



Food and Agriculture  
Organization of the  
United Nations



# ACTIVITY BOOK

# Eating Healthy Matters



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#### **A note for educators:**

This Activity Book is aimed at a broad age range of young people interested in learning more about healthy diets and entering the 2019 World Food Day Poster Contest. Although it could be considered in certain contexts for 8-12 year olds, it could also be used to teach both younger and older students.





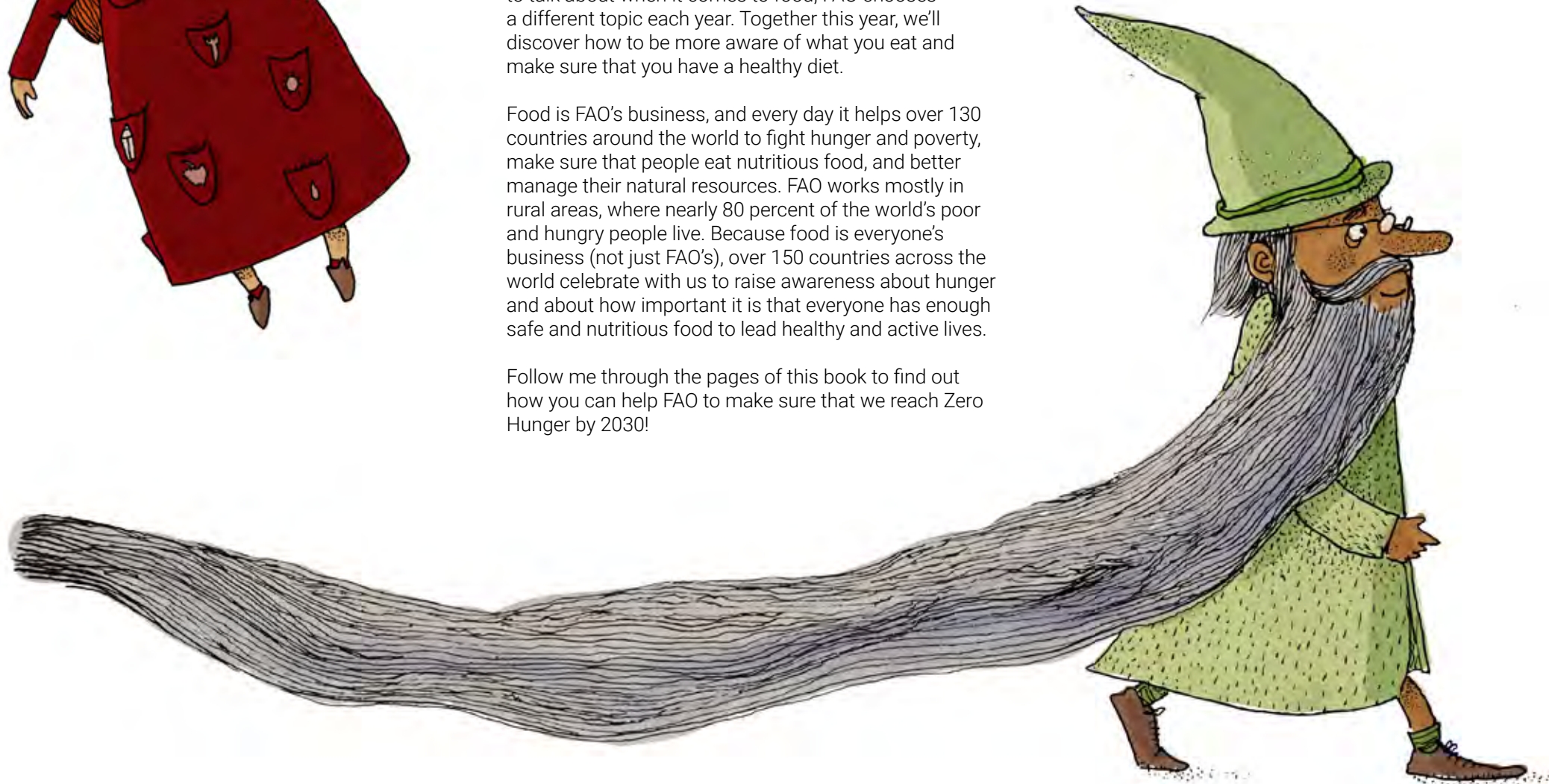
# It's all about food

Hi there! My friend, the Zero Hunger mascot, brought me here to talk to you about healthy diets and nutrition. She and I work side by side every day to make sure that everyone knows how important food really is.

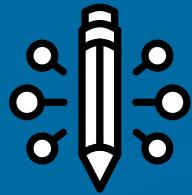
Since 1945, every 16 October we celebrate World Food Day on FAO's birthday and because there's SO MUCH to talk about when it comes to food, FAO chooses a different topic each year. Together this year, we'll discover how to be more aware of what you eat and make sure that you have a healthy diet.

Food is FAO's business, and every day it helps over 130 countries around the world to fight hunger and poverty, make sure that people eat nutritious food, and better manage their natural resources. FAO works mostly in rural areas, where nearly 80 percent of the world's poor and hungry people live. Because food is everyone's business (not just FAO's), over 150 countries across the world celebrate with us to raise awareness about hunger and about how important it is that everyone has enough safe and nutritious food to lead healthy and active lives.

Follow me through the pages of this book to find out how you can help FAO to make sure that we reach Zero Hunger by 2030!



# GET CREATIVE!



## WFD2019 Poster Contest

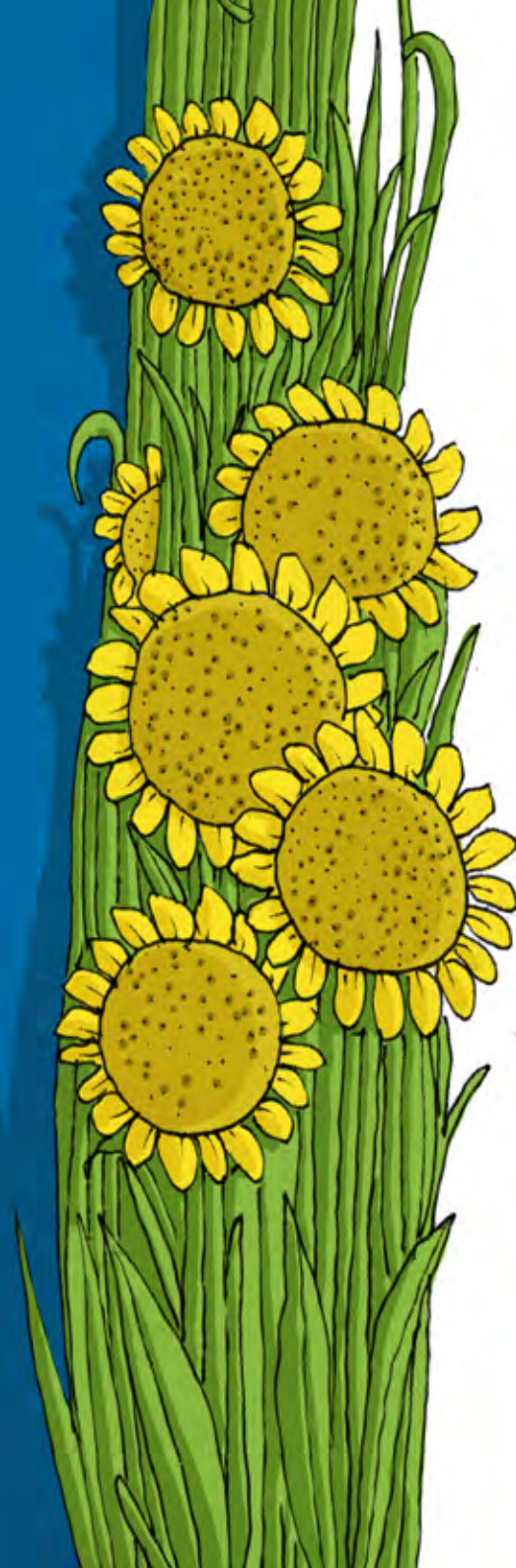
### EATING HEALTHY IS YOUR BUSINESS TOO!

Design a poster and show us your ideas about this year's World Food Day theme. Tell us how you can improve your diet and what we all need to do to make sure everyone everywhere can have a healthy diet too. Remember that your voice and actions count towards building a Zero Hunger world.

To submit your poster, go to:  
[www.fao.org/WFD2019/contest](http://www.fao.org/WFD2019/contest)

The contest is open to 5-19 year olds and the deadline for entries is 8 November 2019.

Three winners from each age category will be selected by our jury and announced on the World Food Day website and on FAO's social media channels. Winners will receive a certificate of recognition and a surprise gift bag, and will be promoted by FAO offices all over the world.



## Choosing what we eat

Every creature and plant on our planet needs food to live, grow and reproduce. **It's also a basic human right.** Every one of us should always be able to get the food we need to live healthy and active lives.

We choose the food we eat based on many different things: the time we have to cook or eat it, what's easiest to eat, what others eat, the occasion, our culture or religion, what we like or dislike, our habits, and our knowledge and cooking skills too. But two very important things help us to decide what we eat: how much it costs and how easy it is to find.

Have you noticed that junk food is very easy to find almost everywhere you go? That's because in the last few years junk food has become more and more popular, and it's also normally cheap. Eating more junk food means that our diets have changed a lot, and not for the better. Junk food has 'junk' in the name for a reason: some of it is bad for the planet because of how it's made, and it's also bad for you (full of sugars, fats, salt and other unhealthy things). **Not eating a variety of enough nutritious food can lead to health problems** and sickness, and in this book I will tell you what you and others can do to avoid this.

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Two very important things help  
us to decide what we eat:  
how much it costs and how  
easy it is to find.

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# My food story

1. Think about yesterday. What did you eat, when and with whom?

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2. Why did you choose those specific foods?

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3. What do you normally eat every day? Ask your parents, teachers and friends the same questions. What did they eat?

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4. What do you think is nutritious, what's not? Fill in the table below and ask your parent or teacher if they agree.

NUTRITIOUS 😊	JUNK 😞	SOMEWHERE IN THE MIDDLE!

# The **ABC** of healthy diets

Being healthy is everyone's responsibility, including yours and your parents. Aside from getting enough exercise and drinking enough water, a very important part of being healthy is having a good diet. A healthy diet means **eating enough nutritious, safe and varied food every day** so that you can grow and live an active life (run, play, learn, grow and climb trees).

An unhealthy diet can lead to illness and even death. Did you know that today, one in five deaths around the world is caused by unhealthy diets? This can happen when people don't eat enough fruit, vegetables and legumes, and instead eat too many foods that are high in sugar, fat or salt. So healthy diets are a really big deal.

A healthy diet is a balanced one, and it's really important to try to include the right amount (not too much or too little!) of different foods to get enough of what your body needs to work well (like nutrients, such as vitamins, minerals and other important things). Here are the different ingredients (AKA food groups) that make up a healthy diet. Knowledge is health, not just power!

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Being healthy  
is everyone's  
responsibility

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## **Fruit and vegetables:**

fruit and vegetables give us vitamins, minerals, fibre and natural sugars. You should eat as many seasonal fruit and vegetables as possible every day.



## **Cereals:**

this group contains everything made from wheat, rice, oats, maize, barley or other grains. They are called 'staple' foods as they are eaten every day. They contain carbohydrates, which are your main source of energy.



## **Tubers and plantains:**

these include potatoes, yams, sweet potatoes, cassava, and malanga, and they too are a source of carbohydrates, vitamins and minerals. Plantains (like bananas but not very sweet) are also an important staple food in many countries.





### **Legumes and nuts:**

legumes (fresh peas, beans or lentils), nuts, seeds and soybean products are crucial sources of proteins. They come from plants, cost less than other protein-rich foods, are high in fibre, low in fat, and have other key minerals and vitamins.



### **Meat, fish and eggs:**

everything made from meat, poultry (chicken, duck, turkey, ostrich, etc.), fish, seafood and eggs belongs in this group. All these foods contain iron and proteins, which are what make you strong and help to fix your body when you get hurt



### **Dairy products:**

these are all made from milk (cow, goat, sheep, buffalo, camel, yak, horse and even moose) and include milk, cheese, yoghurt, curd, and buttermilk. They have plenty of calcium, protein and fat.



### **Fats and oils:**

your body needs the right kind and the right amount of fats and oils to be healthy. Choose vegetable oils, nut butters and avocado over fats in meat, butter, cream, or palm oil, and avoid fried foods high in fats.

### **YOUR TURN:**

Each country has its own definition of a healthy diet and ways to group their foods. Have you ever seen a food pyramid or a healthy plate? This can change depending on what foods are available, and nutrition problems in your country. Look up food-based dietary guidelines on the FAO website and see if you can find what a healthy diet or healthy eating means for your country.



# Nutrition and the SDGs

There's a whole Activity Book dedicated to Zero Hunger, but for those of you joining us for the first time, Zero Hunger means bringing the number of people who suffer from hunger and malnutrition (e.g. people who are over- or underweight) to ZERO. Zero Hunger is the name of FAO's most important operation.

**Zero Hunger** is the second of the United Nations' 17 Sustainable Development Goals (SDGs), all of which we have to reach by 2030 if we want the world to become a happy and safe place for everyone. If we don't achieve Zero Hunger (SDG2), reaching the other goals will be very, very difficult because each goal depends on it.

I'm sure you've already made the connection, but just in case...nutrition is a BIG part of the Zero Hunger Goal. Zero Hunger is not just about people having enough food, it's about healthy eating too, because as the saying goes: **you are what you eat.**

And while we're still talking about what you eat, there are other SDGs that have a say. They are: **Quality Education** (SDG4), **Good health and well-being** (SDG3) and **Responsible consumption and production** (SDG12). It's pretty straightforward really: First, we all need to learn about healthy diets so we can be more careful about the food we grow, produce, eat and throw away. These choices don't just affect OUR health, they affect the health of our planet too. If the food we eat is nutritious, but was grown using too much fertilizer or pesticides, it's not that healthy for us or for the soils and water that absorb them. The way we grow our food needs to change to make sure we have enough resources for the future (when there will be MANY more mouths to feed), and that the planet doesn't suffer for it.

## YOUR TURN:

Why do you think nutrition is important? And why do we need to learn about it? Find out more about SDG4 and the other SDGs by visiting [www.worldslargestlesson.globalgoals.org](http://www.worldslargestlesson.globalgoals.org)





## Time for change

50 years ago the world was worried about how to feed everyone, so a plan was made to grow as much food as possible, as quickly as possible. It was called the **Green Revolution**, and it was successful. But it came at a big price. Many nutritious crops were pushed aside to make room for a small number of crops that grew fast, produced more and brought in more money. In the process, a lot of natural resources (soil, forests, water) were used, which had a negative effect on air and soil quality as well as biodiversity. We're still growing a lot of our food based on this method today, which means that we're not thinking about the future of our planet, which is suffering. And this needs to change.

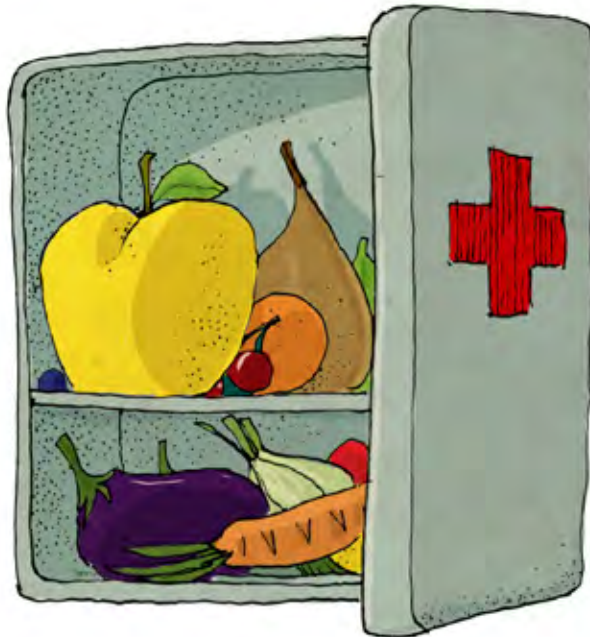
We now know that we don't just have to grow a LOT of food, it has to be **NUTRITIOUS** food. And we have to **think about our planet** by being careful about what we grow and how we grow it. Did you know that there are more obese and overweight people in the world than there are people who suffer from hunger? It's not just about feeding hungry people, it's also about making sure that everyone is able to easily find and buy nutritious food. We also need the skills and tools to choose our food more carefully and make sure that what we're eating is nutritious. It's time for a Healthy Diet Revolution!





The same person can experience hunger and obesity at different stages of their life. Problems caused by malnutrition exist in all countries and can affect both rich and poor.

## DID YOU KNOW?



In many countries, people don't eat enough fruit and vegetables. Eating plenty of these can help to prevent many diseases, including diabetes and cancer.



Most of the world's population live in countries where overweight and obesity kill more people than hunger.





Having a variety of different crops –some that grow quickly, others that need little water, or do well in higher temperatures– is good for us, the planet and can help us to fight climate change too!



Less time is spent preparing meals at home, which means that meals are often less nutritious as people (especially in towns) rely on ready meals, fast foods, and street foods.

Not feeling hungry doesn't mean that you're getting all the nutrients you need. Even people who can afford all the food they could eat may not be getting the right nutrients...



By reading food labels, you can see how many vitamins, minerals, calories, fats, etc. are in the food product. Remember that the words 'light' or 'zero' don't always mean healthy.



Pulses like lentils, chickpeas or beans are a good source of protein, vitamins and fibre and are low in fat and salt. It takes little water to grow them and they make our soils healthier!

**BROWN REVOLUTION:**

I mentioned the Green Revolution earlier, but did you know that there's also a Brown Revolution? It's all about the importance of healthy soils. Most things grow in soil, and our fresh water is found in the ground, so if our soil is unhealthy, polluted or full of chemicals, our food and water will be too. Healthy soils also mean more nutrients in our food!



Find these objects!









# What **FAO** is doing

FAO works hard to improve nutrition and make sure that everyone, everywhere has a healthy diet. It works to improve nutrition in three main ways:

## 1. Planning it

FAO works with governments and people who make policies and laws (legislators) to make sure that they **think about nutrition**. If nutrition is included in a country's plans, it's easier to prevent malnutrition and most of the other problems caused by unhealthy diets. This way it's also easier to support farmers and producers to make sure that the food they grow or process is more nutritious.

Remember your country's **"food-based dietary guidelines"**? This is another way that FAO is striving to improve nutrition and spread the word about healthy eating habits. FAO does this by working with over 100 governments around the world to guide and help them to decide what a healthy diet looks like in their country and to create tools that people can use to improve their diets.

## 2. Growing it

FAO works with farmers and producers on a strategy to grow and produce nutritious food with a bit of a complicated name: **"nutrition sensitive agriculture"**. It basically means growing and producing enough nutritious food. Good planning with governments and legislators means that this food is then made available to everyone who needs it, especially children. By available I mean that it should be found easily, and should not be too expensive so that everyone can afford it.

Apart from making nutritious food more available, FAO also says that we need more nutritious choices, which means that farmers should **grow different foods** so that we don't all depend on the same type of food to keep us healthy. It also means that in some cases, food can be enriched to **MAKE** it more nutritious, for example by improving the health of the soil it's grown in. And finally... don't forget that the way food is grown is really important! This way of farming also means growing more while using less natural resources.





### 3. Teaching it

Talking to grown-ups about food and healthy diets isn't enough for FAO. FAO helps schools and universities to teach young people about healthy eating, because after all, you are the grown-ups of the future! FAO does this in four ways. The first is through **school food and nutrition education**, which some of you may have heard of from our books or because it was done at your school too. FAO helps students, teachers, parents and others working in schools to learn about healthy diets. The idea is to change the way everyone treats or thinks and feels about food by creating learning materials (like this one), and showing schools how to grow fruit and vegetable gardens in inexpensive ways. The second way is to encourage and show people how to **grow nutritious food at home**, giving them the tools and seeds they need to feed themselves and sell what's left, often to local schools so they can cook nutritious meals. The third way is called **ENACT**, and it is a course that teaches university students how to give people the tools, knowledge and information they need to improve their own diets. And the fourth way is by **offering free online E-learning** courses for university students and grown-ups on a variety of topics, giving them the tools to improve nutrition in their country.

FAO is working hard with governments, farmers, producers, schools and universities as well as other institutions to fight malnutrition in all its forms, but **there is something for EVERYONE to do**. Read the next few pages to discover what different people (including you) can do to help fight malnutrition!



#### YOUR TURN:

What does your school teach about healthy diets and nutrition? Do you have a school garden? Have you used it to learn about healthy eating?





# What governments can do

Governments have a very important role to play in making sure that everyone has a healthy diet and is able to lead a healthy and active life. There are five big things governments should do:

1. Governments need to **make laws or plans to improve nutrition** in their country and to help make sure that everyone (especially those who need it most, like children and future mothers) knows how to eat healthily and can afford the right food. This can make a BIG difference.
2. They should also help and **encourage farmers** to grow food in ways that don't hurt our planet. Happy planet, happy food, happy you.
3. **Being more strict about what food is sold** is another way that governments can work to make sure that people eat nutritious food. Food needs to be safe, nutritious and have clear labels, because if we have healthy options and understand more about the amount of calories and the amount of fats, sugars and salt used, we can make healthier choices.
4. **Investing in teaching** both youth and children about healthy eating is another way that governments can make a difference.
5. And last but not least, governments need to **support research efforts** and fund more projects that work on improving or inventing technologies that can help farmers.

## WHAT FARMERS CAN DO

Farmers should learn how it's important to **grow a variety of nutritious crops**, such as fruits, vegetables, legumes and nuts. This can help to provide the nutritious food we need and do less damage to the environment.



# What the **private sector** can do

First off, private sector is a word we use to avoid having to list a lot of different things. It is made up of enterprises of all sizes that sell services or products, from insurance to advertising, and TVs to toys. The food sector includes businesses like bakeries, restaurants, supermarkets, big food manufacturers or any company related to agriculture and food. The private sector has the power to really make a difference by changing the way companies do things. Have a look at a few of them below:

1. Businesses and companies that produce, make or sell food need to **offer safe and nutritious food choices** that help people to have a healthy diet. This means inventing new nutritious products that have people's health in mind, and putting limits on the amount of fats, sugars and salt in existing food products.
2. Companies should **stop using popular cartoons, characters and advertisements** to convince children and youth that food high in fat, sugar or salt, are good. They should advertise nutritious food that helps us to grow strong and healthy.
3. Companies that produce food need to **start putting clear information on food labels** to help people to understand them and make healthy choices. Have you ever tried to understand what's on a food label? They're full of strange words and it's pretty difficult to understand if it's nutritious or not, right?
4. The private sector should **stop using misleading statements!** Just because a packet of biscuits says it's "high in fibre" (which is good for you), doesn't mean that it's not "high in" fat or sugar too...







# Time to **act!**

You, your parents, your teachers, friends and anyone you know can do something to make sure you eat a healthy diet and lead a healthy life. Remember that good eating habits are only part of the solution. You also need to have a fit and active lifestyle – sit around less, get up, dance, walk or play outside! Here are a few tips on how to start changing your eating habits.

### **Snack healthily and say no to junk food!**

Choose one junk food that you would like to eat less of (less quantity or less often) and make a plan. When you need a snack, try choosing a ripe fruit, raw veg, nuts or whole grain bread rather than something packaged and less nutritious!

### **Follow the one third veg rule**

Fill up at least one third of your plate with vegetables during meals or try to eat an all-veggie meal once a week. Include at least one dark green and one orange or yellow vegetable a day, as they're full of nutrients.

### **Take action at school**

Do you have a school cafeteria or vending machine? Have a look at the food they provide. Are there enough fruit and vegetables? If not, talk to your teachers about changing the food choices.

### **Be a critical consumer**

Be critical of the advertising you see on TV and in social media. Ask yourself if the food advertised is nutritious or not. Count the number of advertisements you see in a day and discuss with your parents and teachers.





### Protect our planet

Reduce foods that are harder on our planet. This could include foods that need more natural resources, especially water, to produce (meat uses more than plants or pulses), fruit and veg that aren't in season or local. And remember to buy food with less packaging!

### Choose local, varied, fresh and seasonal

Ask your parents to buy local, seasonal fruit and vegetables and to choose fresh over preserved or tinned foods. If you can, choose organic! Organic farming helps our soils to stay healthy.



### Go from white to brown

Ask your parents if they can swap refined "white" cereals for whole grains (brown rice, wholemeal flour and bread, etc.).

### Drinks matter too

Drink plenty of water if you can. Try to reduce sugar sweetened drinks that don't have many nutrients in them.



### Help out in the kitchen

Watch and learn as your parents cook meals, and offer to help in the kitchen when you see that they're tired. There are plenty of easy, quick and healthy recipes on the internet to inspire you.

### Add variety with legumes, nuts and cereals

Ask your parents to experiment with you by adding different types of legumes (like lentils, chickpeas, peas and beans), nuts and cereals (like millet, barley, oats, brown rice) to family meals.





### Don't let packaging fool you

You need to pay attention to the nutritious value of food, not what it looks like, or how cool the packaging is. And look out for words like 'zero', 'low in' and 'light'. They're often used to make food sound more nutritious, and it isn't always true...

### Eat with your family or friends

Help to prepare a meal with family or friends at least once a week and eat it together. Eating in company is an important way to enjoy meals and spend time together.



