESSES PLAY AN IMPORTANT ROLE IN FEEDING FAMILIES IN AFRICA. IRELAND SUPPLIES SPECIALISED MILK POWDERS TO AFRICA THAT ARE RICH IN NUTRIENTS AND FORTIFIED WITH SUPPLEMENTS.



Here, up to 80 staff work to process the raw milk into powdered milk and add important supplements. The enriched milk powder is then transferred to lorries to be delivered to the port for export. At Dublin port, the product is loaded into containers and travels 4,400 kilometres.



final product and packaged before being transported to shops and market stalls to be purchased by the consumer.

### NAME: TADHG O'SHAUGHNESSY AGE: 13 LIVES: KILDIMO, CO.LIMERICK JOB: STUDENT/FARMER



#### 8.00am

My typical school day is getting up at 8am for breakfast, which is cereal, milk and a cup of tea.

#### 9.00am

School starts at 9am. This is my first year studying some subjects, like Spanish, Woodwork and Business, so it can sometimes be hard but I really like doing lots of different subjects.

#### 4.00pm

School ends at 4pm. When I go home, I change out of my uniform for dinner. Dinner could be a pork chop, roast beef, lasagne or fish with vegetables and potatoes.

#### 8.00pm

We have supper at around 8pm. My favourites are spaghetti bolognese, quiche, omelette or pizza.



My family live and work on a farm in Co. Limerick. My Dad is a farmer and I am the youngest of a family of four.

Our farm is a dairy farm and I help my Dad to millk the cows, feed the calves and clean the dairy. Selling the milk gives us our main income but we also sell calves and older stock. We pasteurise the milk that we use ourselves and sell the rest to the local cooperative. We store the milk in a refrigerated bulk milk tank. The milk truck comes every two days to collect the milk from our herd and other farms in the area.

The dairy co-op uses huge equipment to pasteurise all the milk it collects. They sell this milk to local shops. The co-op also makes butter, cream and yoghurt. These products are sold in Ireland and in countries around the world, mainly England and Europe.

We sell the calves to farmers who raise them to two years old. They then sell them to the factory. The factory kills the cattle and sells the meat to the butcher. The butcher produces the beef i.e. round roast, stewing beef and mince which is sold in their shops. We keep some of our female calves to replace the older cows in time.

During the holidays, I get up at 7.30 to help milk the cows and clean the dairy. In spring, I help feed the calves. In summer, I help get the fields ready for the cutting of silage and hay. These crops are used as feed during the winter. I help with the feeding during the winter too. Even though it can be very cold sometimes, the cows need to be fed and kept warm.

During the school term I concentrate on my school work and help only sometimes in the evenings and at weekends. It's great when school work and farm work combine like when my older brother Patrick and his team won the Junior Achievement Company Programme for inventing 'The Cowtail Lifter' and got to represent Ireland last summer in the European Finals. I want to go to college when I finish secondary school because I think I might study business or agriculture to help me run the farm better when I'm old enough.

### NAME: LINDA ALINDRU AGE: 15 LIVES: NEAR ARUA TOWN, UGANDA JOB: STUDENT/BAKER



I am one of six children, with four brothers and a sister. We keep hens at home (where they feed themselves and multiply without a lot of attention from the owners) and we also grow millet, maize and cassava which grow well in the North of Uganda where we live.

In my school, Mvara SSS, I participated in a Junior Achievement Company Programme. I started my own business making snacks to sell to my school mates from the surplus eggs that my family did not need. Originally I wanted to bake cakes and a local speciality here in Uganda that we call Mandazis, which are a type of fried bread that my classmates and I like. They are eaten with tea or coffee for breakfast, as a snack, or with the main course for lunch or dinner.

The ingredients might look familiar, as our Mandazis are like what people in Ireland call doughnuts. So, if you like those kinds of foods, I think you would like our Mandazis. I have included a common recipe here for you – obviously I cannot reveal my own special recipe but this will give you a good idea of what is involved.

While I really like Mandazis, after my first few months of trading, I saw that the unit costs were too high to allow me to continue. So I switched to pancakes, which I found to be easier to make in a cost effective way and so create a profit.

In trying to run a successful business, I learned the importance of paperwork and knowing how to deal with suppliers to get all of the ingredients required at the right price to produce my snacks and bring them to the market. Learning all of these things inspired me to apply to study Economics at Kyambogo University in Kampala.

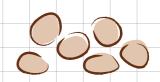
In the future, all going well, and if I can get the capital, I want to open my own bakery and expand my range of products, maybe even open my own café. For now, I will be concentrating on my books and ensuring that I complete my studies.

### Ingredients for Mandazi

- 100g corn flour
- 30g wheat flour
- 20g sugar
- 1 egg
- 1/8 litre milk
- oil for frying

### Method

- 1 Mix flour and sugar in a bowl.
- 2 Add the egg and milk and stir to form a viscous dough.
- <sup>3</sup> Heat the oil in a pan.
- Add the dough one spoon at a time and fry until golden.
- Place on paper towels to remove excess oil and
- serve hot.