### Eat local and traditional

Ask your parents, teachers and people in the market what nutritious food is traditional or local. See if you can try to include this food in your diet more often to eat a varied diet and protect local varieties of food.



### Understand labels

Ask your teacher or parents to help with reading and understanding food labels. Take time to read the list of ingredients on a label and try to identify if the food contains too much salt, sugar or fat.



# Activity Page

You might be thinking that hope is lost and that there is so much that you need to do to make sure everyone has a healthy diet, but **there are already a lot of great things happening!**

Some countries are creating labels that warn people about high levels of salt, sugar or fats in food. Cities are making sure that vending machines sell nutritious food. Schools are growing vegetables or sourcing fresh food from local farmers to make nutritious meals. TV shows are teaching people about healthy eating, and governments have created guidelines to help their citizens to have a healthy diet. Many people all over the world are working tirelessly to fight malnutrition.

## YOUR TURN:

What are people doing in your country? Instead of telling you about the Zero Hunger champions I know that work to improve nutrition, I want you to tell me about one YOU know!

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Now that you've read this book, it's time to test your knowledge!

1. What is the Green Revolution and how do we have to change things today?

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2. Go to pages 12-13 and circle three examples of healthy living or healthy eating. There are more than 8!

3. Who is responsible for healthy diets? What can they do?

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## Make a promise to yourself

Choose up to 3 actions to commit to and write them in the space below. Get some inspiration from the actions in this activity book, or think of some of your own!

1	
2	
3	

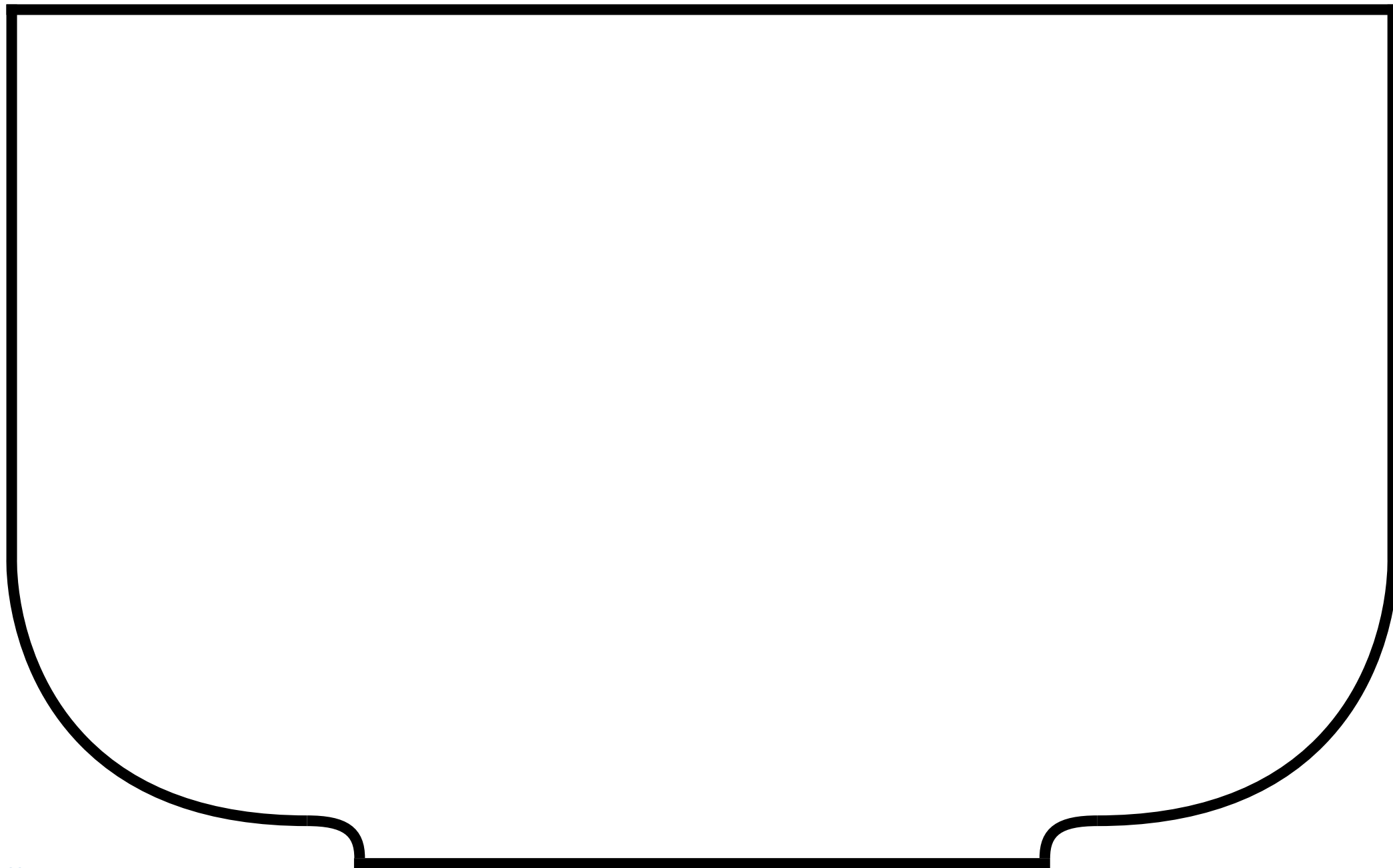
Ask your parents if they can help you to achieve them and tell your friends and teachers about your choices too.



## Enter the World Food Day poster contest!

Now that you understand how important healthy diets are and the role that everyone needs to play, we want to see your ideas on how to make sure that everyone, everywhere

has a healthy diet. Draw, colour or paint them in the Zero Hunger bowl below. Scan or take a photo of your poster to participate in the contest: [www.fao.org/WFD2019/contest](http://www.fao.org/WFD2019/contest)





# Don't forget!

Now that you have completed the Activity Book I want you to tear out this little card full of reminders about healthy eating. You can keep it with you or put it in the kitchen so that your family can have a look at it too.

## MORE INFORMATION?

The world of healthy diets is way too big to cover in just a few pages, so if you want to find out more about nutrition, vitamins, fibres, minerals, food safety and eating green, look up the FAO YUNGA book on nutrition or the Eating well for good health guide for teens on the FAO website!

TEAR HERE

## Eating Healthy Matters

Tips to remember:

- Choose local, varied, fresh and seasonal
- Add variety with legumes, nuts and cereals
- Say no to junk food and snack healthily
- Follow the one third veg rule
- Go from white to brown
- Help out in the kitchen
- Eat with your family
- Understand labels
- Don't let packaging fool you
- Be a critical consumer
- Eat local and traditional
- Protect our planet
- Take action at school
- Drinks matter too







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# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



► Your Guide to FAO



► Working for Zero Hunger



► Change the future of Migration



► Climate is Changing

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Grow,  
Nourish,  
Sustain.  
Together.

ACTIVITY  
BOOK

Food  
Heroes



16 october 2020 **World Food Day**

**Grow, Nourish, Sustain. Together.**



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#### **A note for educators:**

This Activity Book is aimed at a broad age range of young people interested in learning more about the importance of our food systems, who produces our food and where it comes from. It's also an inspiration for those who wish to enter the 2020 World Food Day Poster Contest. Although it could be considered in certain contexts for 8 to 12 year olds, it could also be used to teach both younger and older students.



# Grow, nourish, sustain. Together.

Food is a basic human need and right – we all need it to live! The global population in 2019 was about 7.6 billion. And by 2050, the population is expected to grow to 10 billion. Right now, we produce enough food to feed the world, yet more than 2 billion people don't have regular access to enough safe, nutritious food. The Food and Agriculture Organization of the United Nations' (FAO) goal is to end hunger and make sure people around the world have access to nutritious food to lead active and healthy lives.

Agricultural production has increased over the years to meet the needs of our growing population. This was achieved by farming mainly staple crops like wheat, maize or rice, because these crops were affordable and fulfil most of our energy needs. While food production has improved, it has come at the cost of harming our natural resources, contributing to greenhouse gas emissions and the loss of crop diversity. But there's a way to change our food systems to make sure that a variety of nutritious food is produced sustainably, and that this is affordable and available to everyone.

Farmers and workers across the food system will be the changemakers, but all of us need to support them. We have these food heroes to thank for the food we eat every day.

## WORLD FOOD DAY

Every year on 16 October, more than 150 countries come together to celebrate FAO's birthday for an event known as World Food Day. FAO was founded in 1945 when nations from across the globe united with one common goal in mind: to eliminate world hunger and poverty. It's a worldwide celebration and we invite you to mark this day with us!





# WFD2020 Poster Contest



Design a poster of your favourite food here at work so that together we can make noise and celebrate their efforts across the globe this World Food Day.

To submit your poster, go to:  
[www.fao.org/WFD2019/contest](http://www.fao.org/WFD2019/contest)

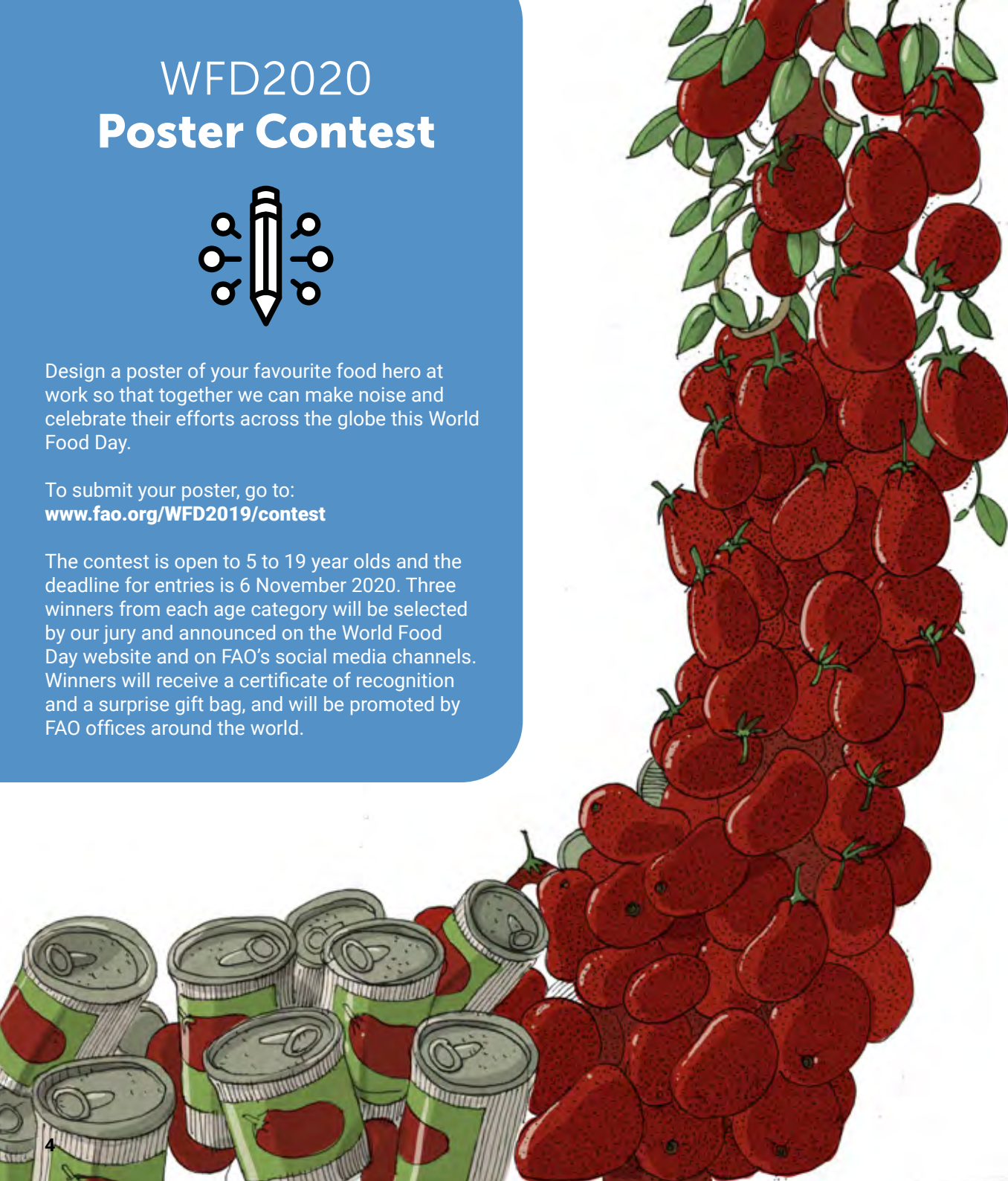
The contest is open to 5 to 19 year olds and the deadline for entries is 6 November 2020. Three winners from each age category will be selected by our jury and announced on the World Food Day website and on FAO's social media channels. Winners will receive a certificate of recognition and a surprise gift bag, and will be promoted by FAO offices around the world.

## The food journey from farm to table

Most of the food you eat comes from a farm, whether it's a crop, animal, dairy, fish or other type of farm. Bread, milk, meat, seafood, fruit and vegetables - you name it. Even if it's homemade, the ingredients most likely came from a farm.

Did you ever think about how far some of the items in your grocery store had to travel to get to us? A great deal happens during the time food leaves a farm to when it is eaten at the table.

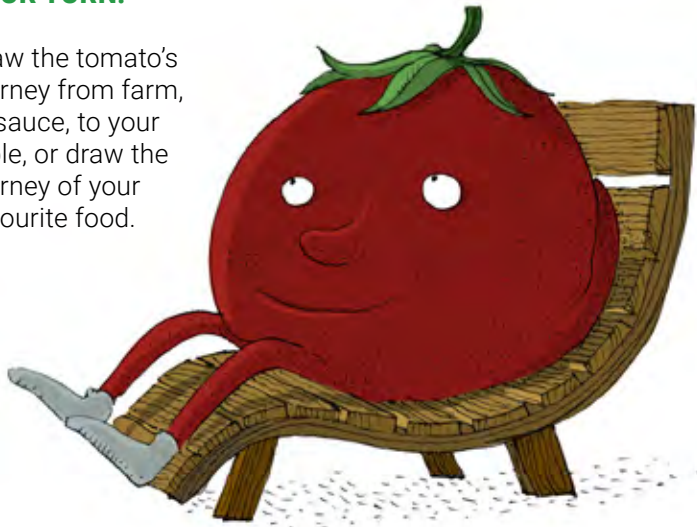
- 1. Cultivation** - Farmers grow crops, rear animals or fish, or get produce from the local environment, like forest products. To do this, they need agricultural equipment, seeds, fertilizer, animals or fish, water, land and labour.
- 2. Processing** - Food either reaches your table the same way it was when it left the farm, or it is processed, which means that food coming from farms is transformed into a variety of food products, such as jam or tomato sauce, usually at a factory. Preserving food by processing it often gives it a longer life, meaning that food is available between harvests.
- 3. Market** - Farmers may use some of the food for their family and transport the rest to sell at a market. It sounds easy but some farmers might not know where to sell their products at a fair price, or have access to transportation, or even a road. Food may also pass from the farmer to a middleman before it goes to a factory for processing, reaches a supermarket or gets transported to another country.





## YOUR TURN!

Draw the tomato's journey from farm, to sauce, to your table, or draw the journey of your favourite food.



Take a humble tomato for instance. A tomato can travel thousands of kilometres to reach its destination. The farmer sometimes sells tomatoes to a wholesaler, also known as middleman, who in turn sells the tomatoes to a supermarket warehouse. If they are lucky, farmers sell the harvest themselves at the nearest market or through the internet by e-commerce, a digital market that connects farmers to consumers.

Sometimes tomatoes are transformed into a food product like sauce. Once the farmer picks the tomatoes, they're loaded onto trucks and transported to a factory. Washed and sorted, the tomatoes are then crushed and heated in huge vats. The juice is cooked down until it reaches a concentrated paste, at which point it is packed into large bags and transported to supermarkets to be sold as tomato sauce.

The long and often complicated journey of the tomato and other foods is linked like a chain and often called a food system. You can imagine that, if a link in the chain or system breaks (or doesn't work like we expect it to), the whole process is interrupted. It could be that a harvest fails due to drought, flooding or a pest outbreak, or that conflict or a disease outbreak prevents movement of food from one stage to another.





# Real life #FoodHeroes

Heroes are not just fictional characters – they also live in your neighbourhood! Food heroes are protectors of biodiversity, defenders of the Earth's natural resources, and guardians of social and cultural traditions. They work in rural and urban areas. They are agricultural labourers, fisherfolk, mountain farmers, foresters, pastoralists and farmers in indigenous communities. The world is filled with heroes.

You may also recognize your local heroes as your parents or guardians that cook for you at home, processors, retailers at the grocery store, the people working at a food bank in your community, or food truck drivers. Every hero is an important piece of the giant puzzle that is our food system!

Food heroes exist in every region and environment across the globe. And for many food heroes, family and farm are two concepts that are deeply linked. Did you know there are more than 600 million farms around the world? Most of them are run by an individual or family and rely on family members to work the land. This is what we call family farming. They're also intergenerational which means the farm is passed down from the parents to their kids. In doing so, family farmers upkeep cultural values and knowledge of the land, strengthening the community's heritage and identity. And in developed and developing countries, family farming is the main form of food production.



## YOUR TURN!

- Who are the #FoodHeroes in your community?
- Can you think of another food hero that we haven't mentioned yet?

## BIODIVERSITY

The word biodiversity is a combination of two words: biological and diversity. It refers to the variety of all living organisms on our planet. It is the backbone of our ecosystems and this diversity helps to naturally sustain all life forms.



While rich in knowledge and skills in farming, 80 percent of the world's poor and food insecure live in rural areas. And most of the rural poor are small-scale family farmers whose livelihoods and food depend not only on crops or animals, but also forest products, fisheries and aquaculture, that is, the cultivation or farming of organisms, such as fish, shellfish, algae and other aquatic plants either in inland freshwater ponds or in the sea.

A lack of financial resources puts a strain on many smallholder farmers and makes it difficult to break the cycle of poverty. Banks may not always lend money to poor farmers, but solutions like microfinancing, also known as "money-borrowing", helps by giving them a loan that can be used to buy equipment for their farms, like seeds, fertilizer and machinery.

But our food heroes face other challenges too, such as access to markets and infrastructure like roads, control over natural resources like land and water, digital technology, proper governance, and gender inequality (which means that men and women may not have the same rights). Did you know that about half of all farm labour is carried out by women, yet they own less than half of all farmland? Gender inequality means that women in rural areas often have limited job opportunities. In order to ensure equal work opportunities amongst our fellow heroes, women across the food chain need more access to resources and support from their local government. For every 100 men living in extreme poverty, there are 122 women. Eliminating gender inequality is a step towards eliminating poverty.

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Heroes are not just  
fictional characters

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# Farmers and digital agriculture

Today, there is so much that digital technology can do. It can even be used in food production to help farmers! Digital agriculture uses tools to share, collect and analyze information along the food chain. It allows farmers to know what's happening when it's happening. Potential problems can be anticipated and farmers can respond in real time to any situation. Digital tools like satellites, drones and Apps can help farmers and workers along the food chain to reduce food losses, improve water management or fight against pests and diseases or process better. It can also help to monitor forests, prepare farmers for disasters, and so much more. Having better control of resources leads to greater food security and a higher profit for farmers.

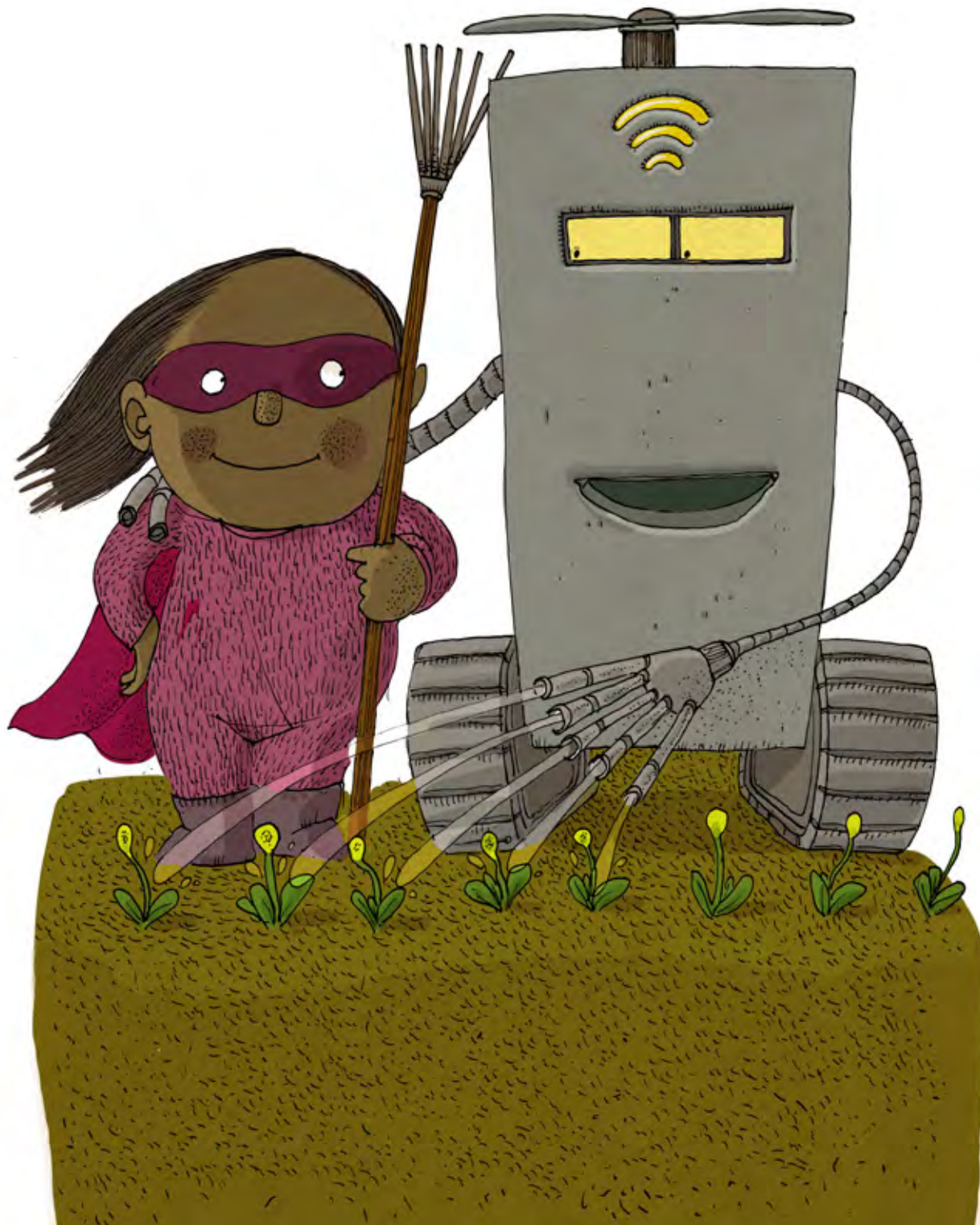
Encouraging young people to work in agriculture is essential to the future of food systems. With better access to infrastructure, better paying jobs and tailored training in digital technology, governments can encourage young women and men to work in the food sector. Right now, over 3 billion people in the world don't have access to internet. We must ensure that all farmers and food sector workers, especially in rural areas, are equipped with digital resources and networks. Improving digital skills will lead to a more sustainable food system.

## THERE ARE THREE IMPORTANT REQUIREMENTS TO MAKE USE OF DIGITAL AGRICULTURE:

1. access to the internet and cellphones;
2. skills to use digital technology; and
3. a culture that encourages digital agricultural activities as a business.







# Let's discover digital technologies that can help **food heroes**!

- Artificial intelligence (AI) is the ability of a machine or computer to think and learn by itself. AI can improve food systems by learning habits and studying patterns to increase food production and use less resources. Two private sector companies, Alibaba Group Holding Ltd. and JD.com, developed a "smart brain" for pig farms. This technology uses facial, temperature and voice recognition software. It can tell if a sow is pregnant by analyzing its sleeping and eating habits and can detect if a pig is sick.
- Apps can be used by farmers to check the weather, diagnose a pest or disease, get information on food prices so they know when to sell at a fair price – all in the palm of their hand. And some can be used in offline mode if phone credit runs out!
- Agribots, like tractors, that run automatically or weed vegetable beds with great precision help farmers to save time.
- Drones or flying robots can collect data covering large areas or get to places that are difficult to reach by land. They can tell when a crop is ready for harvest, apply fertilizer and water fields.
- Satellites that already circle around our planet collecting information from outer space can be used to monitor the stages of food production and provide weather forecasts so that farmers can anticipate storms or droughts. With more information about their fields, farmers can make better informed decisions and react earlier to potential problems. FAO created a tool whereby farmers control the use of water in their fields using information from satellites. Water is a basic need for crops and with WaPOR it can be managed sustainably.





80 percent of the world's food is produced by family farmers, and there are more than 600 million farms across the globe!

## DID YOU KNOW?



To meet the growing demands for food, many countries increase their agricultural production. But oftentimes, these processes lead to food loss and waste.

Climate change causes temperatures to rise and extreme weather events such as floods and storms. This affects farmers' harvests, the activities of food chain workers and leads to an increase in plant pests that damage crops.

While there is currently enough food to feed the global population, more than 2 billion people don't have regular access to enough safe, nutritious food.







The majority of the world's poor and food insecure live in rural areas, and most of the rural poor are family farmers. With a lack of access to financial services and technology, it is difficult to break the cycle of poverty.

Even though women provide more than half the labour on farms, they hold a very small amount of the land (only 15 percent!).



Growing more diverse foods benefit the natural resources in our environment and is also good for our diets.



Over 3 billion people in the world don't have access to internet. Access to technology can help farmers and food sector workers to produce more and earn better.



The world's youth population is expected to grow, yet employment opportunities for young women and men remain limited – especially for those living in rural areas of developing countries.



Help our Food Hero navigate the food system and arrive to the finish line!











## Challenges faced by **food heroes**



Food heroes face many challenges. A growing population means there are more mouths to feed so more food needs to be produced and brought to market. This means there will be more competition for resources, such as land, energy and water. As people get richer, they demand more expensive foods in addition to basic cereal crops, meat, fruits and vegetables. Food heroes are going to need to discover new or innovative ways to produce more food, and different foods with less resources, while dealing with a number of challenges (some are already discussed on pages 7 and 8).

### Poverty

Smallholder farmers produce most of the world's food, yet they often don't have enough food for their own families. When crops fail, or in lean times between harvests, smallholders tend to eat a smaller amount of less nutritious food. A plentiful harvest can also have its downsides for poor farmers as they don't have the means to store food or take it to market. With more food available, prices can also drop meaning that farmers earn less. Poverty also causes farmers to leave their farms and migrate in search of a different job.

### Climate change

Climate change is linked with increasing temperatures which cause more storms, droughts and other extreme weather events that can cause destruction and make it harder to grow food, rear animals or practice aquaculture. It is also causing plant pests and diseases to travel to places they have never been before, destroying entire fields of crops, and affecting the size of fish.





### Conflict

Conflict such as wars make it hard to grow food or get food to those who need it. It can damage farms, produce and important infrastructure, including roads, markets, storage facilities or factories. It can even cause poverty and hunger and force farmers and other food sector workers to migrate. Many of the 2+ billion people without access to enough food live in conflict zones.

### Food loss

I'm sure you are familiar with food waste that happens at home or at restaurants or supermarkets when uneaten or spoiled food gets thrown in the bin. But food also gets wasted between the farm and the market and we refer to this as food loss. There are many reasons for this. Some farmers may not have access to a fridge. Bad packaging could mean that the food spoils fast or unsuitable transport may mean that food simply falls off the truck. In developing countries it's estimated that as much as half of all fruit and vegetable crops are lost between harvest and the market. All the water used to produce those lost crops is also wasted.

### Viruses and pandemics

Virus outbreaks can happen in a country or region or even spread to several countries around the world, in which case we talk about a pandemic, like the Coronavirus COVID-19. In an effort to stop the spread of infection, governments often arrange a quarantine where people are asked to stay at home. This often means that food heroes have difficulty working, which causes problems with the movement of food, especially in developing countries. The Ebola Virus Disease outbreak in West Africa in 2014-2016 caused hunger as there were no workers available at harvest time and farmers were unable to bring their produce to market. Animal diseases can also wipe out herds, ruining a pastoralist's livelihood.

### COVID-19

The Coronavirus COVID-19 pandemic has widespread effects in countries across the globe. It is essential now more than ever to call attention to the importance of resilient sustainable food systems that support our food heroes and communities. This World Food Day is an opportunity to call for global cooperation and solidarity to keep our food supply chains going and help the most vulnerable.



### YOUR TURN!

Choose one of the challenges and list which food heroes are affected by it and how, and what this does to the food system.





# FAO and the SDGs

The 17 Sustainable Development Goals (SDGs) of the United Nations (UN) are a set of guidelines supported by all UN organizations. They're used to steer nations, private sector companies and people around the world in the right direction towards achieving a peaceful, prosperous and more sustainable world. In order to act towards fighting poverty (SDG 1) and hunger (SDG 2) by 2030, more complex issues need to be worked on too.

Tackling the effects of climate change (SDG 13), encouraging gender equality in communities around the world (SDG 5), and promoting inclusive and sustainable economic growth and work for everyone (SDG 8), are just some of the ways in which we can achieve these goals. Everything from life on land (SDG 15) to life under water (SDG 14) needs to be protected, not only for our generation, but also for future generations. What we do today affects tomorrow. Obtaining sustainable living will ensure that the natural resources in our environment are respected, and that everyone everywhere has enough nutritious food to eat and can live without poverty.

Education is key to learn how to act and share resources. Using new digital technology to study our land and water, monitor farms, reduce food waste and loss are important for improving our food systems. Every action big or small makes a difference, and now is the time to act!

## YOUR TURN!

Learn more about FAO's work to achieve the SDGs and read real stories about how people are working towards achieving them by visiting [www.fao.org/sustainable-development-goals/](http://www.fao.org/sustainable-development-goals/)

Find out more about the SDGs by visiting [worldslargestlesson.globalgoals.org](http://worldslargestlesson.globalgoals.org)



# What FAO is doing to help **food heroes**

FAO is committed to help governments, partners and food heroes by increasing access to markets and resources, like finances, innovation, farm inputs and more, to help the most vulnerable have a better life and provide nutritious food for everyone around the world. FAO is even staying up to date on the latest technology to help food heroes benefit from the emerging digital society by conducting research, providing training programmes, developing databases and Apps.

FAO also promotes initiatives such as the Farmer Field School (FFS), a community-based approach that lets farmers take the lead in educating. It allows farmers to come together to share their knowledge and skills. It's a way in which to combine local, traditional knowledge of farming with scientific knowledge. FAO and other organizations have been promoting this type of field school in more than 90 countries.

## What can **farmers** do?

Since the majority of all farms in the world are family-owned, they play an impressive role in the production of our food. If they join forces and work together as cooperatives, they can develop common strategies for sustainable cultivation, as well as to learn how to prepare for natural disasters and recover faster from their impacts. Governments need to support farmers but small farmers also need to preserve the Earth's natural resources, such as soil and water, and find out about new techniques for harvesting, food storage, packing or transport to cut down on food loss. We are not only talking about farmers in the fields but also communities living off forestry, fishery, and pastoralism.





# What can governments do?

Governments and decision-makers have a big responsibility to help food heroes by keeping food systems moving, encouraging youth to work in farming and building up infrastructure like roads, and factories that connects farmers in rural areas to markets. They also need to find ways to work with private businesses and banks to create more opportunities.

Governments can help farmers to gain access to important resources like money, training and technology but at the same time, put systems in place to protect them in the case of a disaster, such as a storm or global pandemic. These safety nets could include food vouchers or money transfers to help keep their family going, secure access to medical services, or a pension when food workers retire.

In some cases, governments need to rethink how they are spending their money, while in others, international solidarity or support from other countries is needed. Development aid from other countries aims to promote lasting development through investment in agriculture, education or setting up microfinance plans.

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Governments and decision-makers have a big responsibility to help food heroes

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# What can **private companies** do?

Private companies have a big part to play in ensuring that the food production system is sustainable and constantly active. Multinational corporations need to use large areas of land responsibly, respecting the environment and making sure that local people are not pushed away from their farms, jobs or homes.

Telecommunication, technology and data companies can make sure that digital tools and technologies are shared with food heroes, so they have access to important information and new Apps. These could help farmers for example to predict the weather, diagnose pests or diseases, use natural resources with more caution, or help distributors and factories to be more efficient.









### Respect food.

#### Respect food sector workers!

Storing uneaten food properly for another day's meal is a great way to avoid wasting perfectly good food. Respect the hard work of our food heroes and the world's precious resources that are used to produce all that we eat.



### Be an activist

Governments and decision-makers have a big responsibility to help food heroes, but we are more than just eaters. Ordinary citizens – including young people – can call for action putting pressure on decision-makers to make changes where needed. If you don't have access to a computer or the internet, don't worry: you can also find ways to speak out in your community. Great communication works offline too!



### Help people to rise out of the poverty trap

Tell your parents about the importance of supporting important development initiatives, such as school meal and nutrition programmes. Education is power. It opens up doors to better opportunities for employment and increases awareness about the importance of eating well.



### Grow food at home

If you have access to a garden or outdoor space, grow some vegetables or herbs. This will take some time but it will teach you a lot about how food is produced. This can be a form of exercise and fun activity to do alone or with friends and family. Green spaces also do a lot of good for us and our environment by purifying the air we breathe.



### Appreciate and celebrate

Celebrate the efforts of our food heroes who in times of crisis still work hard to bring food to our plates. Tell a farmer at the market, a supermarket, food delivery or factory worker that you're grateful for the service they provide and I'm sure you'll bring a smile to their face!

### Practice good food hygiene

You should always keep yourself and your cooking areas clean by properly washing your hands and food. This is especially important if a virus is going around, such as in the case of the Coronavirus COVID-19 outbreak, because practicing good food hygiene prevents the spread of germs.





# Activities

## Make your own food system

In small groups, pick a kind of food you often eat and research all the stages in its production (from growing/raising to harvest, processing, packaging and sale. Don't forget transportation!). On separate round pieces of card, draw a picture to represent each step. You can then string these together and hang your food chains in your classroom.

## Now we want you to tell us about your favourite food hero!

Ask yourself, where does your food hero work in the food system? (see page 5 for examples)

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What superpower(s) does your food hero have?

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What SDG does this food hero work for?

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Give your food hero a name!

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## Enter your food hero in the Poster Contest

Now that you have read and learned about the different kinds of food heroes and their important role in our food systems, enter the World Food Day Poster Contest. Draw, colour or paint your food hero at work, then scan or take a photo of your poster to participate in the contest (for more information see page 4).



# Don't forget!

Cut out the badge on this page and present it to your local food hero to show your appreciation for all of their work or wear it yourself and show that you are a food hero too!

Solution to pages 12-13



## FAO virtual group visits

FAO headquarters is located in Rome, Italy, but the Organization works in over 130 countries across the globe! Are you curious about the history of FAO, its projects and the spaces where world leaders come together to meet? We invite you to check out our Group Visits website where you can get an inside view of FAO and learn more about our work.

For more information visit  
[www.fao.org/about/visit-us/en](http://www.fao.org/about/visit-us/en)

CUT OUT

# FOOD HERO'S BADGE

CUT ALONG  
THE DOTTED LINE



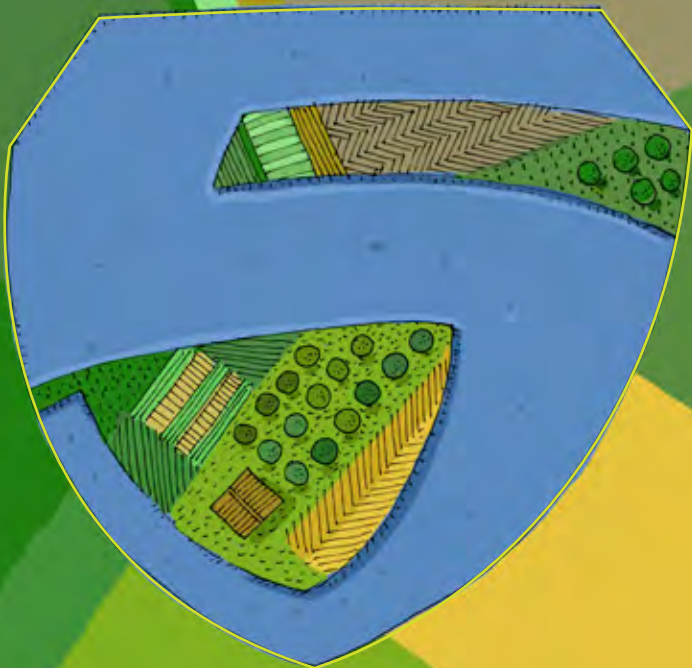




Food and Agriculture  
Organization of the  
United Nations



# FOOD HERO'S BADGE



# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



▶ Healthy Plants  
Healthy Planet



▶ Eating Healthy Matters



▶ Your Guide to FAO



▶ Working for Zero Hunger



▶ Change the future  
of Migration



▶ Climate is Changing

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Food and Agriculture  
Organization of the  
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International  
Plant Protection  
Convention

# ACTIVITY BOOK

# Healthy Plants Healthy Planet



INTERNATIONAL YEAR OF  
**PLANT HEALTH**  
2020





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#### **Note for the educators:**

This book has been designed, written and illustrated to help educators and guardians bring children and young people closer to the world of plant protection; the science that deals with plant health. Although addressed to an age group between 8 and 12 years, this book can also be useful for older kids. It can be considered as a first, simple plant protection manual, designed on the occasion of the International Year of Plant Health.

FAO gratefully acknowledges  
Maria Lodovica Gullino,  
Professor at the University of Turin, for  
her contribution to this publication.



# It all starts with a seed...

Among all life forms on Earth, there is one that is different, since all other living beings on the planet, including humans, depend on it. Without it there would be no life on Earth.

## Plants.

There are many types of plants. Counting them all would be impossible. Just think that forests alone cover more than 30 percent of the Earth's land surface, and that doesn't even include grasslands, gardens, jungles, savannahs and other terrestrial habitats. Just look at the surface of the Earth as seen from space, and you will notice that green is one of the three main colours as well as brown and blue. There are even plants living beneath the blue surfaces!





# Plants are life

There are things in our daily lives that we do regularly and often take for granted. Breathing, eating, playing, studying and running are all activities that we normally do, without asking ourselves why. Well, this will surely surprise you, but many of these actions would not be possible without the help of our green, silent allies – plants. Why? Because plants provide us with oxygen to breathe, food to eat, and green areas to run and play!

Over 98 percent of the oxygen we breathe is produced by plants. They also offer shelter, like dens and beds for animals, and act as our main source of food. Did you know that 80 percent of the food in our diet is composed of plants and products of the earth? To date, over 250 thousand plant species have been identified, of which as many as 30 thousand are edible for humans. The nourishment and oxygen plants provide give us the energy we need to grow and jump. Plants also provide us with medicines when we are sick.

With their roots, they keep soil from moving and help prevent soil erosion. They keep soils healthy too, meaning more carbon can be stored in the ground, which is important in the fight against climate change. Good, solid soil and healthy plants go hand-in-hand. Taking care of plants and keeping them healthy is therefore very important for human survival and for other life forms on Earth.

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Over 98% of the oxygen  
we breathe is produced  
by plants.





# Plants and the Sustainable Development Goals (SDGs)

The 17 SDGs are what the world needs to become a peaceful, safe and healthy place for everyone. Member States of the United Nations have committed to do everything they can to ensure that all 17 goals are reached by 2030. An impossible challenge? Not at all, but it depends on each of us. We can all play a part.

Plant health contributes to “Zero Hunger” (SDG2) by making sure that food is provided for the world’s population. Healthy plants even protect “Life on Land” (SDG 15). “Climate Action” (SDG13) starts with healthy plants that help soils to store carbon. At the same time, climate change is a threat to plant health because the increase in temperature causes plant pests and diseases to move to new countries (see page 16).

Healthy plants also contribute to global economic development (SDG 8) through increased **international trade** (the sale of goods between two or more partners from different countries). However, international trade can affect plant health because plants and plant products (seeds, cut flowers and fruits) are often contaminated by pests and diseases, meaning that they move from one continent to another.



## Activity

Can you suggest other SDGs to which plant health can contribute? Find out more about the SDGs and how you can play a part in achieving them here:

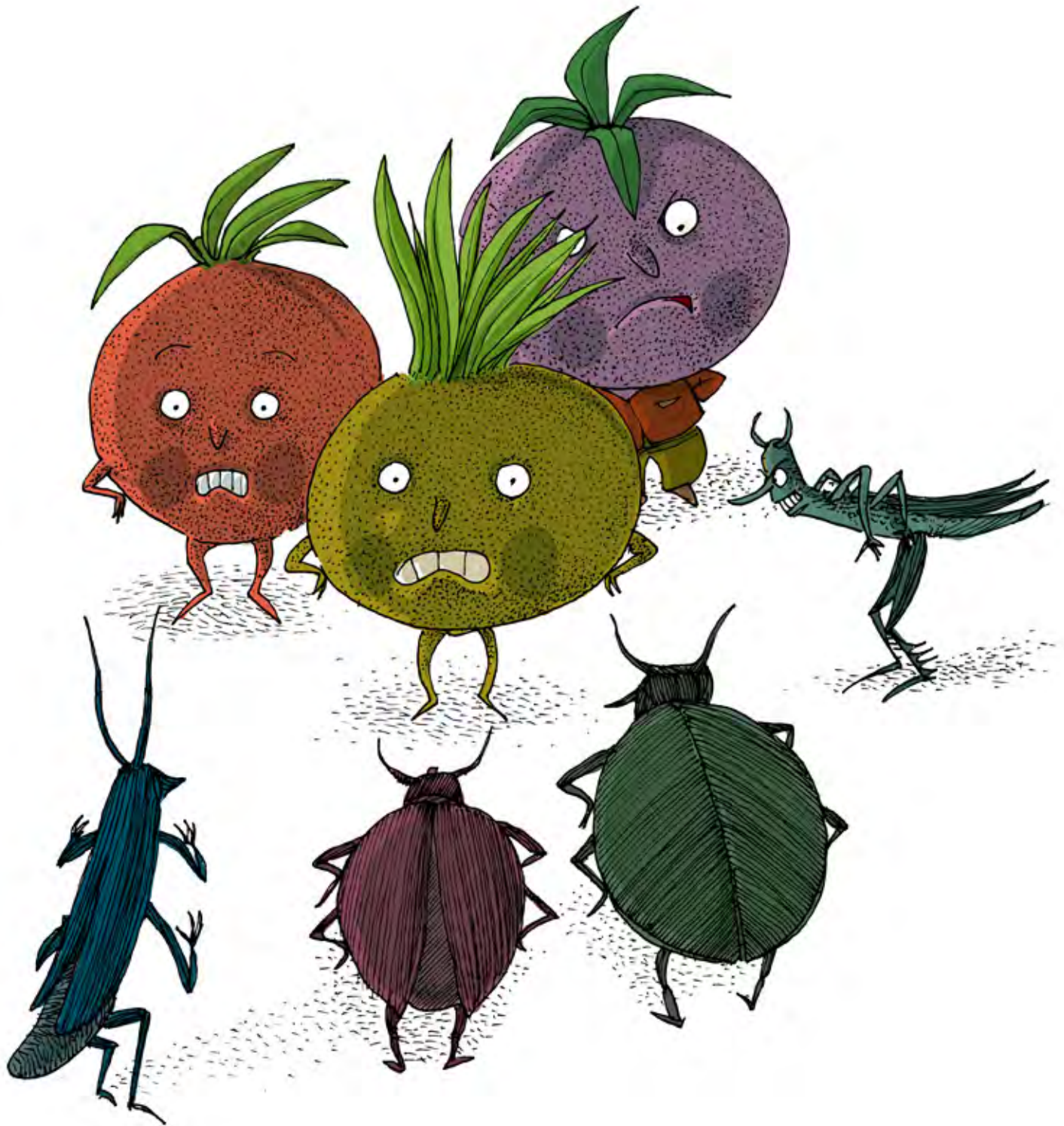
[worldslargestlesson.globalgoals.org](http://worldslargestlesson.globalgoals.org)



# Plants get sick and hurt, too

Just like us humans and all other living beings on Earth, plants get sick or hurt. However, when this happens the whole planet can be affected. Plant pests and diseases can cause wheat and tomatoes to stop growing in our fields, trees to no longer produce fruits, and other products of the earth to rot. Even worse, people who depend mostly on agricultural products for their daily meals can start to suffer hunger.

How does a plant get sick or hurt? Seeds, bulbs, leaves and other plant parts can become the vehicle – if not the permanent home – of entire colonies of pathogens, armies of pests, and other plant enemies. Just like the measles or the flu, these diseases can be contagious and spread from one plant to another, causing serious damage to the environment. Just think how only one contaminated seed in every ten thousand is enough to destroy entire fields of plants, depriving whole populations of food.



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Plants get  
sick or hurt

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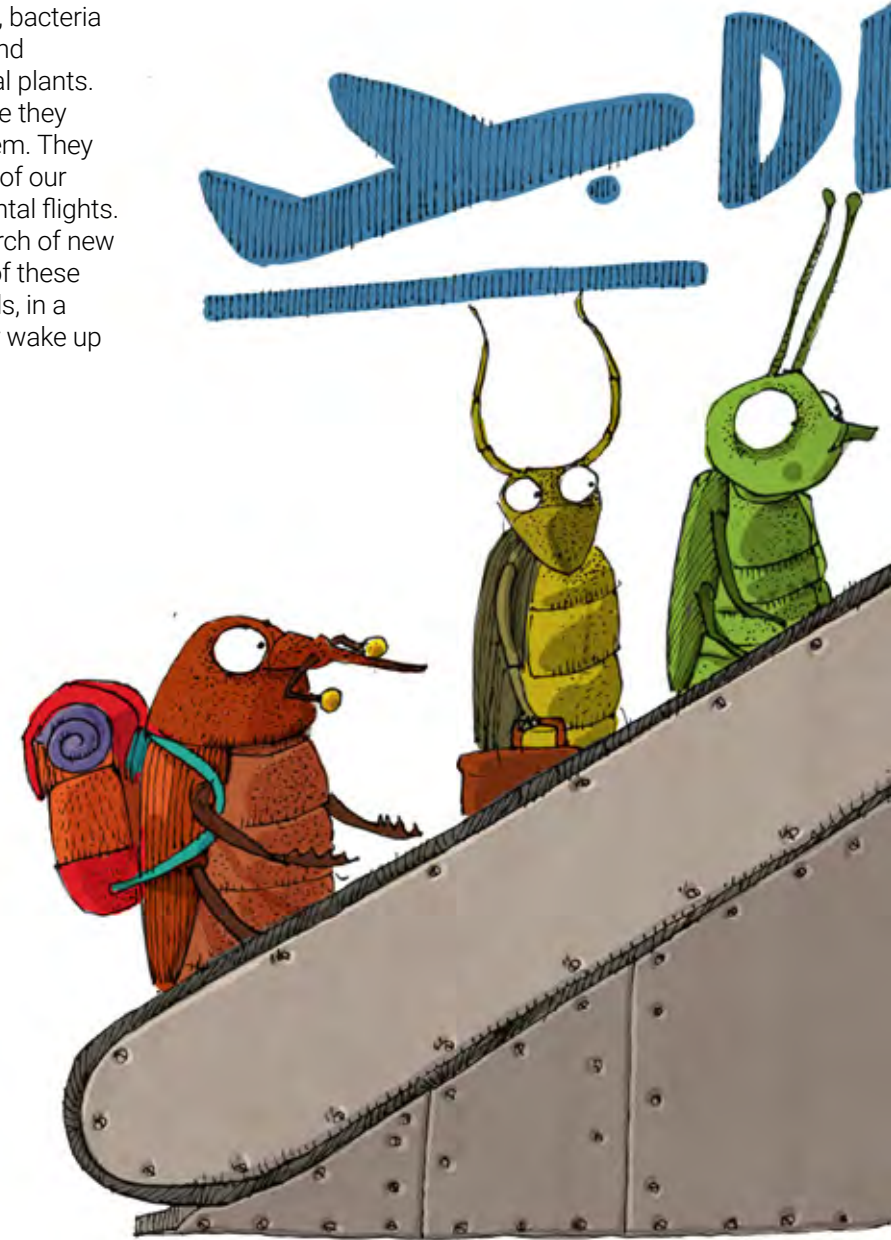


# Plant enemies

As small as they are lethal, plant enemies have different shapes and colours. Some insects, fungi, viruses, bacteria and worms can destroy entire forests, gardens and cultivated fields, beautiful flowers and ornamental plants. Finding these pests is often very difficult, because they hide where no one would ever think of finding them. They slip into suitcases or find shelter under the soles of our shoes. They travel by cargo ships or intercontinental flights. Their favourite hobby is to travel the world in search of new crops and healthy plants they can attack. Many of these dangerous creatures remain quiet for long periods, in a sort of lethargy called "dormancy". However, they wake up refreshed from this sleep, stronger than ever.



When plants get sick or hurt, they need real medicines, used to prevent and treat infections. In addition to synthetic chemicals called "agrochemicals", for several years researchers have actively studied and developed more natural or biological means of control: beneficial bacteria, fungi, viruses and useful insects capable of counteracting the development of plant pests. In other words, friendly microorganisms and insects are fighting the bad creatures that make plants sick or damage them.







### Plants are life

Plants produce almost all of the oxygen we breathe and make up 80 percent of the food we eat. Even the meat, fish or dairy products we eat come from animals that depend on plants to grow.



### Economic advantages

All countries sell plants and plant products to other countries through an activity called international trade. Over the past decade, this activity has helped plant pests and diseases to enter new countries as they hide within the products that arrive.

# SOME NUMBERS



### A growing demand for food

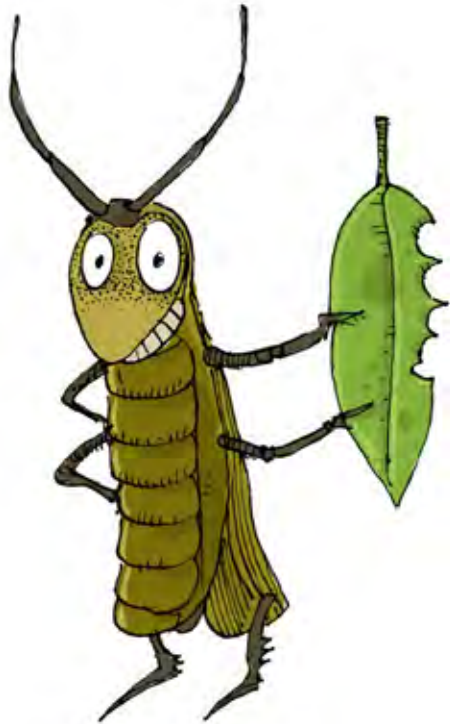
Farmers will have to produce more than double what they do today by 2050 to satisfy a fast-growing and richer population that increasingly lives in towns and cities.