## GLOBAL CLIMATE CHANGE



The overwhelming consensus of scientists all over the world is that climate change (or global warming) is undeniable. The effects of climate change are rising global temperatures and an increased incidence of extreme weather events such as droughts, storms, floods and in some cases extreme cold spells. The cause of climate change is man-made, with increased emissions of greenhouse gases due to burning of fossil fuels (coal, oil and gas) and also deforestation of tropical rainforests. Agriculture is also contributing through methane (cows belching) and nitrous oxide emissions (mainly though nitrogen losses from fertilisers and manure).

The impact of climate change (increased temperature and climate variability) is expected to affect the whole world, yet with different levels of temperature in different regions. Developing countries in Africa and Asia are expected to be worst affected by the changing climates, with bouts of droughts and flooding expected in many areas. In developing countries, agriculture is central to the economic and social development of its people. Agriculture is one of the sectors which is expected to be affected most by climate change. Water shortages and extreme weather events make planting and harvesting of crops very difficult and can lead to a reduction in both the yield and quality of produce. This is especially problematic as these regions are already very sensitive to the weather and are also expected to see rapid rises in populations in the coming decades, which will negatively affect food security. Developing countries are also faced with limited resources to deal with this challenge.

The developed world (including Ireland) is working to help developing countries combat the impact of climate change. This assistance is either though technical assistance (improved seeds, fertilisers, irrigation methods) or by providing funding for countries to address theses challenges.

- RISING GLOBAL TEMPERATURES – Droughts – Storms
- FLOODS
- EXTREME COLD SPELLS



Mwangala Nyambe & Agnes Kape Senanga, Zambia Credit: Patrick Bentley, 2012

#### WHAT DO YOU WANT TO BE WHEN YOU GROW UP?

It's a question you've probably been asked a thousand times. Maybe you want to be an astronaut, a dancer, a footballer or inventor. Whatever it is, you have your own big dreams.

But what do you think happens when children can't dream big? What if they can't even dream about growing up to be an average height? What if they can't escape from disease and infection and do well in school or get a job?

For too many children in the world, this is their reality, and the reason is simple. For most, it is because they are not getting the right type of food, nutrition and healthcare when they are tiny babies and infants.

In school you have already learned about balanced diets and healthy eating, you know about the food pyramid, vitamins, minerals and getting your '5 a day'. You know that good nutrition means not just getting enough food but getting the right type of food.

#### HUNCER HEROES

As part of our 1000 DAYS Food Right Now campaign, Concern is asking your class to become Hunger Heroes. Sign up today for 1000 DAY activities, wristbands, posters, information packs and more... concern.net/foodrightnow

#### **1000 DAYS**

...But perhaps what you didn't know is that the most critical time in a child's development is from pregnancy through to two years of age (1000 days).

Under-nutrition during this critical time can lead to stunting, where children don't grow to the same height as a healthy child of the same age. Stunting can also influence a child's brain development, affecting their ability to learn. This has an impact on their education and their future. Malnutrition affects a child's life, not only in childhood but for the rest of their lives.

1000 DAYS is our window of opportunity to change this terrible reality. In 2010, the Irish and U.S. governments launched a global campaign to improve nutrition in the 1,000 days from pregnancy to a child's second birthday. There are now lots of new programmes around the world like the one Concern is doing in Zambia (see page 11), that help farmers grow more nutritious crops and improve the diet of mothers and their young children.

The science behind 1000 DAYS gives us the power not just to dream, it gives us the power to really change hunger and malnutrition forever.

### **PRODUCED BY:**

Agriculture, Food and the Marine An Advine Talimhaíochta, Bia agus Mara The Department of Agriculture, Food and the Marine's mission statement is to lead the sustainable development of the agri-food and marine sector and to optimise its contribution to national economic development and the natural environment. agriculture.gov.ie

Agri Aware is the independent Irish agri-food educational body. The mission statement of Agri Aware is to improve the image and understanding of farming and the agri-food industry among the general public. Agri Aware delivers educational programmes for primary, second and third level students and for the general public. See agriaware.ie





Irish Aid is the Government's overseas development programme, on behalf of all the people in Ireland, which helps many of the world's poorest countries to tackle poverty and hunger. It is managed by the Department of Foreign Affairs and Trade. To read more about Irish Aid's work, go to irishaid.gov.ie

Gorta's vision is a world where there is no hunger or poverty and where the poorest communities have the means to create more prosperous futures for themselves and their children. Find out more at gorta.org





In partnership with business and educators, Junior Achievement brings enterprise and life skills to young people, particularly targeting those at risk of early school leaving. www.jai.ie

Concern Worldwide is an international humanitarian organisation dedicated to working with the world's poorest people to transform their lives. We use our knowledge and experience to influence decisions made at a local, national and international level to significantly reduce extreme poverty. concern.net