#### Activity

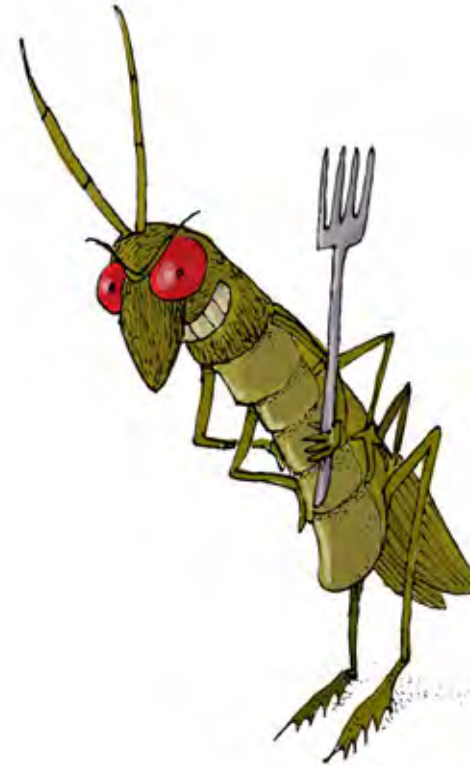
Choose your favourite food and think about the ingredients used to make it. Draw it and show any links with plants, even if it didn't originally come from plants!





### Damage caused by pests

Plant pests can destroy a large amount of plants and cause a country to lose a lot of money, because they are not able to trade these plants or plant products. In the most difficult conditions, which often occur in developing countries, more than a third of crop production is lost.



### Hungry pests

The largest swarms of locusts consume more than 100 thousand tonnes of food per day. This could feed tens of thousands of people for a whole year!

### Climate change

Climate change and resulting higher temperatures can stop a plant from growing properly or make it less nutritious. It can also encourage pests to move to new countries or continents.



### Useful insects

Some insects are important for plant health. They promote pollination, which is vital for the reproduction of plants; they stop pests from causing destruction; and they promote soil health. Unfortunately, the amount of useful insects has decreased by 80 percent in the past 25 to 30 years.



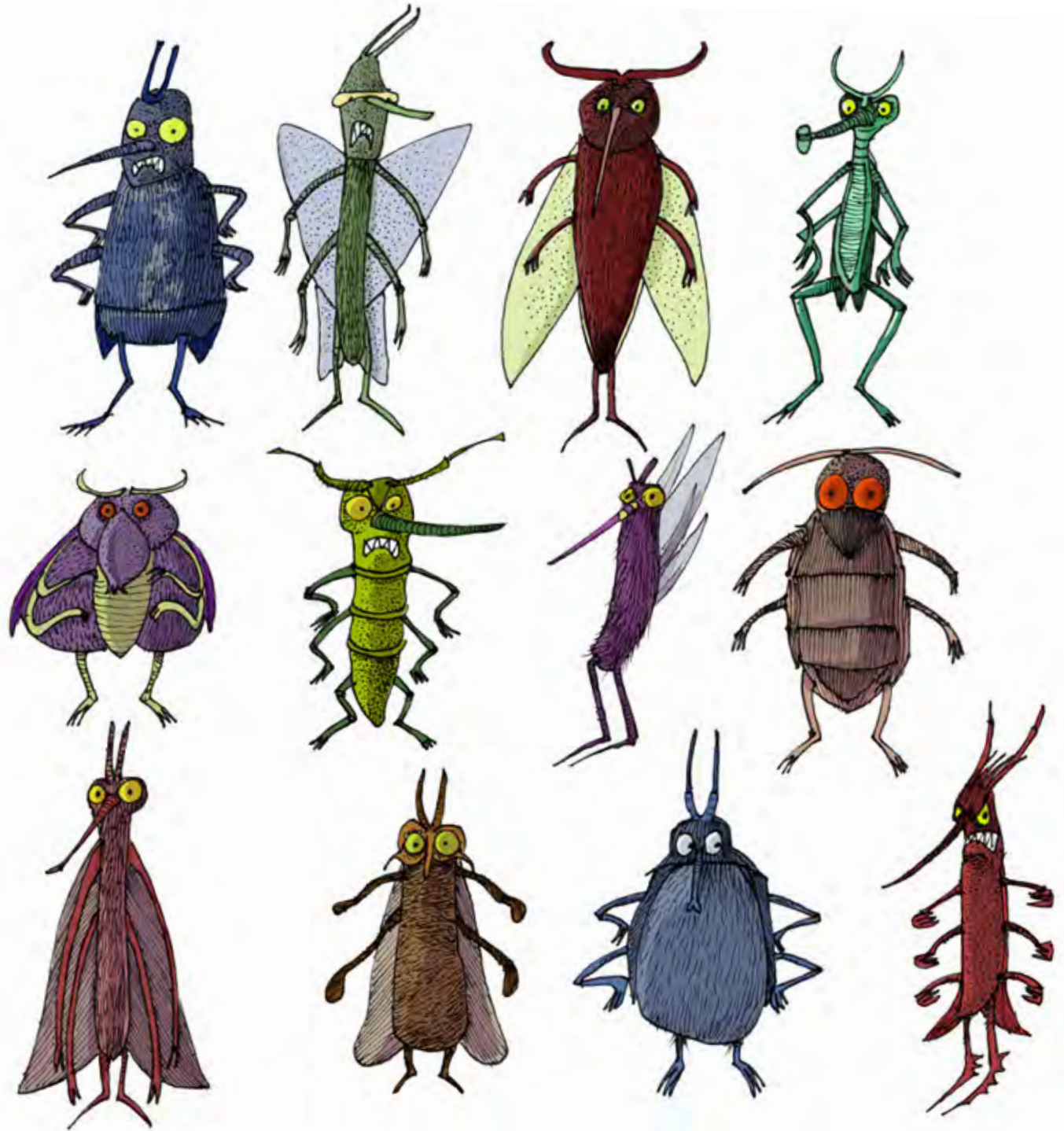
# Historical enemies: wandering pests and foreign diseases

Plant enemies have existed since the dawn of time. However, in the past, when science and technology were not as advanced, identifying and defeating a plant pest was a very difficult undertaking.

In the mid-nineteenth century, a wandering microorganism called potato blight arrived in Europe from an unknown land. Nobody was prepared to welcome this unexpected little guest. In Ireland, the pest destroyed entire potato crops, the main meal for the Irish at the time, and caused a famine that led to more than one million people dying.

In 1943, a fungal disease called brown spot destroyed almost the entire rice crop in Bengal, India. More than two million people died of hunger, while the rest were forced to emigrate elsewhere in search of food.

Often the origin of these diseases remains unknown. Majestic trees like elms and cypresses that covered large areas of Mediterranean countries, such as Spain and Italy, about a hundred years ago have been struck by catastrophic diseases. These diseases also made their way across the ocean to America.

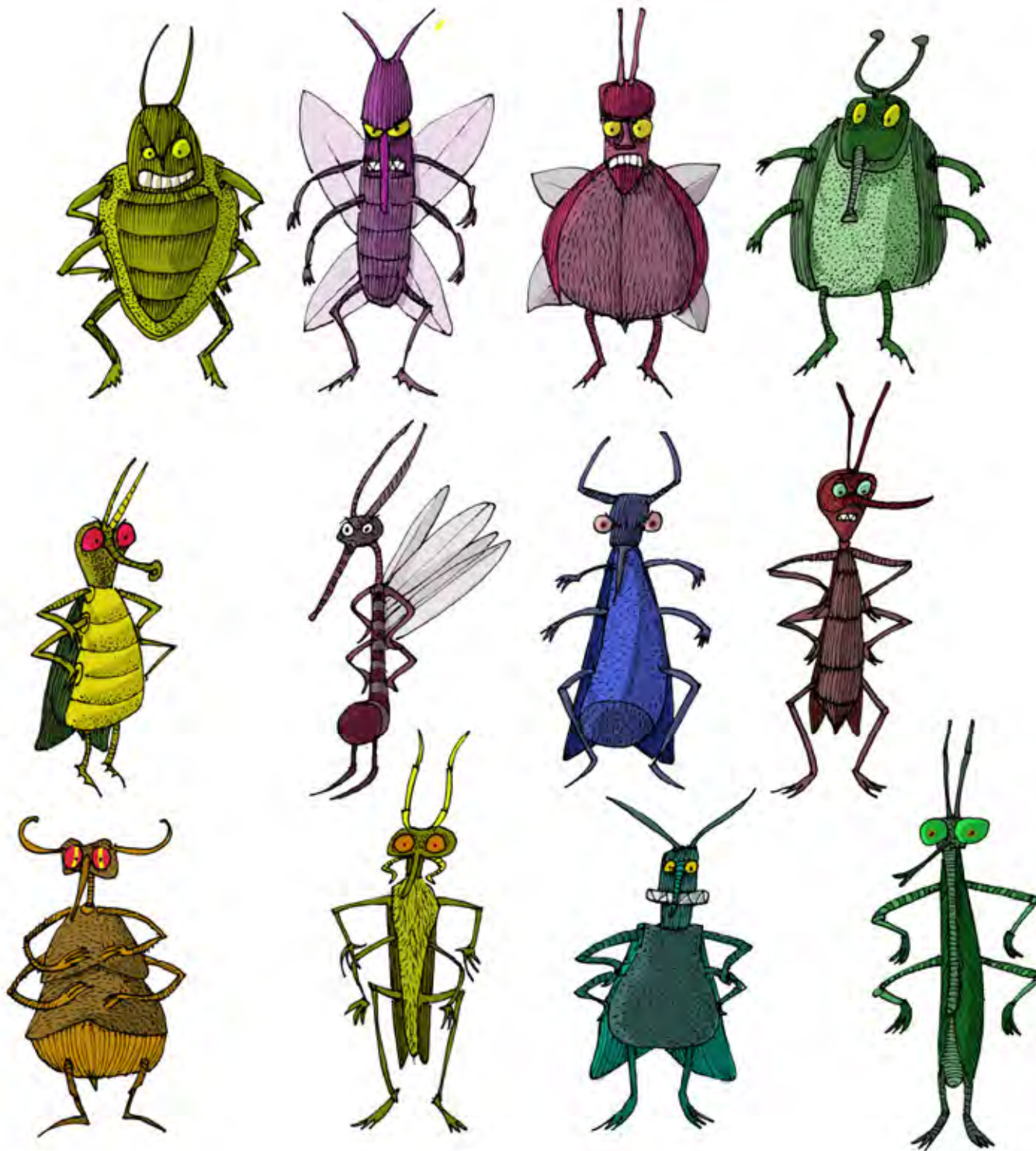


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Plant enemies have existed  
since the dawn of time

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## Today's enemies: pests with a suitcase

Over the years, pest invasions have become even more frequent and devastating. Opportunities for movement have increased. In fact, with globalization, the number of intercontinental flights has skyrocketed, and commercial traffic from one end of the world to the other is normal. Long ago, these dangerous pests had to make long and exhausting trips from one country to another, with their own means (wings, legs, antennae, teeth), or be transported by the wind. Today, however, they just have to board an international plane or a cargo ship to arrive at their destination in record time.

A disease called wheat rust Ug99 appeared in Uganda in 1999, and attacked the most used varieties of wheat, spreading rapidly to all wheat growing areas of the world.

A bacterium called *Xylella fastidiosa* is destroying olive trees in Salento, a fertile land in southern Italy. This is ruining the livelihoods of entire families of farmers who depend on olives for their income, threatening tradition and destroying the landscape and tourism.





Spot these pests and diseases!









# Traveling pests: aliens

My name is José Carlos and I come from Mexico. There's a pest called fall armyworm that's driving all the maize farmers in the world crazy. It's a worm that eventually turns into a moth through a process called metamorphosis and it appeared first on my continent - the tropical Americas. Unfortunately, it didn't stay put. It started to travel far and wide across the planet, destroying entire crops of maize. This is one hungry worm. It prefers maize, but can feed on more than 80 different crops, including rice, millet, sugarcane, vegetables and cotton.

It can travel huge distances – up to 100 km per day – and has even made its way to Africa, India, Yemen, China, Korea, Japan and Australia! It's really difficult to stop this parasite because it flies so far and reproduces so fast. A female fall armyworm can lay up to a thousand eggs!







We are very worried about locusts where I come from. They're like grasshoppers. I'm Zala from Ethiopia, where tens of millions of hungry locusts that fly in huge swarms are eating all our crops. A lot of people in my region are already poor or hungry so this is a big problem. Locusts are also very fast. They travel 150 km and can eat an amount of food equal to their body weight in a day. Well, you might think that's not a lot because they're so small but multiply this weight by millions (one swarm), and you'll understand the damage they can cause. We are terrified!



#### Activity

With the permission of your parents, take a photo of any insect you find. Discover what it is and if it has a purpose. Is it a pest or a useful insect?





# Plant pests and climate change

You must have heard about climate change. Many young people and children of your age are already fighting all over the world to save the planet from the effects it is having on the environment. But what you may not yet know is that climate change is an ally of plant pests.

In fact, most pests can't survive cold or frost. The higher temperatures caused by global warming provide armies of pests with the ideal conditions to trace new paths, reproduce and hire new recruits.

The effects are especially visible on those pests that we find during the summer, such as fruit flies. These insects need humid and warm environments to survive and reproduce. But that's not all! The damage caused by climate change to the environment weakens the resistance of plants and their ability to recover, meaning that they're weaker in the event of an attack.

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But what you may not yet know is that climate change is an ally of plant pests

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# Who will save the planet from plant enemies?

## Plant doctors

Step forward plant and flower doctors! These experts love life and spring, and green is obviously their favourite colour. Just like our doctors, and veterinarians who treat our four-legged friends, plant doctors intervene when a plant, flower or tree gets sick or hurt. They work hard to identify what is the best response for each disease and how to save a plant. These doctors never get discouraged. On the contrary, the discovery of new diseases and pests helps them to make progress with their research and to experiment with more effective treatments. Plant doctors never give up, because they know that protecting a plant means protecting life.

On the next pages you can read how the Food and Agriculture Organization of the United Nations (FAO) and the International Plant Protection Convention (IPPC) also work hard to protect plants.







## The international community

Protecting plants from pest and disease invasions is a global mission. All continents, countries and people of the world are fighting together to protect plant health. Every year in Rome, a group of representatives and experts on plant pests and diseases gathers from all over the globe. Their task is to define guidelines, universal instructions, which all countries in the world can follow to prevent pests and other plant diseases from spreading from one end of the world to the other. These international measures (or "standards") not only help to prevent situations, such as the ones Zala and José Carlos spoke about, but also to fight hunger in the world.

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All continents,  
countries and  
people of the  
world are fighting  
together to protect  
plant health

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### PLANT GUARDIANS 1

#### Food and Agriculture Organization of the United Nations

FAO works with more than 190 Member States to fight hunger and poverty and to ensure access to safe and nutritious food for all. FAO helps farmers around the world, especially those in developing countries, to use sustainable agricultural practices. This means producing enough food both to eat and make an income, while protecting the world's natural resources and the environment. FAO plays an important role in spreading the use of new effective technologies to produce food and protect plants in an environmentally friendly way. FAO also protects forests all over the globe from pest attacks to maintain biodiversity and protect the main source of oxygen for humans. Protecting plants is not only about fighting pests. It also means keeping soil and seeds healthy, managing the use of water, ensuring proper nutrition for plants and using sustainable agricultural practices. Plants are exactly like us: the healthier they are, the less they get sick.



### PLANT GUARDIANS 2

#### International Plant Protection Convention

They say that prevention is better than cure. Preventing harmful pests from arriving suddenly in new places is surely simpler than trying to repair all the damage they cause. As we have read so far, plant pests are not only making plants sick, they also have disastrous effects on food security, world hunger and trade.

The Secretariat of the **International Plant Protection Convention (IPPC)** knows this well and has been working for years to protect plants from the invasion of harmful plant pests. More than 180 countries around the world are a part of this Convention and they have a common mission to safeguard the world's plants. However, minimizing the effects of these plant pests on a global level would not be possible without help from the regions and countries. For this reason, **national and regional plant protection organizations** come into action: they collect and share information and deal with plant pests and diseases locally.



# So what can we do?

To take care of plants you don't necessarily have to be a plant doctor or a government representative. Everyone can do something to protect them!

**1 Become a plant guardian**  
Observing roots, leaves and stems more closely is the first step in learning to love these precious living beings who keep the planet in balance. Take walks in nature to a botanical garden, or to the park nearest your home. If you notice something strange, take note of it and inform an adult. An expert, a teacher or a parent will know whom to contact.

**2 Be careful when you travel**  
If you travel, remember not to bring seeds, flowers, fruits or vegetables with you unless you have permission. Some pests could be hiding inside!





### 3 Check the origin of online products

Tell your parents to be careful when ordering plants or plant products online. Small parcels are often not checked by the authorities, which means that you could help pests get into your country from abroad.



### 5 Be kind to the environment

Try to be kind to the environment and protect the Earth's precious resources. For example, avoid wasting water and make sure you properly dispose of household products that contain chemicals, paints or batteries, so as not to pollute our soils or water.



### 4 Make cities greener

Add some green to the scene by creating and caring for school gardens, community gardens, or potted plants on roofs or balconies. Ask your parents to help encourage local authorities to plant roof gardens to cover tar that absorbs heat. All this plant material creates shade, cleans the air, cools the city landscape, and reduces water pollution.



### 6 Become a #PlantHealth supporter

Spreading the word is very important, so inform your family, class and neighbours. Everyone must know that protecting plants is essential for life and a better future.

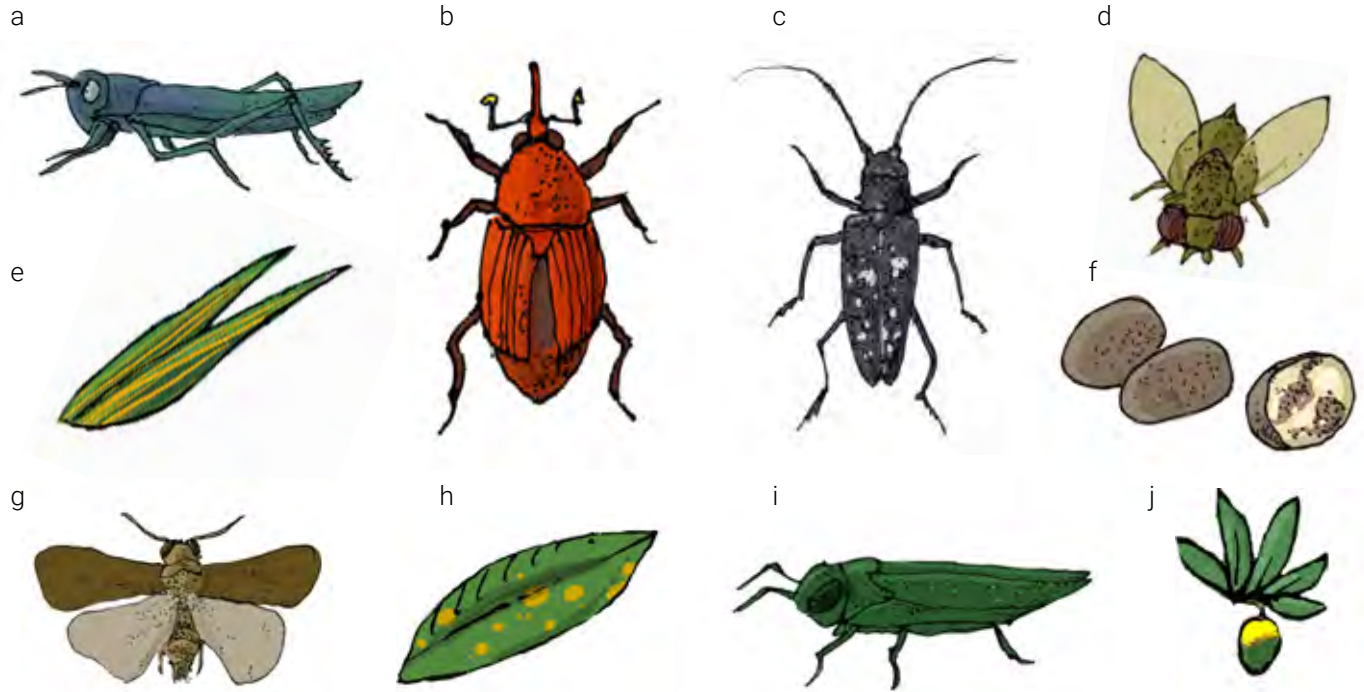




# Activities

Look up images of plant pests and diseases online and use this information to help match the pictures here (you also saw these on pages 12-13) with the correct name:

- |  |  |
|--|--|
| 1. <i>Spodoptera frugiperda</i><br>(fall armyworm)               | 6. <i>Schistocerca gregaria</i><br>(desert locust)                         |
| 2. <i>Rhynchophorus ferrugineus</i><br>(red palm weevil)         | 7. <i>Phytophthora infestans</i><br>(potato late blight)                   |
| 3. <i>Anoplophora glabripennis</i><br>(Asian long-horned beetle) | 8. <i>Hemileia vastatrix</i><br>(coffee leaf rust)                         |
| 4. <i>Agilus planipennis</i><br>(emerald ash borer)              | 9. <i>Candidatus Liberibacter asiaticus</i><br>(citrus greening bacterium) |
| 5. <i>Ceratitis capitata</i><br>(Mediterranean fruit fly)        | 10. <i>Puccinia striiformis</i><br>(wheat yellow rust).                    |



- Do some research on the internet with a guardian and discover where you can find the six pests. Draw a simple map and mark the movements of these pests across the world. Use your imagination to show how they may have travelled there.
- Search the internet to learn about the history of one of the four plant diseases above. Write a case study with text and photos and present it to the class.







INTERNATIONAL YEAR OF  
**PLANT HEALTH**

2020

**2020: the International Year of Plant Health**

The United Nations General Assembly proclaimed 2020 as the International Year of Plant Health. The objective of this international year is to spread and increase awareness of the importance of plant health among the public, and especially the younger generations. FAO and the IPPC Secretariat are working to raise awareness of this issue among the adults of today and tomorrow, and to understand how protecting plants is essential to defeat world hunger.



# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



▶ Eating Healthy Matters



▶ Your Guide to FAO



▶ Working for Zero Hunger



▶ Change the future of Migration



▶ Climate is Changing



INTERNATIONAL YEAR OF  
**PLANT HEALTH**  
2020

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Food and Agriculture  
Organization of the  
United Nations



# ACTIVITY BOOK

# Water is life, water is food

Leave no one behind





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### World Food Day

Every year on 16 October, people from more than 150 countries come together to mark World Food Day (WFD). Since 1945, nations around the world have joined forces with the common goal of raising global awareness and taking action to end hunger and guarantee healthy diets for all. FAO was founded on that day. But WFD is YOUR day too! Become a food hero and inspire others to take action to help create a more sustainable world where no one is left behind.

### Note to teachers

This Activity Book is aimed at a broad age range of young people interested in learning more about the importance of water on our planet. It is also a source of inspiration for those wishing to enter the World Food Day (WFD) 2023 Poster Contest. Although it is intended for children between the ages of 8 and 12, it is also a valuable teaching aid for younger and older students.

### Acknowledgements

FAO would like to thank author Susanna Mattiangeli and illustrator Lorenzo Terranera for their contributions to this publication.



# The Water Planet

The planet we live on may be called Earth, but the reality is that it's mostly made up of water. This precious resource covers about three quarters of the world. It is in water that the first lifeforms arose and in water that we are born. Water allows us to grow and live. Think about your body: that's mostly water too.

---

Do you know  
how much  
water there is  
in the world?

---

Imagine millions and millions of billions of litres of water, which take up much more space than our continents combined. But we can only use a small part of this enormous quantity.

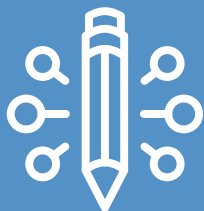
Why? Water can be fresh or salty, distilled or mineral, pure or polluted. That depends on the substances dissolved in it.

Most of the water on Earth is salty (71 percent) and can be found in the seas and oceans. Hardly any of the water is fresh – only 3 percent of all the water on the planet. It is stored mainly in glaciers and snow, underground, in lakes, rivers and swamps.





# WFD2023 Poster Contest



What comes to mind when you try to imagine a world where everyone has access to food and water? Take part in the World Food Day Poster Contest. Unleash your creativity by designing a poster showing your water action for food.

To take part, go to:  
[www.fao.org/world-food-day/contest](http://www.fao.org/world-food-day/contest)

The competition is open to participants aged 5 to 19 and the deadline is 3 November 2023. Three winners in each age group will each receive a certificate of recognition and a surprise gift bag. They will be mentioned on the World Food Day website and FAO social media channels.



## Water and farming

Almost all the food in the world is produced from soil in the fields and water. Since ancient times, farming, which is the practice of cultivating the land but also of rearing animals, has used different methods to water vegetables, fruit trees and cereal crops.

---

It all begins with a seed,  
soil and water.

---

Water from rivers and lakes and groundwater from wells is used for farming. In places where rainfall is scarce, water drawn from below ground is the main way to irrigate the land. Over the last 70 years, techniques to drill into the ground and pump out groundwater have helped millions of people out of poverty and hunger. But now freshwater resources are decreasing.

Rapid world population growth, global warming and an increase in the production of goods and services around the world have reduced reserves of this precious commodity.





Over-extraction of groundwater is a threat to the food security of many people. Worldwide, about 72 percent of the available fresh water is used in agriculture. Only 12 percent is used in towns or communities for everyday life, while 16 percent is used by industry.

If we wish to safeguard water reserves, we must clearly begin with farming and the food system as a whole.

Everything in the world is connected, like a big chain: farming, which contributes to the depletion of reserves, is affected by water scarcity. The people who are most affected by this situation are smallholder farmers struggling to meet their daily needs, particularly women, Indigenous Peoples, migrants and refugees.

One third of the planet's inhabitants are affected in various ways by decreasing water resources, while one tenth of humanity finds life very difficult due to living in places where drinking water is scarce. At the same time, the need for water is increasing in step with the world's population. There are now around 8 billion people in the world: if, as has been predicted, the world's population reaches 9 billion by 2050, the demand for water will rise by 35 percent. We will need to grow more food using less water. How, though?



# Solutions

## Broadening our knowledge

Understanding how much groundwater we use, particularly in farming areas, is very important if we plan to use it sustainably. Getting as much information as possible can help monitor how much water it actually takes to grow crops and help farmers manage this resource better. Technology and innovation can be great allies in this important challenge.



## Protecting wetlands

Land and water coexist in some of the world's natural environments. Swamps, lagoons, marshes and basins can be freshwater, saltwater – or brackish water, which is somewhere between the two. These ecosystems are valuable for many reasons. For example, they are rich in biodiversity or home to a wide variety of living species, and they are also natural reservoirs that purify water. More than three quarters of the world's wetlands have disappeared in the last 300 years and those that remain are threatened by pollution and climate change. In a world threatened by water scarcity, we need to do more to protect these areas.



## Making farming more efficient

Some irrigation systems in farms are not designed to save water. As we'll see in more detail, there are ways to water plants without wasting resources. At the same time, food production can be increased by making room for crops of high nutritional value that do not require too much water to grow, such as pulses.





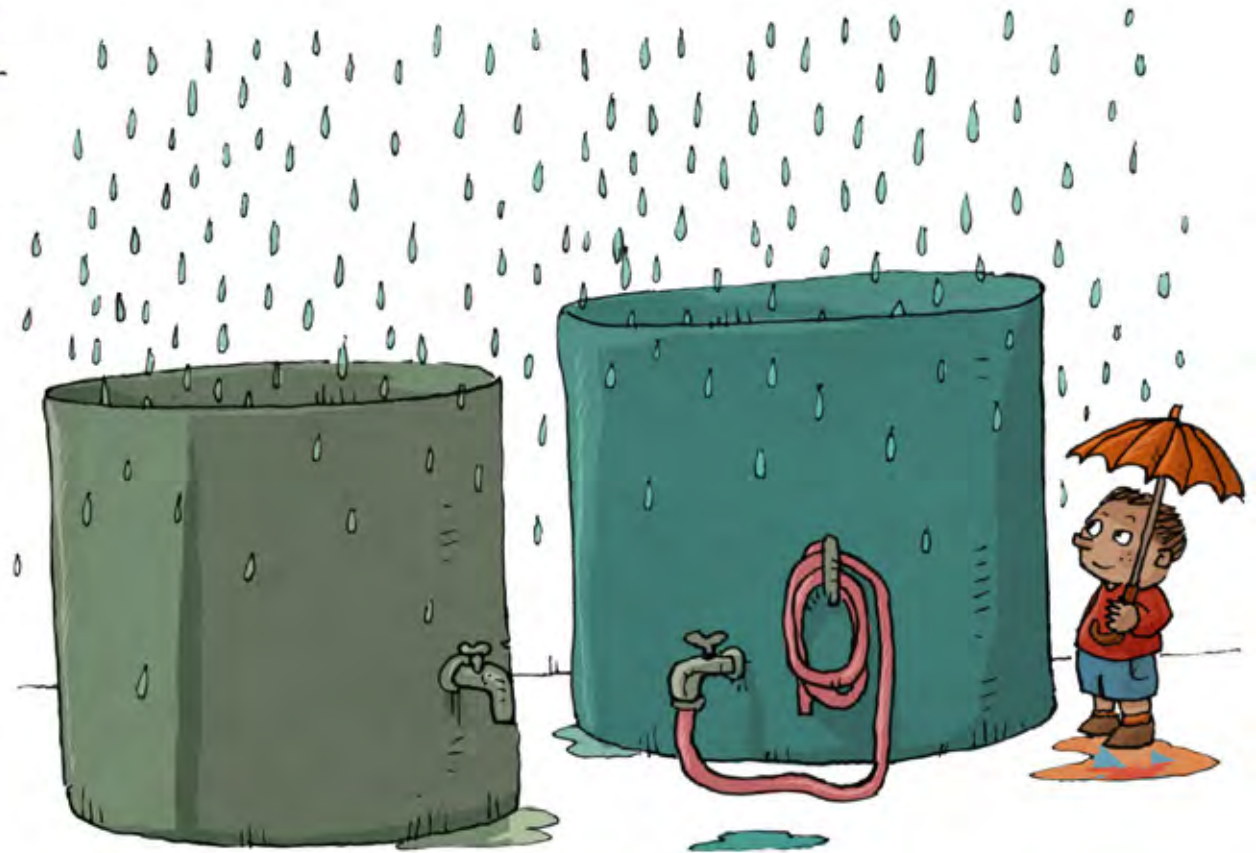
**Reducing waste is an essential step towards saving water.**

Approximately one billion tonnes of food (if you find this hard to visualize, just imagine 250 000 elephants) is wasted in the world every year, along with the water needed to produce it. Food might be lost during production or wasted in shops and homes at the end of the cycle. We can reduce all this waste.



**Slowing global warming**

Over the past 50 years pollution has caused gases to concentrate in the atmosphere. This heats our planet and changes the way air masses move. As a result, the number of droughts or long periods without rain, has increased since the year 2000 and there are more than twice as many floods. Currently, most natural disasters are water related. Farming that is more sustainable or environmentally friendly, can help slow global warming.





# We must work together

**Governments** of individual countries need to invest money to support the most efficient farming practices that do not waste water and produce food without leaving anyone behind. Laws are needed to protect wetlands, seas, lakes and underground reserves.

**The scientific community** can contribute greatly to this end by continuing to do research, collecting data and making it accessible so that reliable, fact-checked information on the subject of water can be disseminated worldwide.

**Private companies** can do a lot as well: technology can continue to come up with innovative solutions to improve the efficiency of farming.

Water scarcity affects the whole of society, so **civil society organizations** can also become agents of change by spreading accurate information on this topic, encouraging a more sustainable diet and a more water-friendly lifestyle in general.

All of this can make a difference as long as we cooperate across the board. We can only preserve water and guarantee that everyone has access to it by forming teams of international organizations, governments, research institutes, the private sector and citizens' associations.



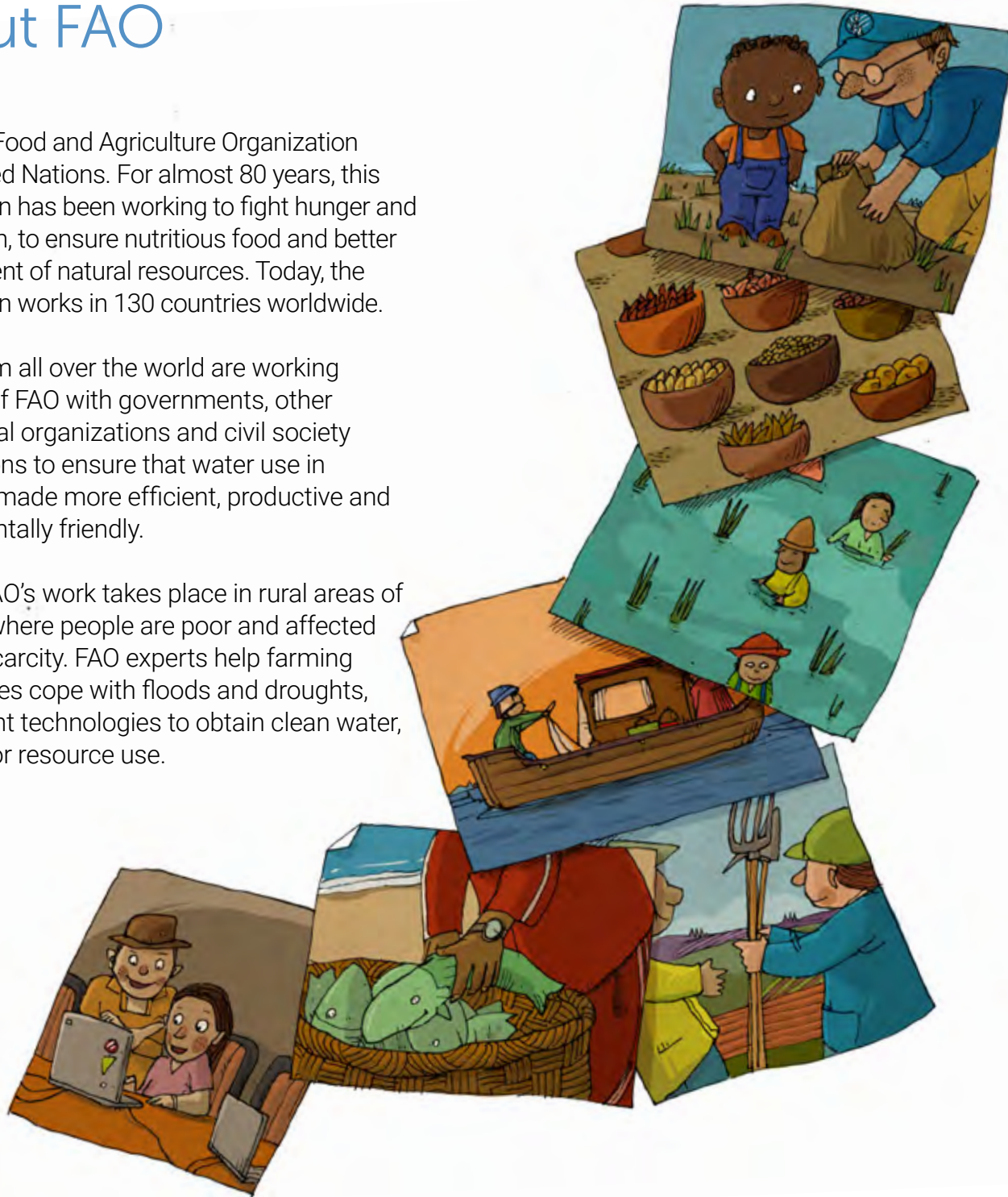


# About FAO

FAO is the Food and Agriculture Organization of the United Nations. For almost 80 years, this organization has been working to fight hunger and malnutrition, to ensure nutritious food and better management of natural resources. Today, the organization works in 130 countries worldwide.

People from all over the world are working on behalf of FAO with governments, other international organizations and civil society organizations to ensure that water use in farming is made more efficient, productive and environmentally friendly.

Much of FAO's work takes place in rural areas of countries where people are poor and affected by water scarcity. FAO experts help farming communities cope with floods and droughts, use the right technologies to obtain clean water, and monitor resource use.



- FAO provides smallholders with material and technical support to grow crops using less water, reduce energy consumption and practice more sustainable agriculture.
- We help governments in many countries to improve water management and irrigation systems, working to find solutions on a case-by-case basis.
- We work with local experts to help prepare for and respond to natural disasters crises in a timely fashion.
- We provide courses and opportunities for countries to exchange and share b new technologies, knowledge and water-sparing farming practices, helping populations to exploit natural resources sustainably.
- We help small agricultural companies access finance to work in a more efficient and innovative way, avoiding food and water wastage during production.
- We encourage the inclusion of women, youth and Indigenous Peoples in the search for solutions and in decisions that affect their lands.





# Sustainable Development Goals

The United Nations has set 17 Sustainable Development Goals to be achieved by 2030 and over 190 countries are committed to achieving them.

What does Sustainable Development mean? It means being able to ensure a healthy, dignified and fair life for all, respecting the environment and conserving its resources. FAO is committed to many of these goals, because, as we have seen, food goes hand in hand with the future of the planet.

Goal 6, Clean Water and Sanitation, is about access to drinking water and sanitation and safe water resources. Since water lies at the heart of life on the planet, sustainable development clearly cannot be achieved without also achieving this goal.



# Water projects

## Technology

**News from space** – WaPOR (pronounced vapour) is the name of an FAO project to monitor a given crop's water consumption using information from space satellites. We can find out about the evapotranspiration of farmland from high above. In other words, we can measure the water vapour produced by a cultivated field to understand how much water crops have used in their development from seed to harvest and obtain data we can use to avoid waste. FAO uses this information to produce a publicly accessible pool of data that anyone can use to improve water management.

**All kinds of data** – AQUASTAT is FAO's global water information system that collects, analyses and disseminates data for every country and region around the world. Its aim is to provide governments, private individuals, international organizations and civil society organizations with comprehensive and up-to-date information on water and its use. This information portal is very important for achieving Sustainable Development Goal 6, which aims to guarantee clean water for all and achieve efficient management in the use of this resource.







## Solutions old and new

**Hydroponics** - This is a method for growing crops using little water and no soil. During this simple process, the seeds are first soaked in water until they germinate, then placed in a greenhouse where they continue to receive nourishment and water to grow. This method has many advantages: the plants take only a week to grow compared to several weeks when normal methods are used. It requires no fuel and little water, which makes it ideal in times of drought. FAO's hydroponics specialists train technical staff in many countries to spread this practice.

**Aquaponics** - This farming production method does not use chemicals and saves a lot of water: plants are grown in tanks populated by fish that fertilize them by leaving their waste. This system is very efficient, as long as the water quality is monitored.

**Food from the rain** - FAO has launched projects to introduce harvesting systems to collect rainwater and new water management techniques that are based on traditional methods. This is a way to adapt to climate change, ensuring that communities, particularly women, have regular access to water and make efficient use of it.

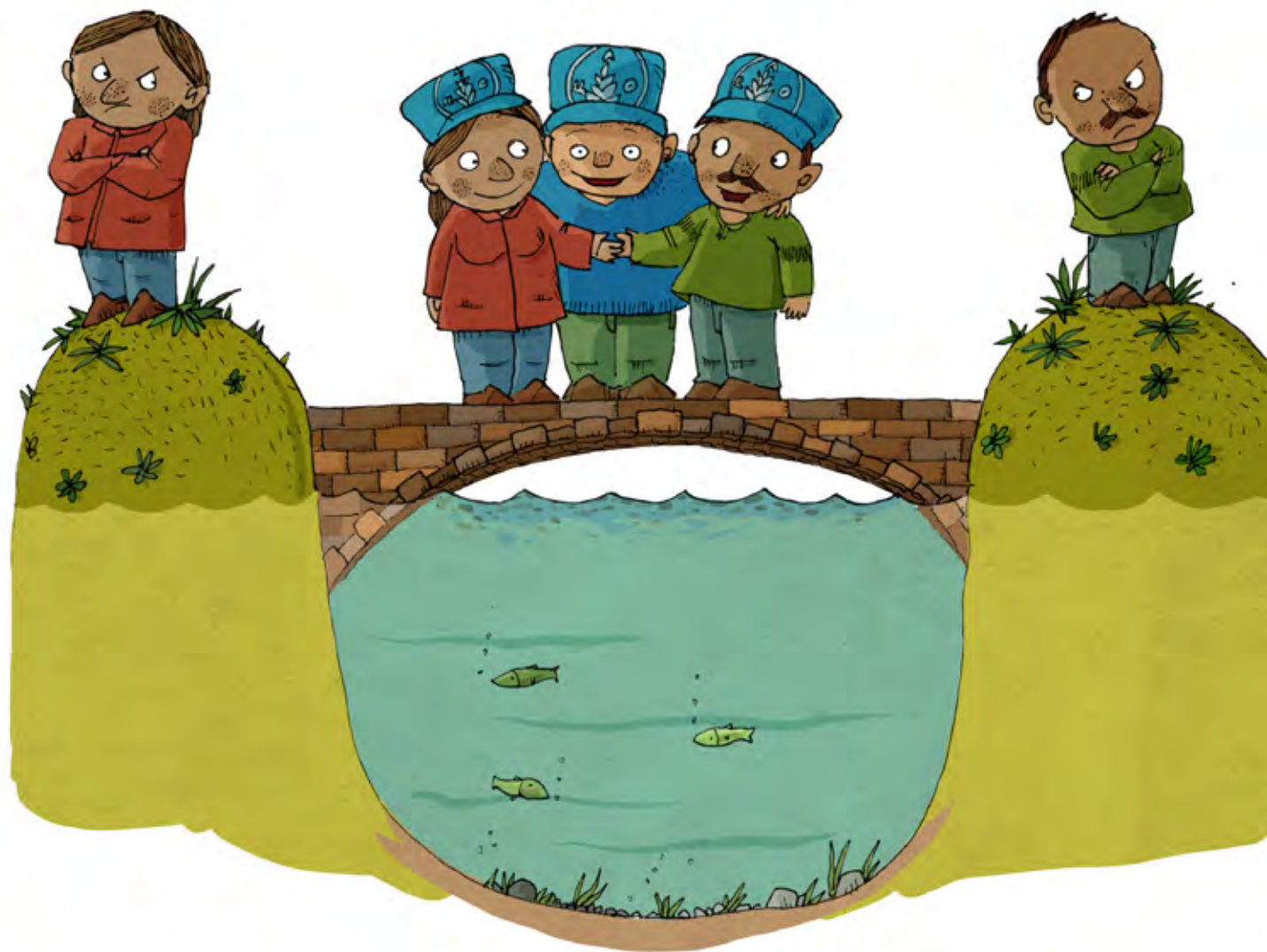
**Agricultural Heritage Systems** - Traditional farming methods can be very efficient and environmentally friendly. This is why FAO has compiled a list of sustainable traditional systems that should be protected. There are now more than 70 Globally Important Agricultural Heritage Systems. These are places where communities have managed ecosystems over generations by saving water, respecting soil health and working together to leave no one behind. Protecting these places and exploring ancestral knowledge can help us find solutions for the present and the future.



## Health and Peace

**Water under the microscope** - One Health is an FAO programme that works for the health of all living things and ecosystems as though they were one organism. Since everything in the world is connected, water quality affects food quality and it is important to monitor this aspect from production to consumption. Food-borne diseases are often the result of eating food contaminated by poor quality water. FAO is working to study the composition of small organisms living in the water that can cause disease. Contamination and epidemics can be avoided by tracing their path from water to food.

**Resolving conflicts** - In many parts of the world, competition for water is an ever-increasing cause of hostility that can escalate into open conflict. For example, in certain parts of Africa where water is scarce, farmers are reluctant to share this commodity with nomadic pastoralists. Conflicts may even arise because of differences between ancient unwritten laws and new regulations on water use. This is why FAO proposes projects to encourage meetings and dialogue between the various communities, helping to find solutions and improve community life so that all people can enjoy water.



On the next page you'll find a fun game! You will need a dice, and a counter for each player.







You poured medicine and waste down the drain rather than disposing of it properly. Go back space.

You always turn off the tap while brushing your teeth. Jump to 24.

You joined cleaning initiatives of local rivers and lakes to combat water pollution. Roll again.

You took a long shower, letting the tap run. Skip a turn.

You reinvented leftovers in a new recipe to reduce food and water waste. Move forward three spaces.

You never fixed that leaking pipe, and the water keeps dripping. Go back two spaces.





# Water unites us

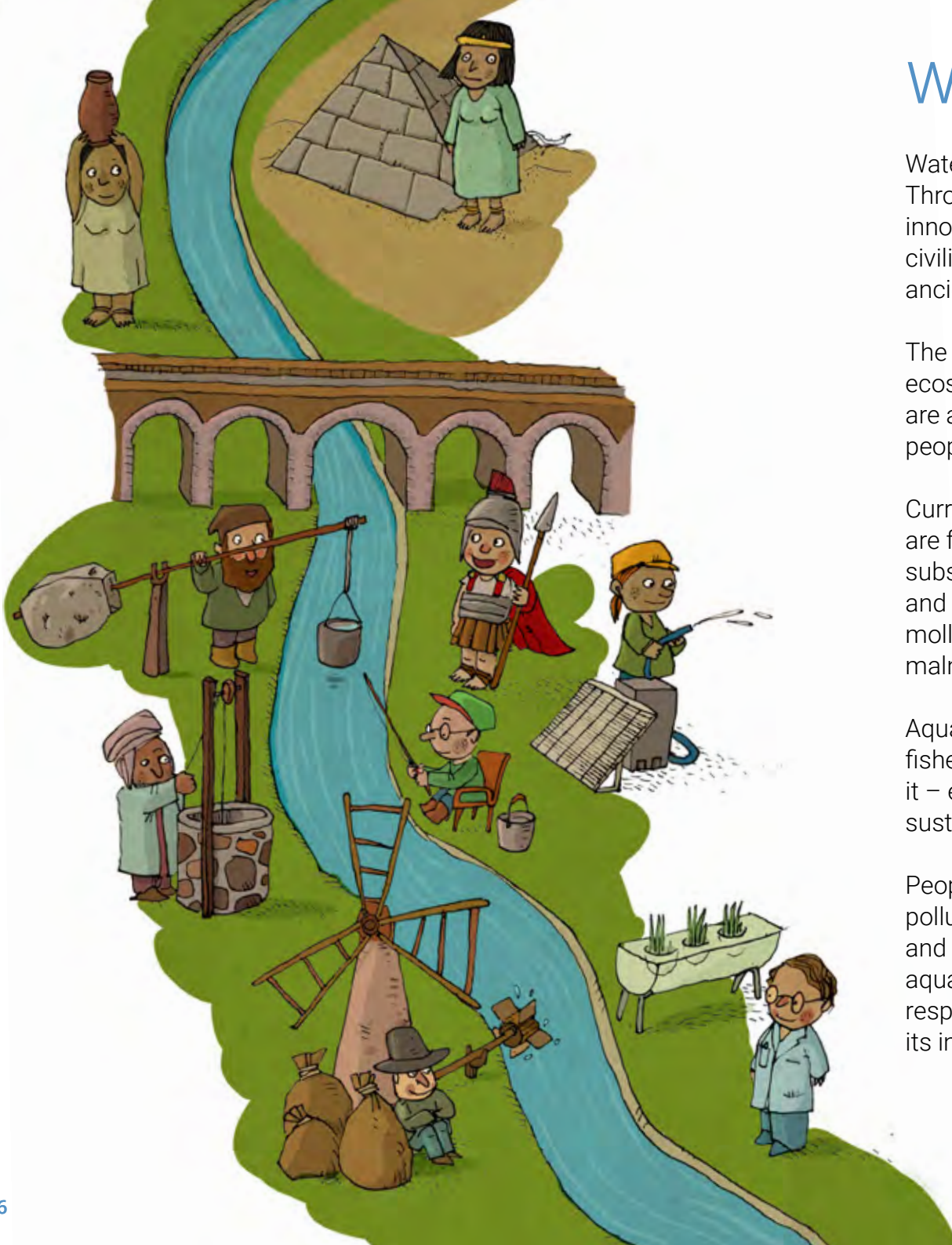
Water is the element that creates life and provides food. Throughout human history, it has always played a key role in innovation and invention. Water has always been the basis of all civilizations, from the wells of ancient Egypt to the aqueducts in ancient Rome and new practices such as aquaponics today.

The ocean, lakes, rivers and wetlands are home to important ecosystems and an astonishing wealth of biodiversity. They are an essential source of food security: more than 600 million people depend on food that comes from water to survive.

Currently, 3 000 different species of fish are caught and over 650 are farmed. In many regions, fish is the main source of important substances such as protein, omega-3 fatty acids, vitamins and minerals that are vital for human health. Together with molluscs and crustaceans, fish play a key role in the fight against malnutrition.

Aquatic food systems – that is, all the work done by small-scale fishers, those who raise fish and those who process and preserve it – ensure the livelihoods of coastal and inland communities, sustain local economies and influence cultures around the world.

People living off aquatic food systems suffer the effects of pollution, ecosystem degradation, unsustainable practices and climate change. Preserving and safeguarding these aquatic ecosystems and the species they host is not merely a responsibility, but a necessity for the well-being of our planet and its inhabitants.





# Four fundamental steps for safeguarding water on the planet

These are the **Four Betters**.

We must strive for **Better Production, Better Nutrition, a Better Environment** and to achieve a **Better Life** together, leaving no one behind.

To combat water scarcity, it is especially necessary to achieve better production in the world. This means increasing food production in a way that is planet-friendly with a responsible management of our water resources.

As we have seen, sustainable agriculture produces more nutritious food and keeps ecosystems healthy. An efficient use of fresh water that avoids unnecessary waste, makes it possible to irrigate fields and ensure the hygiene and health of communities.





# What can we do?

**Water is vital for everyone**, so we all have to do our part. Water is used to produce food, energy and even the clothes we wear. Our everyday choices have an impact on the precious natural resources in our environment. We can learn to save water and help ensure that no one is left without this valuable commodity. Your actions, big or small, can make a difference.

## **Eat local and seasonal food**

Opt for food produced nearby, which has not had to travel long distances on big trucks. Choose seasonal fruit and vegetables: they take less water to produce. If you can, try to eat more foods that grow with less water such as pulses, millet and nuts. This choice is good for us and good for the planet.







### **Eat more fresh food**

A healthy, balanced diet is important to stay healthy and helps the environment at the same time. When you shop, choose fresh products, which are generally healthier and made with less water than processed and preserved products.

### **Reduce food waste**

It takes a lot of water to produce food and get it from the farm to the table. When considering all the food lost and wasted, don't forget about the water wasted to produce it. Storing food in the right way helps you plan meals and reduce food waste. You can also try using leftovers for a new recipe or try composting fruit and vegetable peel in a garden.

### **Don't waste water**

Not wasting water saves energy and money. Take shorter showers, don't let the tap run and water plants using rainwater you collected or the unsalted water that boiled the vegetables. These are just some of the many ways to save this precious natural resource. Using less water can also help keep the planet's wetland habitats healthy.







### **Save energy**

Currently, 90 percent of the energy produced also requires water. Switch off electronic devices such as smartphones, computers or tablets when you're not using them. At home, leave lights on only where they are needed. These small actions can make a big difference.



### **Don't pollute water**

It might seem like stating the obvious, but we must never forget that pollution damages our environment. At home, there are several ways to avoid polluting water. Don't pour food waste, oils, medicines and chemicals down the toilet or down the drain. If you can, use environmentally-friendly soaps and detergents to wash and to clean your house. Another good idea is to regularly empty the septic tank, which is the tank used to treat wastewater, in an effort to prevent pollution and problems for the environment.



### **Clean up the environment**

Certain associations organize clean-up operations to reduce pollution in local neighbourhoods. Help clean local beaches, rivers, lakes or wetlands. It's one way to protect your environment, help your community and also to learn more about the impact of our behaviour on nature.



### **Buy sustainably**

When buying clothes, it's best to choose natural and organic fibres such as cotton over synthetic options. Synthetic materials such as polyester or acrylics often release microplastics that are so small that many pass through filtration processes entering our water systems, oceans, and ultimately the food chain.

### **Be in the know**

Look for news of solutions to preserve water and discover stories about people who are committed to the environment and can inspire us. It's also important to share this information to encourage others, such as friends and family, to act with you. Together, you can turn this knowledge into action.



### **Write to your local leaders**

Every citizen can ask their representatives to take action to protect our water and ecosystems. If you want to make decision makers change their policies, you have to let them know that the community cares about the environment. Contacting those in positions of power and sharing reliable information helps bring about real change.



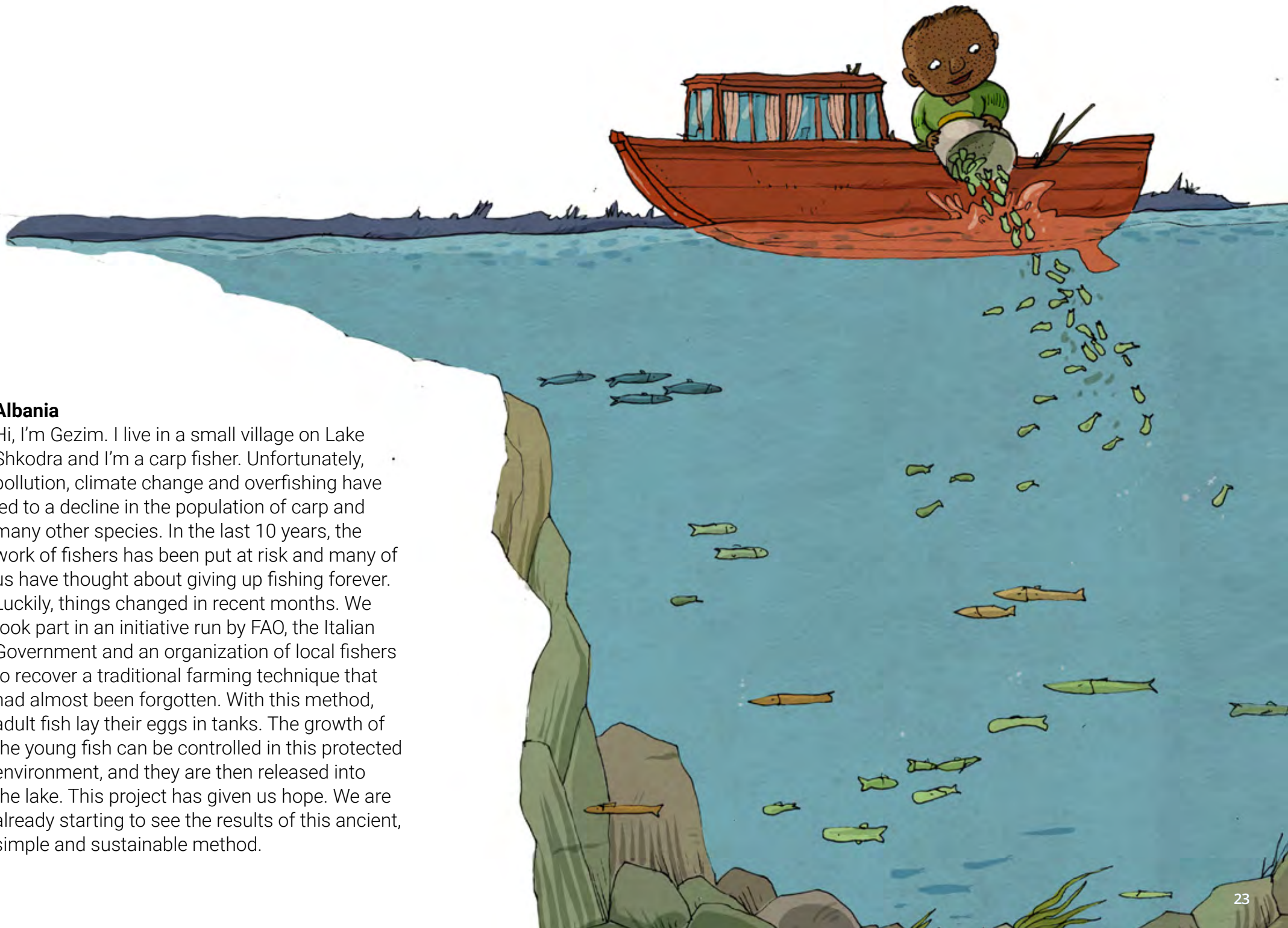
# Stories

## Sri Lanka

I'm Ramani and I grow rice in the Malwathu Oya river basin. The weather plays tricks on us here. Sometimes it rains too much, ruining crops and other times there's no rain and we can't grow anything. At one point, we farmers were very worried about our future so we asked local experts for help. They started looking for solutions and learned how to use FAO's WaPOR platform, which collects information from a satellite in space. It's incredible! From up there you can tell how much water each crop really needs. This data allows us to plan our work better. We used to start the season by cultivating all the rice together, using a lot of water. Now we work a little at a time and control waste. Being more aware has raised our crop yields and hopes.







## Albania

Hi, I'm Gezim. I live in a small village on Lake Shkodra and I'm a carp fisher. Unfortunately, pollution, climate change and overfishing have led to a decline in the population of carp and many other species. In the last 10 years, the work of fishers has been put at risk and many of us have thought about giving up fishing forever. Luckily, things changed in recent months. We took part in an initiative run by FAO, the Italian Government and an organization of local fishers to recover a traditional farming technique that had almost been forgotten. With this method, adult fish lay their eggs in tanks. The growth of the young fish can be controlled in this protected environment, and they are then released into the lake. This project has given us hope. We are already starting to see the results of this ancient, simple and sustainable method.





### **Jamaica**

My name is Howard and I'm a farmer in the Mount Airy farming consortium in the Clarendon region. Working the land here is a real challenge. We have to deal with long droughts and much of the soil in the area has become depleted due to the intensive mining of bauxite, Jamaica's main mineral resource. To save our agriculture sector, some time ago FAO and the Agricultural Development Authority of the Government of Jamaica organized a series of courses to teach farmers new techniques. I took these courses too and learned many systems including fertigation, which is a natural way of fertilizing the soil as it is irrigated. Thanks to this method, no water is wasted, soils have become fertile again and we have increased yields by more than 35 percent. Now we can think about expanding and we can make plans. It's been a long time since we were last able to do that.

### **Namibia**

Hi, I'm Agnes and I rear cows and goats in Otjozondjou, a small village in the east of Namibia. My animals are in good health now, but a few years ago I lost many to drought. There wasn't enough water for the whole barley field and the little we had wasn't enough for the animals. It was terrible to see so many of them die. Then a project supported by FAO introduced us to hydroponics, which allows fodder to be grown without soil and with little water. All you have to do is put the seeds in water until they germinate and then keep them in the greenhouse for a week to get green seedlings that can be given to livestock. The community pulled together to save its farms quickly and at little expense. If another drought comes along, we'll be ready for it.





# Now it's your turn!

1. Where do Ramani, Gezim, Howard and Agnes come from?

*Draw an arrow to connect the main character from each story to their country of origin.*



Ramani



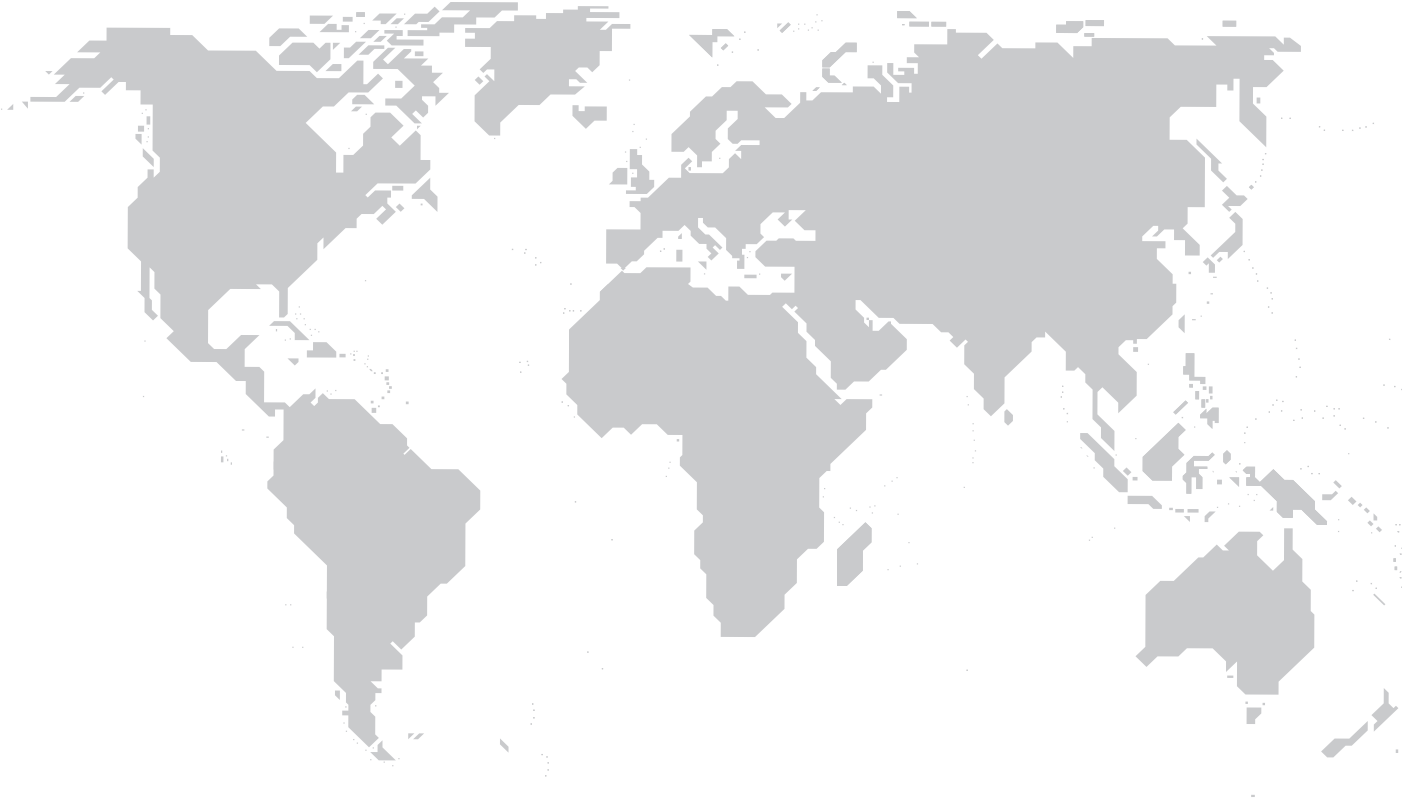
Gezim



Howard



Agnes



2. Being thankful for water

List five water-saving measures you would like to propose in your school:

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# Experiments

Do you want  
to find out how  
it works?



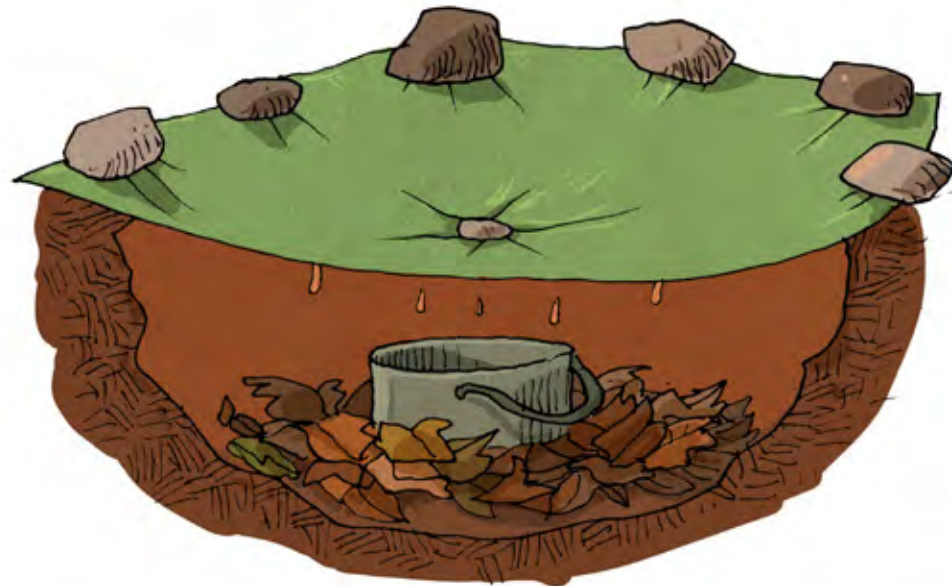
## Make a filter at home

Groundwater is naturally filtered by the soil. Do you want to find out how it works? Build a filter at home. Cut a plastic bottle in two: place the top part upside down on the bottom part, and then fill with six layers: cotton wool, sand and gravel followed by another set of cotton wool, sand and gravel layers. Now your purifier is ready. Add some soil to a glassful of water, mix well and pour the contents into the filter. The filter layers trap the soil particles and the water collected at the bottom is almost clean again. Careful, it's clean but it's best not to drink it. Use it to water your plants!



## Water from the ground

A solar still is a system for collecting water by harnessing moisture from the ground. If your school has a garden, you can try to build one. Pick a sunny spot, make a hole in the ground and place a bucket at the bottom. Immediately after digging the hole, cover it with a sturdy plastic sheet, securing all the edges with stones and soil so that moisture can't escape. Place a stone in the middle of the sheet, at the point where the bucket stands, to create a slope. The sun's heat will cause the moisture in the soil to evaporate and condense under the sheet, forming many droplets that will fall into the bucket. It really works!



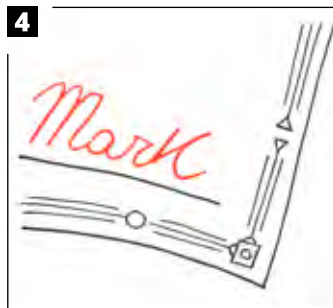
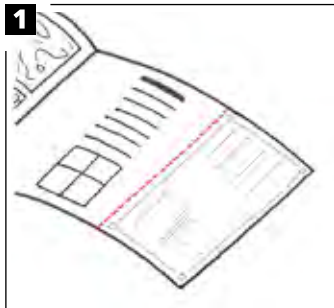


## INSTRUCTIONS

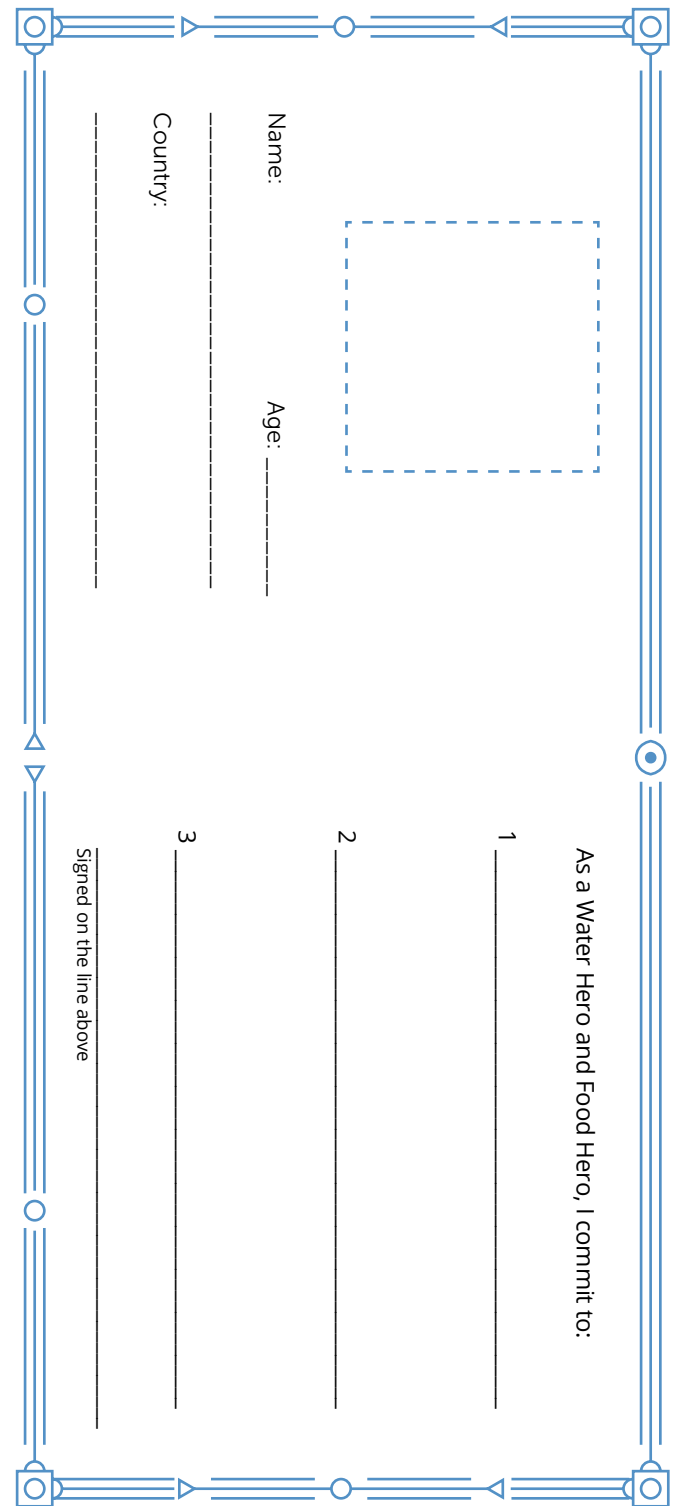
Now that you have completed the Activity Book, you are ready to commit to water action. Water Heroes are #FoodHeroes!

Follow the instructions to complete your Passport:

1. Carefully tear out the passport on the right.
2. Fill in the details on the inner left page.
3. Draw a picture of yourself or glue a photo in the box provided.
4. Take a pledge. Choose 1-3 actions to commit to and write them down in the space provided in your passport. Get some inspiration from the actions in this activity book, or think of some of your own! Then sign your declaration.



Don't forget to fold your passport in the middle



As a Water Hero and Food Hero, I commit to:

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

Signed on the line above \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Country: \_\_\_\_\_





Food and Agriculture  
Organization of the  
United Nations



With your actions, your passport will be  
valid for a sustainable world.

Date . . . / . . . / . . .  
#FoodHeroes

[www.fao.org](http://www.fao.org)

# Activity Book Series

Download the FAO Activity Book Series for activities or lesson tips on important global issues at the heart of FAO's work: [www.fao.org/documents/card/en/c/cc0239en](http://www.fao.org/documents/card/en/c/cc0239en)



▶ Maria's story



▶ Leave no one behind



▶ Our actions are our future



▶ Food Heroes



▶ Healthy Plants,  
Healthy Planet



▶ Eating Healthy Matters



▶ Change the future  
of migration



▶ Climate is changing



▶ Your Guide to FAO



▶ Working for Zero Hunger

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[www.fao.org](http://www.fao.org)

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Food and Agriculture  
Organization of the  
United Nations



# ACTIVITY BOOK

# Working for Zero Hunger

working for Zero Hunger





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# Working for Zero Hunger



## World Food Day

I welcome you all to World Food Day! I can't wait to share my recipe for a hunger-free world, and everyone is invited to join me on this mission. I am the mascot for the 2018 edition, and I was born right here, at the headquarters of the Food and Agriculture Organization of the United Nations, a.k.a. FAO.

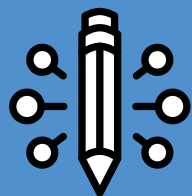
Founded in 1945 to unite all nations in the fight against hunger, FAO celebrates its birthday on the **16th of October**, through a global celebration known as World Food Day. Today, more than 130 countries come together to honour their common goal: a world free from hunger and poverty, in which everyone can lead healthy lives.

The Zero Hunger Goal (**#ZeroHunger**) is at the heart of the United Nations Sustainable Development Goals to be achieved by 2030. But, FAO and all governments involved in the most important mission for our planet won't make it unless everybody makes an effort. The special ingredient for true and everlasting change is... people! And this means you too!





# GET CREATIVE!



## WFD2018 Poster Contest

### You're an ingredient too!

Your ideas are invaluable: every child is an adult of tomorrow, and what you do now will bring about a better world for you and your friends to inherit in the future!

If you are aged between 5 and 19 you are invited to design a poster on the theme of World Food Day. Go to

[www.fao.org/WFD2018-contest](http://www.fao.org/WFD2018-contest)

to submit your masterpiece!

The deadline for entries is **9 November 2018**. Winners will be announced on the World Food Day website and on FAO's social media channels, and promoted by FAO offices all over the world. They will also feature in an exhibition at FAO headquarters in Rome, receive a Certificate of Recognition and a surprise gift bag.

# What is Zero Hunger?

World hunger is sadly on the rise: an FAO report shows that in 2016 there were 38 million more people suffering from hunger than in 2015. Every day, **over 800 million people struggle to get any food at all**, and risk starvation. That's more than the inhabitants of Indonesia, the USA and Pakistan put together!

The Zero Hunger mission aims to reduce that staggering figure **down to ZERO**. Brazil was the first country to take the challenge in 2003 when the government helped millions of people out of poverty and hunger.

FAO has been helping countries to fight hunger since 1945. Zero Hunger is still FAO's number 1 mission, and these are the ingredients we need to make it happen:

- 1. Food security:** to guarantee access to healthy food for everyone, every day. Our Earth is capable of feeding us all: it's down to human beings to distribute food fairly, leaving no one empty-handed!
- 2. Good nutrition:** to make sure that people get all the nutrients they need to live well, and encourage responsible, environmentally-friendly eating habits. This will restore the balance between those who eat too much or badly, and those who don't get enough food.
- 3. Sustainable agriculture:** the use of fields, forests, oceans, and all natural resources essential for food production, without damaging the planet. Sustainable, because food production has to respect the environment, with all the people and animals who live in it or our resources will not last!
- 4. Poverty eradication:** since poverty is often the direct cause of malnutrition, even in countries where food is available in supermarkets. People who can't afford healthy food, or food in general, tend to get ill more easily. Basically, a healthy lifestyle is the result of social and economic progress!

The special ingredient in this recipe, though, is you, remember? Only with everyone's help will this great goal be achieved.







**ZERO HUNGER** is the second of the 17 Sustainable Development Goals (SDGs) of the United Nations, supported by all UN organizations. Nations, private companies, and citizens from around the world are working hard to achieve the 17 goals by 2030, starting with poverty and hunger.

Many exciting programmes have been launched as part of this mission, and most of them are aimed at families and small communities. Almost every action involves education and the sharing of information and technology. Studying is the best way to learn how to utilise resources and improve people's lives: studying the territory, new growing techniques, changes in climate, and what could put people's health at risk. It is also important to study advanced technologies, and how they can be made to serve the most vulnerable people, as well as the greater good. Every single ingredient adds to the final recipe! But studying isn't enough, we have to turn our ideas into actions.

---

But studying isn't enough, we have to turn our ideas into **actions**.

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### ► WHAT IS BIODIVERSITY?

Biodiversity is the variety of plants and animals that live in perfect balance in one environment (ecosystem), and keep it alive and well. If a species dies, the entire ecosystem is endangered. Did you know that rice alone has 100,000 varieties and that we only depend on about 30 different crops for nearly all our energy needs?

### FAO and the SDGs

The SDGs are a guide for governments to develop policies and actions so that they can end hunger and poverty, fight inequality and injustice, tackle climate change and achieve sustainable development (a solution that lasts). From ending poverty and hunger to responding to climate change and sustaining our natural resources, food and agriculture are an important part of every goal. Achieving

Zero Hunger also means that we can achieve many other goals – without first providing healthy food for all, you can't achieve education or good health.

Take part in some interesting activities to learn about the Sustainable Development Goals by visiting [www.worldslargestlesson.globalgoals.org](http://www.worldslargestlesson.globalgoals.org)



## Find the solution

Look at the colourful SDGs and messages that show how food and agriculture are an important part of achieving the entire set of goals. **Match each goal with the correct message.**

Find the answers on the last page of the book.

- 1 No poverty
- 2 Zero Hunger
- 3 Good health
- 4 Quality Education
- 5 Gender equality
- 6 Clean water and sanitation
- 7 Renewable energy
- 8 Good jobs and economic growth
- 9 Innovation and infrastructure
- 10 Reduce inequalities
- 11 Sustainable cities and communities
- 12 Responsible consumption
- 13 Climate action
- 14 Life below water
- 15 Life on land
- 16 Peace and justice
- 17 Partnerships for the goals

- a Fair, sustainable agriculture lifts communities out of poverty.
- b With sustainable agriculture, none of it is wasted!
- c The Earth has plenty to give: it's up to us to share!
- d 80% of the world's poor live in rural areas, let's start from there!
- e Well-fed, well-read: a good diet makes us brighter and ready to learn.
- f Innovative agriculture helps developing countries...develop.
- g Eating well, living well, living longer.
- h Better laws for fairer access to rural land.
- i Forests are huge nests of biodiversity, their future is our future.
- j We need to feed growing cities – by 2050 over 65% of the world will live in them.
- k Together we are stronger!
- l Does anything spell 'justice' more clearly than a peaceful Zero Hunger?
- m Waste is just not cool.
- n Women produce half of the world's food! They must have equal access to land.
- o Fish life is life for the 3 billion people fed every day by their protein.
- p Sustainable agriculture is part of the solution!
- q Let's use alternative energies for food production.



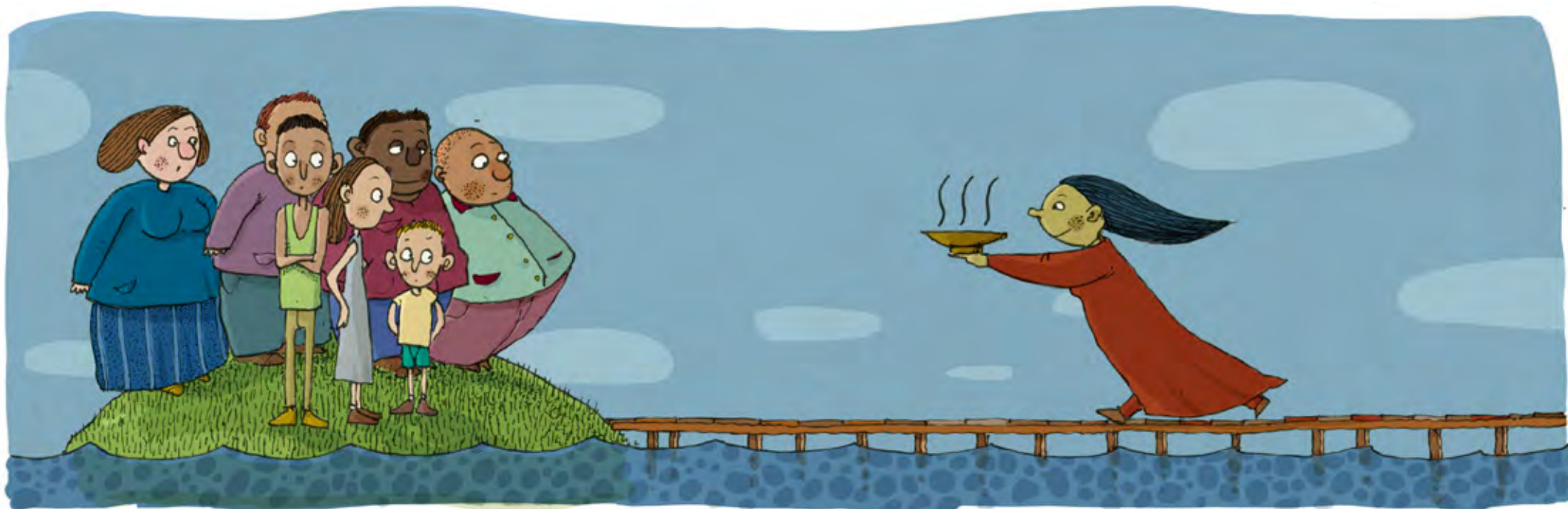
# What is hunger?



We know that hundreds of millions of people are hungry all over the world. But why does this happen? Where do hunger and malnutrition come from? What is the cause, and how can we fight it?

Looking back at history, hunger has always existed, and always for the same reasons. **Poverty** is one of the main causes of hunger. If you are poor, you can't afford nutritious food. This makes it difficult to work or earn a living and often means that people remain in a poverty trap.





**Conflicts** disrupt farming and food production. Millions of people are often forced to flee their homes, and then they find themselves deprived of access to sufficient food. The vast majority of hungry people in the world live in countries affected by conflicts. Wars or uprisings can also be a direct consequence of hunger: it's natural to explode with anger when access to food becomes impossible. Food can therefore be a powerful tool in bringing peace to the world.

We human beings have been overlooking the effects of pollution over the past couple of centuries. Pollution has affected the climate causing an increase in **extreme weather events** – such as floods, tropical storms and long periods of drought. Poor farmers, fishermen, pastoralists and forest dwellers suffer most during and after a natural disaster – they don't have enough to eat and they are often forced to leave their homes. Rising temperatures as a result of **climate change** also affect the environment dramatically and can turn healthy soil dry and infertile.

Poverty, war, and natural disasters particularly affect the less wealthy areas of the world today. But even in wealthy, industrialised countries there are large groups of people living in poverty, unable to feed themselves properly. They often live in the same neighbourhoods as overweight or obese people. **Overeating** and irresponsible consumption of unhealthy junk food are a big part of the hunger problem causing an increased number of deaths every year. 1.9 billion people, which is more than a quarter of the world's population, are overweight. 600 million of these are obese and adult obesity is rising everywhere at an accelerated pace. The production and waste of huge quantities of food is contributing to pollution, and affecting people's health everywhere. Malnutrition, therefore, is a global issue: it concerns us all, no matter where we live.

**Economic growth** is often the key to help countries out of hunger. Sadly though, when not controlled and fair, it can widen the gap between rich and poor, generating further hunger, conflict and tension. Growth must include vulnerable people and consider society as a whole: it will only work when every single part is considered essential to

the whole. We know that people are the special ingredient in the recipe to end world hunger: **everyone needs to take action** to achieve this common goal. We'll see how in the next chapter!

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**1.9 billion people,**  
which is more than a  
quarter of the world's  
population, are  
overweight.

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# Who's doing what?

The Zero Hunger recipe is that **we all have a role to play!** The solutions to end hunger once and for all are simple but will only work with that special ingredient: people! And their actions – which is the difficult part. That's why FAO shows the way forward by involving governments, private sector companies and ordinary people in a series of programmes designed to get us all on the road to Zero Hunger.

## 1. Governments and political leaders

To young people, politics may sound like grown-up stuff, but it actually plays an essential part in everyone's life. Leaders, for example, have a key role in the fight against poverty and hunger. Their focus on agriculture, climate change, job creation, and their increased protection of the more vulnerable can make a difference both in the short and in the long term. Governments need to monitor the market so that prices are fair for small farmers too. They should make sure that large corporations respect and protect the rights of local people when buying or leasing large quantities of land. And they also need to promote healthy eating, invest more in research, and focus on developing rural areas. This is to name but a few of the actions that can be taken to improve people's lives.

**Good leadership makes a difference:** that's why FAO believes that supporting, and being supported by governments is necessary to develop global strategies against hunger.





## 2. Small family farmers

Around **90% of farms in the world are family-owned**. This means that behind each farm there's a mum, a dad, sometimes other relatives, and children who all work together to produce food for the family and for the rural community they belong to. These farms play an impressive role in the mission to reach Zero Hunger, and they must be made aware of it! FAO encourages them to join together as cooperatives to increase their power, improve their access to resources, and maximise their profits. Together, they can adapt to climate change and develop common strategies for sustainable cultivation, as well as to learn how to

prepare for natural disasters and recover faster from their impacts. Lastly, small farmers need to preserve the Earth's natural resources, such as soil and water, and improve techniques for harvesting, food storage, packing or transport to cut down on food loss. We are not only talking about farmers in the fields but also communities living off forestry, fishery, and pastoralism. FAO devotes time and resources to the amazing potential of these small farmers, especially focusing on knowledge, education and technology.



## 3. Private sector

One of the main ingredients in the fight against hunger is **innovation**, and it wouldn't be possible without the support of the "private sector". But what is this, precisely? It's formed by companies and enterprises of all sizes that work not only in agriculture but also in services related to it, like insurance, marketing, communication and finance. Companies in the financial sector work with FAO to give poorer farming families access to funds so they can improve their farms and earn more. Supermarkets can sign up to FAO's SAVE FOOD initiative and network with food retailers all over the globe to reduce food loss and waste across their stores, and also encourage their customers to join in the effort. Multinational corporations can work with FAO to use large areas of land responsibly, respecting the environment and making sure that local people are not

pushed away from their farms, jobs or homes. Telecommunication companies are indispensable to FAO: they can develop new Apps that give family farmers access to information, so they can use natural resources with more caution, and prepare for extreme weather events related to climate change. Newspapers, magazines and other media outlets should team up with FAO to share more information on hunger, nutrition and other food-related issues. **Any entrepreneur in the world can join FAO in the fight against hunger**, for example by adopting sustainable development procedures and joining in the international dialogue on this topic. Because, as we have seen, hunger is a problem that concerns us all!















#### 4. You, young people from all over the world!

Last but not least, FAO believes in the power of the youngest generations, from every country, from all walks of life. Young people, as we have already said, are the adults of tomorrow and will inherit the Earth. The children in this picture have already chosen their actions and are taking flight!

**What can you do to help the world in its mission to reach Zero Hunger?**

Read through some of our tips in the following pages and find out how you can join them.







## Eat healthy food

Help with the grocery shopping and learn to identify unhealthy ingredients such as trans fats on food labels. Replace an unhealthy processed snack with fresh fruit, raw vegetables, nuts or whole grain bread. Eat baked chips instead of traditional fried potato chips and avoid foods with added sugar.

## Take care with water

Drought means no water and this is becoming more and more common, even in countries where there used to be plenty. This is linked to climate change, meaning... we're part of the problem. So fix leaks, use rain or "grey" water for your garden, take quick showers instead of baths, and turn off the tap while brushing your teeth (it will make your smile wider!).



## Keep fish populations alive.

Some fish, like cod or tuna, are more popular than others and because of this, they are overfished and risk disappearing forever. Convince your friends and family to eat other kinds of fish that are more abundant, such as mackerel or herring. You can also look for fish that has been caught or farmed sustainably, and labelled as eco or certified fish. When you order seafood at a restaurant, always ask if it's from a sustainable source. Be a fish hero!

## Keep the ground and water clean.

Don't drop litter, pick up rubbish dumped irresponsibly by careless people, and don't forget to tell them off if you see them doing it! Be a conscientious consumer and choose household cleaners, paints and other products that contain no bleach or other strong chemicals. This will keep our soils healthier. Look online and try to buy from companies that have sustainable practices and don't harm the environment. If something is cheap, it's likely to be hurting people or the planet in some way: buy better quality or don't buy at all and... When you buy, only buy what you really need.

## Buy local

Shop from local farmers whenever you can. Why? You support local economic growth and the journey between people and produce is shorter. Less emissions, less pollution, healthier world, happier farmers. Great value all round!



## Make cities greener.

Add some green to the scene and eat home-grown healthy veg by building and looking after a garden at school, in your local community, on waste ground, set up a rooftop container garden or even grow some on the balcony of your apartment. Encourage your local authority to consider planting roof gardens instead of rolling out heat-absorbing gravel and black tar. Having plants everywhere creates shade, cleans the air, cools the cityscape, and reduces water pollution.



## Recycle

Plastic, glass, aluminium, and paper. Don't forget to use the front and back of every sheet of paper: it saves trees. Start recycling at school, get your classmates on board!

## Be rubbish-savvy

Get wise to the household items that don't go in with the regular rubbish – ever – like batteries, paints, mobile phones, medicines, chemicals, fertilizers, tyres, ink cartridges, etc. If they slip through, they can be extremely harmful to the environment, especially if they get into our water systems. Plastic discarded irresponsibly can severely damage marine habitats and kill thousands of marine animals every year. Learn how to recycle or dispose of these harmful items safely!



## Energy-efficient is best.

Does your family need a new fridge, cooker, washing machine or some other household appliance? Make sure they buy an energy-efficient one that uses less electricity and has the symbol A+++ on it. You can also save energy by turning off the lights when you leave a room, unplugging your TV, stereo or computer, instead of leaving them on standby, and by using energy efficient light bulbs. You could also put on an extra jumper in winter and ask your parents to turn down the heating, or shade the windows from the sun in summer instead of blasting the air conditioning.

## Organise a community clean-up

Don't wait for the council or the government to act. Round up some friends and neighbours to form a cleaning team and make your territory shine! Whether you target a village or town, local park or beach, do your bit to make them shine for everyone.

## Support #ZeroHunger

Strength in numbers! Share interesting posts on social media using #ZeroHunger, let your voice be heard and challenge politicians to join the Zero Hunger mission by making laws and initiatives that help our planet. You're never too young to be informed about politics: start to think about how you will use your vote when the time comes!

## Get Creative!

Spread the word about your Zero Hunger mission – enter the WFD poster contest, write, make a video, get creative! And start from your neighborhood: make it better, cleaner, happier!





## True stories about children taking action

FAO helps youth around the world as it works with countries, farmers and other partners to achieve Zero Hunger. Read through the following stories to hear about actions taken by FAO and young people!

### Hi! I'm Justin David Faundo from the Philippines!

A lot of people think farming is not cool and won't make you rich; in my country, many people dream of having a job in industry or technology. But then some FAO representatives came to my school one day, with a local organization called Yakap Kalikasan, and they inspired me and my classmates to become the next generation of farmers, food entrepreneurs, scientists, agronomists, extension workers and even government leaders! I'm the leader of my group now, and we are all part of a project that shows us how to grow vegetables in simple, inexpensive ways. So, do you still think farming is uncool? Well, think again! We are a ray of hope for our rural community and we are working hard to achieve sustainable development and food security. We're also very creative! If you were to visit our school, you'd see old sneakers hanging up by the laces with lettuce growing out of them, coriander popping out of old cola bottles, and



eggplants in discarded tyres. Yes, we recycle materials to make them useful again! Our organic gardens are like science laboratories, and at lunchtime we eat what we grow so that we all get a nutritious meal every day. The youth organization overseeing the programme sells our surplus produce at the local market. We have even tried out our newfound skills at home, working with our parents to grow vertical gardens when we have limited space in our backyards. This means we have to buy less food and there's money left over to spend on other things. How cool is that?



### Bilasan from Syria here!

Being a ten-year old girl during a war is not easy. We've been living in danger for the past 8 years; that's almost my whole life! So many innocent lives are lost every day and millions of people suffer from hunger and malnutrition, which can have serious, long-term effects on children's growth and future development. With the support of the European Union, a team from FAO is in fact teaching children in primary schools in my country about the importance of nutrition, and helping us to grow fruit and vegetables. With additional help from UNICEF and WFP's school meals programme, the project is currently running in 17 schools, and will soon be rolled out to

another 35 schools around Syria, including dangerous areas like Aleppo. Thousands of children like me will benefit from the project. I learned about the food pyramid, vitamins and a healthy diet, and I now know a lot about cabbages, peppers, tomatoes and other food. We even have an edible playground! It's like an outdoor classroom where we learn how to preserve the Earth's natural resources, by using water tanks, for example, and a drip irrigation system that minimizes evaporation and saves nutrients. Does that sound complicated? Well, my mum says I'm an expert because I planted strawberries at home, but I promise you, it's not difficult at all!



## My name is Elvis Cortés Hernández, and I'm from Mexico!

I'm a 5th grade student at the General Lázaro Cárdenas bilingual elementary school in the central state of Puebla. My country has one of the highest obesity rates in the world...that means a lot of people here are a bit chubby, which might sound cute but it's not, it's actually unhealthy. Chubby people think junk or high-fat food tastes yummier, but you know what? My favourite foods in my school cafeteria are carrots, broccoli and fruit. Yes, that's right – broccoli! That's why I'm so healthy and can run around the school playground, where we also have a school garden and chicken farm. I help to tend the school garden, doing the sowing and harvesting with another 95 boys and girls. My geometry and maths teacher shows us how to grow food and tells us about the importance of nutrition, which helps us and our families to eat well. We had FAO's guidance at the beginning, but the project has now been running at the school since 2011. I'm proud to be part of it, and to be healthy, too!



## Greetings from Asamanech Asmelash in Ethiopia!

I like school for two reasons: because I learn new things and I eat with my friends. Have you ever tried to focus on reading and writing when your stomach is rumbling? I have and it's no fun. My classmates miss school a lot, some have even dropped out because they were too hungry to pay attention. Now that our tummies are full, we can concentrate better on our lessons. Our teacher Gatso Besah is very happy with the new school feeding programme. It provides children from poor families with meals and the food is purchased from local farmers to help lift even more people out of poverty in my country. All this is possible with FAO's help. FAO gives local farmers seeds and tools, and teaches them how

## Did you know?

When Nelson Mandela was a prisoner in South Africa, he spent hours gardening every day. He grew vegetables, often in oil drums cut in half. He had about 900 plants at one point. It helped him to improve his own diet and that of the other prisoners, even the prison warders!



## Now it's your turn

1. Describe a Zero Hunger Hero you know or have seen on TV or in the news.

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2. Tell us about your favourite Zero Hunger initiative. Have a look on the internet, newspapers, social media channels and YouTube if you're stuck!

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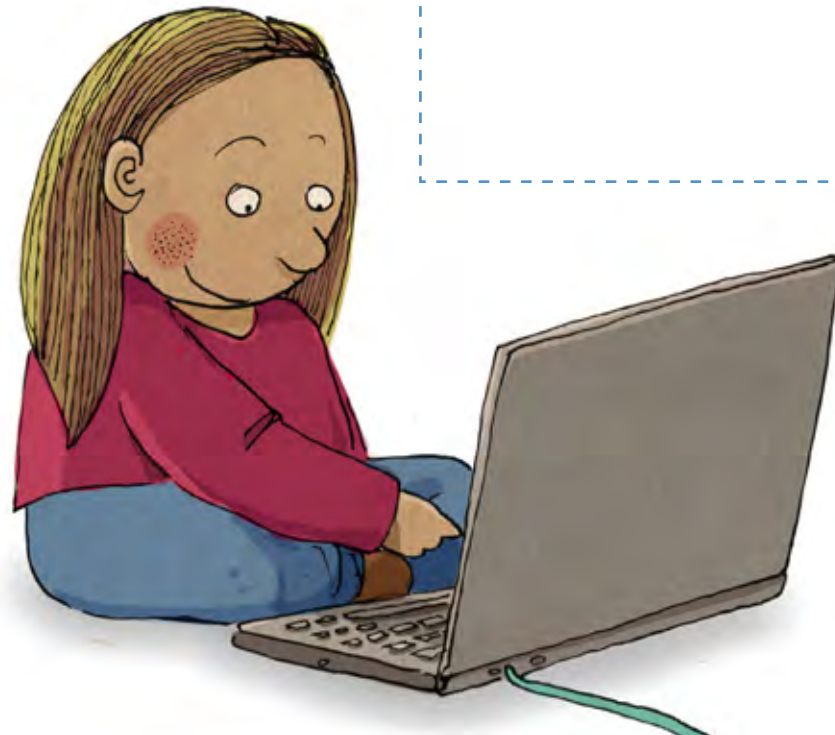
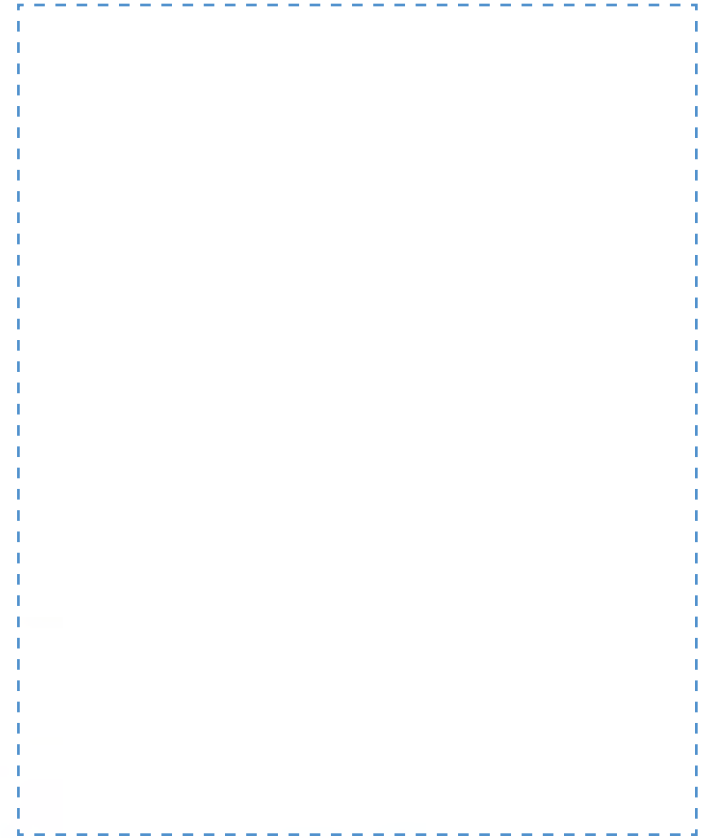
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3. Can you think of any new actions that we haven't suggested for our Zero Hunger mission?

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4. Draw your own Zero Hunger mascot. What would he or she help with in your neighborhood?

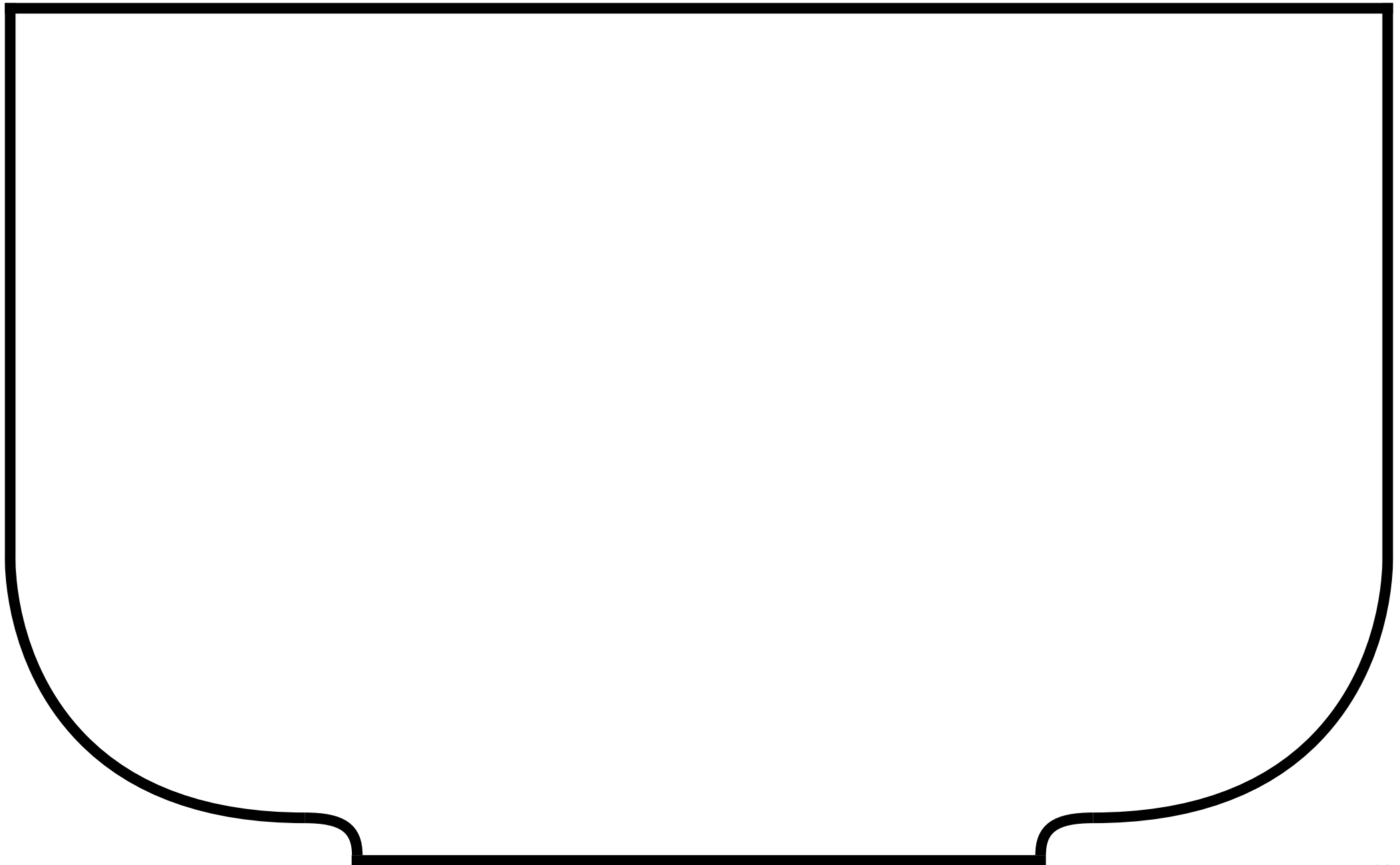




# Enter the World Food Day Poster Contest

Now that you've read all about Zero Hunger and the role that everyone needs to play, we want to see your ideas on how to achieve this global goal. Draw, colour or paint them in the Zero Hunger bowl below.

Scan or take a photo of your poster to participate in the contest: [www.fao.org/WFD2018-contest](http://www.fao.org/WFD2018-contest)





## FAO's and the United Nations' call

FAO, along with the UN, is trying to share its recipe for Zero Hunger around the world and wants to bring people together to work as a team. FAO promotes collaboration between governments, farmers, individuals and private sector, stressing the fact that only by working together can Zero Hunger become a reality.

As we have seen, FAO is working towards this goal in many ways, for example by taking knowledge and tools to areas of the world that have been left behind, deploying aid from the private sector and raising awareness in governments. Or by protecting biodiversity, preserving endangered species in special gene banks to be used for future research.

Every ingredient must be considered in its own right, as demonstrated by the data and statistics offered as evidence to decision-makers all over the world. Based on this precious information, FAO suggests the best strategies to develop treaties and laws in support of local farmers, and food policies that are fair to all.

## Zero Hunger for a better world

So, dear friends, my recipe works, the ingredients are there and we'll stir them together until 2030, when hopefully Zero Hunger will have become a reality, our reality. Don't ever forget that you have the power to choose: how to live, what to buy, what to eat, how to respond to difficulties, and whether or not to be part of the change. I'm guessing you will be, we all will.

Every single tiny gesture will contribute to the Zero Hunger recipe, and that means that every single person is indispensable. Well then... remember to fill out your passport and to **take a Zero Hunger pledge**.

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See you in **2030!**

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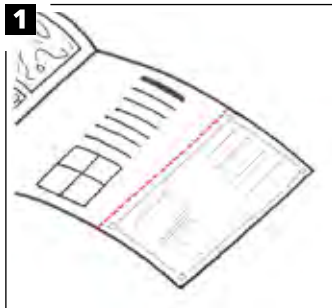


## INSTRUCTIONS

Now that you have completed the Activity Book, we want you to become a Zero Hunger Citizen by doing your part and helping us to achieve our goal by 2030.

Follow the steps below to complete your Zero Hunger Passport:

1. Carefully tear out the passport on the right.
2. Fill in the details on the inner left page.
3. Draw a picture of yourself or glue a photo in the box provided.
4. Take a Zero Hunger pledge. Choose 1-3 actions to commit to and write them down in the space provided in your passport. Get some inspiration from the actions in this activity book, or think of some of your own! Then sign your declaration.



### Answers to page 7

1-d, 2-c, 3-g, 4-e, 5-n, 6-b, 7-q,  
8-a, 9-f, 10-h, 11-j, 12-m,  
13-p, 14-o, 15-i, 16-l, 17-k

Remember to fold your passport down the middle

Country: \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

As a **Zero Hunger** Citizen, I commit to:

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

Sign on the line above \_\_\_\_\_



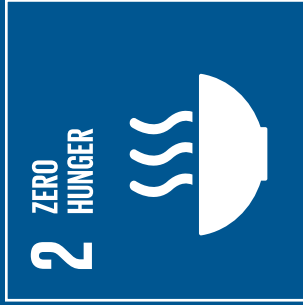


Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS

Working for Zero Hunger

ZERO HUNGER



With your actions, this passport will be valid for a **Zero Hunger** World by 2030.

Date / /  
#ZeroHunger

[www.fao.org](http://www.fao.org)

PASSPORT

# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



► Your Guide to FAO



► Change the future of Migration



► Climate is Changing

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Food and Agriculture  
Organization of the  
United Nations



## ACTIVITY BOOK

Leave **no  
one** behind

Better production, better nutrition,  
a better environment and a better life.





Required citation:

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### World Food Day

Every year on 16 October, people from more than 150 countries come together to celebrate World Food Day (WFD).

In 1945, nations around the world joined forces with the common goal of raising global awareness and taking action to end hunger and ensure healthy diets for all. FAO was founded on that day. But WFD is also YOUR day! Become a food hero and inspire others to take action to help create a more sustainable world where no one is left behind.

### Note for teachers

This Activity Book is aimed at a broad age range of young people interested in learning more about the importance of our food systems, who produces our food and where it comes from. It is also a source of inspiration for those wishing to enter the World Food Day (WFD) 2022 Poster Contest. Although it is mainly intended for children between the ages of 8 and 12, it can be a valuable teaching aid for younger and older students.

### Acknowledgements

FAO would like to thank the writer Susanna Mattiangeli and the illustrator Lorenzo Terranera for their contributions to this publication.

This year's Activity Book is dedicated to

those who struggle most,  
the most vulnerable,  
those left behind.

Picture our planet as one big community where we depend on each other and we're all links in a long human chain. As we learned in the 2021 Activity Book, Our actions are our future, we are all connected. Every event has consequences that reach far into the future with other knock-on effects. Some periods are particularly difficult when many disasters happen at the same time. For example, we've seen how the COVID-19 pandemic made it difficult to distribute products, and how prices and poverty have increased in many countries. All over the world, people are experiencing the effects combined with climate change, conflicts and international tensions.



Think about Ukraine, a country that produces and sells crops worldwide. The war is causing food prices to increase and hunger is rising in faraway countries, in addition to the tragic consequences typical of any war. Many other countries are involved in armed conflicts: the Democratic Republic of Congo, Ethiopia, the Syrian Arab Republic and Yemen, for example. War and poverty often go hand in hand. In the face of global crises, we need global solutions now more than ever.

FAO is working to ensure that no one in the world is left behind. In more than 130 countries the Organization is helping to take actions that improve the conditions of the smallest and most vulnerable farmers, making them more efficient and resilient to crises.

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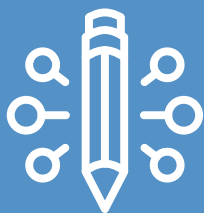
A sustainable world is  
a world where  
everyone matters.

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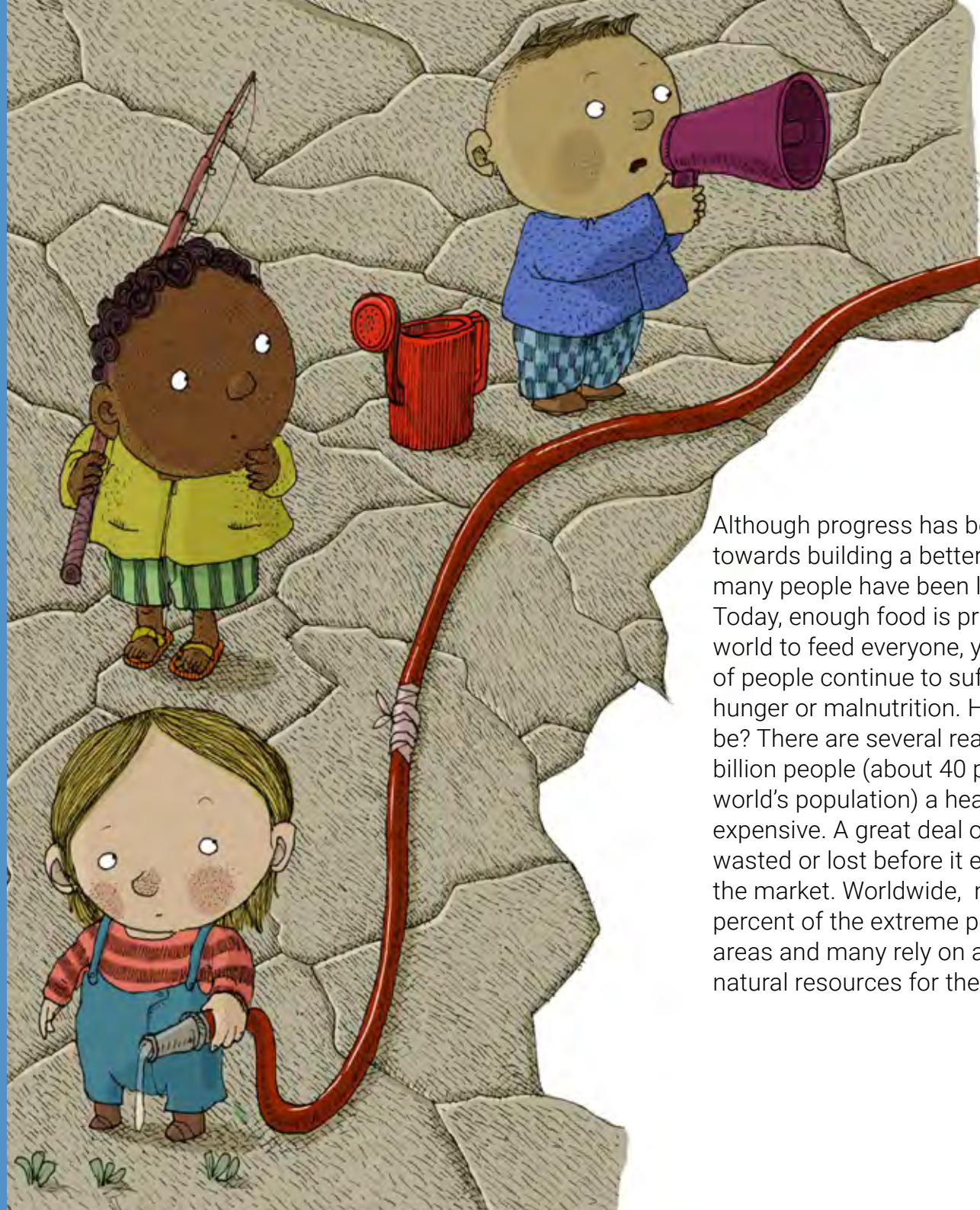
# WFD 2022 Poster Competition



After reading this book, design a poster showing us your ideas for World Food Day. Can you represent a world where no one is left behind, where there is healthy food for everyone?

To take part, go to the website:  
[www.fao.org/world-food-day/contest](http://www.fao.org/world-food-day/contest)

The competition is open to participants aged 5 to 19 and the deadline is 4 November 2022. Three winners from each age group will receive a certificate and a surprise gift bag and will be mentioned on the World Food Day website and FAO social media channels.



Although progress has been made towards building a better world, too many people have been left behind. Today, enough food is produced in the world to feed everyone, yet millions of people continue to suffer from hunger or malnutrition. How can this be? There are several reasons: for 3.1 billion people (about 40 percent of the world's population) a healthy diet is too expensive. A great deal of food is also wasted or lost before it even reaches the market. Worldwide, more than 80 percent of the extreme poor live in rural areas and many rely on agriculture and natural resources for their living.



They are usually the worst affected by natural disasters (droughts, floods, hurricanes, earthquakes, epidemics, etc.), wars, economic crises, or even all these issues at once.

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As we are all too aware,  
these challenges know  
no boundaries.

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**Governments**, the **private sector**, the **world of academia** and civil society must work together in solidarity to prioritize food security, peace and equality for all. Each of us can work for a better future.





## The main challenges

### Conflicts

War, of any kind, is a major cause of hunger and food insecurity because it brings destruction. Every day, more than 30 000 people are forced to flee their homes because of conflict and persecution. This makes it difficult or impossible to grow food or get it to those in need. The effects of conflicts on food, health and education systems can continue long after hostilities have ended.



### Gender Inequality

Women are more likely than men to suffer from hunger and malnutrition. This is because in many cases they eat last and least. Although they work hard for their families and farming communities, few women own land. In many countries it is difficult for them to borrow money so they can make long-term plans; they are not encouraged to pursue an education so they can build up skills to use advanced agricultural tools or the knowledge needed to set up their own businesses. Over the years, significant political commitments have been made to improve the status of women, but in many places in the world they face inequality. It is essential for women to have access to land ownership, training, credit, business opportunities, technology and innovation.



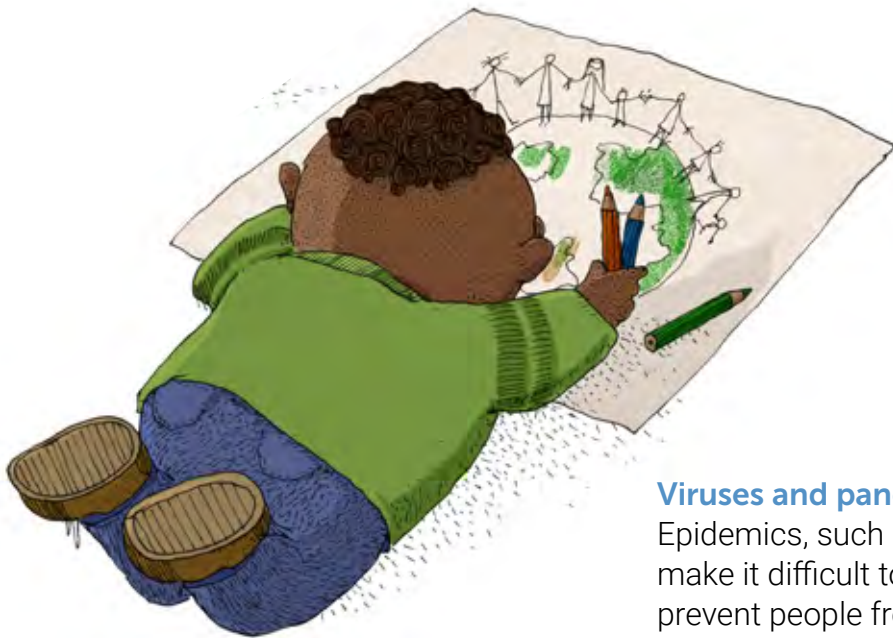
### Poverty

Most of the world's poor are smallholder farmers in rural areas. They produce a large proportion of the world's food, but often don't even have enough for their own families. A drought or flood can leave them without supplies, while a very large harvest can go to waste due to a lack of good storage facilities. It's difficult to break the cycle of poverty without the proper tools, so these vulnerable farmers are often forced to leave their farms and migrate in search of a different job.



## Migration

Migration is the movement of people within a country (from the countryside to the city, for example), or across international borders, in search of a job and a better life. Migrants can be an asset to host countries and to different parts of their own country that receive them, yet many migrants head for countries that do not have enough money, food, job opportunities and natural resources to share with newcomers. With mass migration, small farms can also be left without young workers. FAO is working to ensure that people can choose to stay at home – if it is safe to do so – by supporting small family farms and helping countries train new generations of farmers.



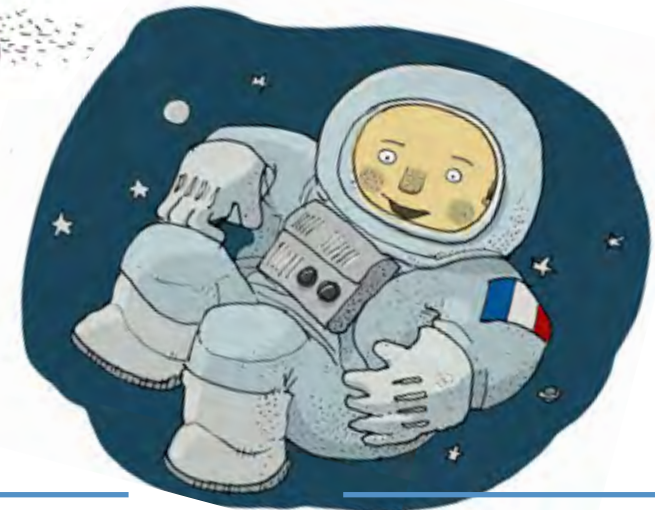
## Viruses and pandemics

Epidemics, such as COVID-19 or Ebola, make it difficult to move around and they prevent people from working, harvesting vegetables and cereals and bringing them to market. In addition to human infections, animal infections can wipe out flocks or herds, ruining entire economies.



## Climate change

The use of fossil fuels, the destruction of forests, and intensive livestock farming are activities that produce global greenhouse gases (GHG) such as carbon dioxide and methane. These gases are responsible for global warming, melting polar icecaps and for rising sea levels. Global food systems are part of the problem because they emit up to a third of greenhouse gases, but they are also affected by climate change. Droughts and flash floods resulting from global warming have a major impact on farmers, who can lose everything in a flash.



**Thomas Pesquet** is a French astronaut for the European Space Agency and FAO Goodwill Ambassador. After seeing the devastating impacts of deforestation, water, air and soil pollution from space, he decided to use his knowledge and experience to raise awareness of climate change. Last year, Thomas Pesquet, surprised us with a message from outer space on the Junior World Food Day. This year, he's back on Earth and joining us in person with other exciting guests. An exhibit will feature his photos from space alongside the inspiring actions of food heroes around the world. Stay tuned for more!





### Child labour

Child labour refers to work that is not fit for young girls and boys, which may damage their health, endanger their safety or affect their growth and their physical and mental development. Not all work carried out by children is considered child labour: some activities can help girls and boys contribute to their survival and food security. However, prolonged hard work that prevents play and study violates children's rights. 160 million girls and boys worldwide have to work, mainly (70 percent) in the farming sector. FAO is committed to tackling the root causes of child labour in agriculture by adopting family protection programmes, helping companies use resources properly and encouraging women's empowerment and access to credit and training.

### Inequality for Indigenous Peoples

Indigenous societies have survived for centuries by adapting to change, but today they are threatened by pollution, the destruction of forests and habitats, and climate change. Because of these difficulties, some people are forced to leave their communities and migrate to the city to survive. The risk is that ancient traditional knowledge will soon die out. FAO encourages the protection of Indigenous Peoples' traditional knowledge. It promotes the appreciation and awareness of their sustainable food systems because some practices can help other communities overcome difficult situations.



As we have seen, local crises can affect the entire world. Wars and epidemics can cause prices to rise and bring poverty to faraway places. Fortunately, however, the opposite is also true. By keeping an emergency under control, its consequences are avoided. For example, FAO's action with governments to control locusts in the Horn of Africa (responsible for the devastation of many crops) stopped the invasion spreading to West Africa.

Read our book *Healthy plants, healthy planet* to learn more about locusts.

### Emergency support and resilience

FAO intervenes in communities affected by emergencies with actions that can mitigate damage and prevent similar situations in the future. By supporting local agriculture through funding and providing farming tools, people can provide food for themselves and survive even in the most difficult circumstances.



### Social protection

This makes it possible to provide medical care, education, old-age pensions, or protection where there is extreme poverty. It is the basic system to prevent people from being left behind. FAO works in places around the world where more social protection is needed, helping to ensure better nutrition for all: organizing healthy school meals for children or distributing equipment to farmers affected by emergencies.

## Solutions

### Gender equality

To help close the gender gap, several countries have made money available to support women in underdeveloped agricultural areas who want to become entrepreneurs by granting small loans. Some of these loans can be obtained easily using a mobile phone which helps women who live far from cities overcome the problem of distance.



### Job opportunities, training and education

FAO's Rural Youth Action Plan helps young women and men from the least developed agricultural areas to get an education and a decent job. Another example is the World Food Forum (WFF): a youth-led global movement, movement and network to transform agrifood systems.



### Science and innovation

Science is the study of phenomena in the world through observation, the formulation of hypotheses and their verification through experiments. Technology is the application of science. New technologies can help small farmers, but it's not that clear-cut. Innovation does not necessarily mean rejecting what has already been done. It means thinking in a new way, including applying traditional knowledge to today's challenges.



# Ten tools to leave no one behind

## 1. Cash+

This FAO plan allows poor and vulnerable agricultural households who are struggling to meet their immediate needs to produce food again or do it better. Assistance may include cash but also seeds, planting materials, fertilizers, gardening equipment, fishing and vaccination tools, animal feed and often technical training.



## 2. School food programmes

These programmes ensure that children in deprived areas have a daily meal, allowing for better concentration, improved learning and nutrition. They encourage families to send their children to school, especially girls and can also support local farmers who provide the food.



## 3. Sustainable agriculture

This is the smartest solution for farmers and the environment. Harvests and earnings can increase, food can be tastier and healthier, and farmers save money because they don't use expensive chemical pesticides. It also stops soils from becoming depleted and addresses climate change by limiting greenhouse gas emissions.

## 4. Farmer Field Schools

These study groups compare old and new farming practices in demonstration plots, carrying out experiments to measure plant development and soil composition. Teaching the nutritional properties of food and disseminating hygiene and storage practices is important for the whole community.



## 5. Biotechnologies

These are advanced methods of producing seeds that are resistant to drought, which is becoming more common throughout the world due to climate change.



## 6. Aquaponics

This method of agricultural production doesn't use chemicals and saves a lot of water: plants are grown in tanks housing fish, which produce waste to fertilize them.



## 8. FAO web platforms

These useful information-sharing tools help governments to work better to protect flora and fauna, to better manage natural resources, to reduce the risk of natural disasters and much more.



## 7. Smartphone apps

These tools can help farmers predict the weather or recognize plant or animal diseases. One FAO app, for example, helps to identify, control and fight the Fall armyworm, a pest that causes great damage to crops.



## 9. Nuclear technology

This can stop parasites over-reproducing through a sterilization technique. For example, it was used to combat an invasion of the Mediterranean fruit fly (*Ceratitis capitata*) in the Dominican Republic.



## 10. Global Initiative on Food Loss and Waste Reduction

This involves governments, research institutes, producers, distributors and consumers who want to find innovative and effective ways to combat waste across the food supply chain.

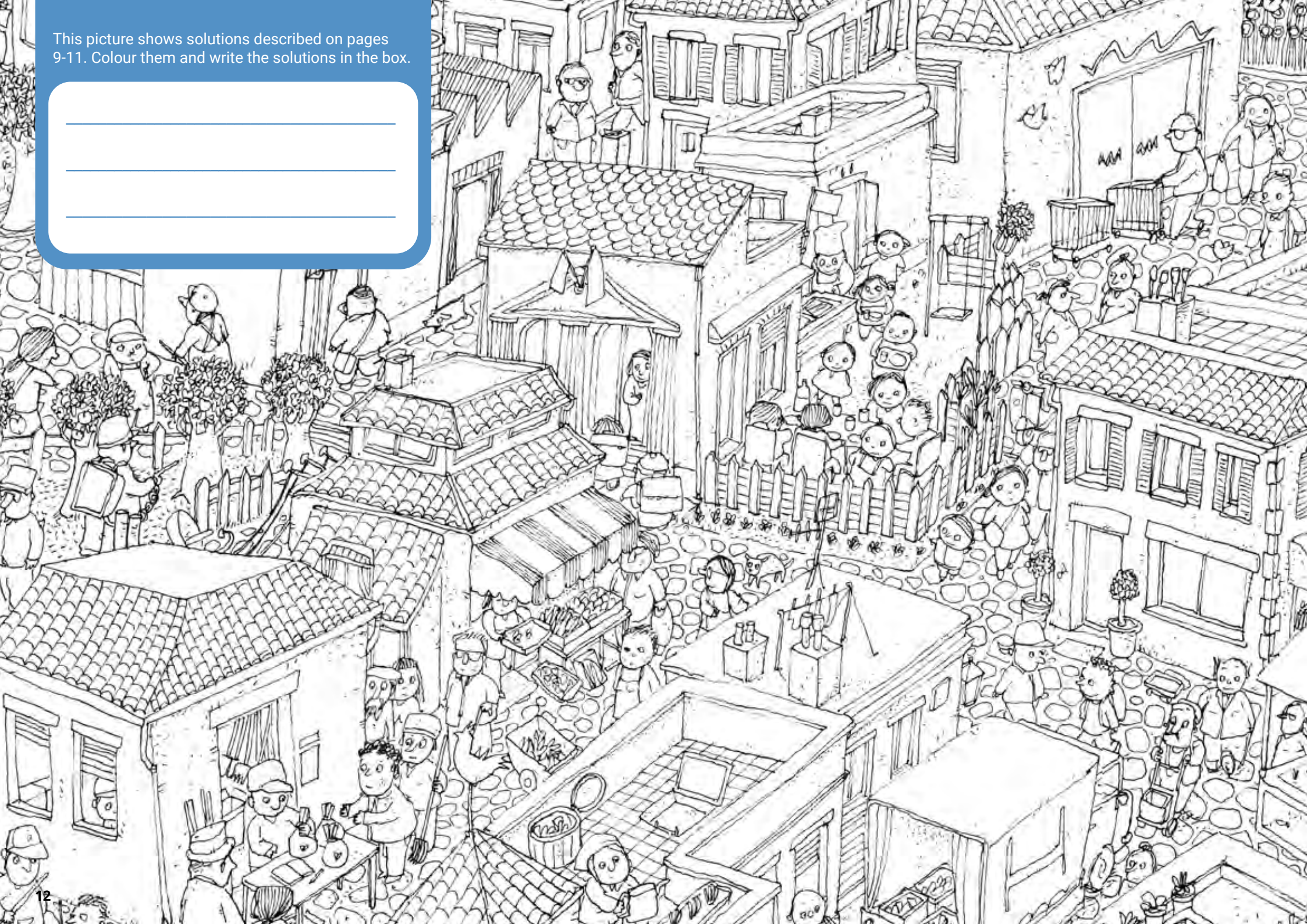


This picture shows solutions described on pages 9-11. Colour them and write the solutions in the box.

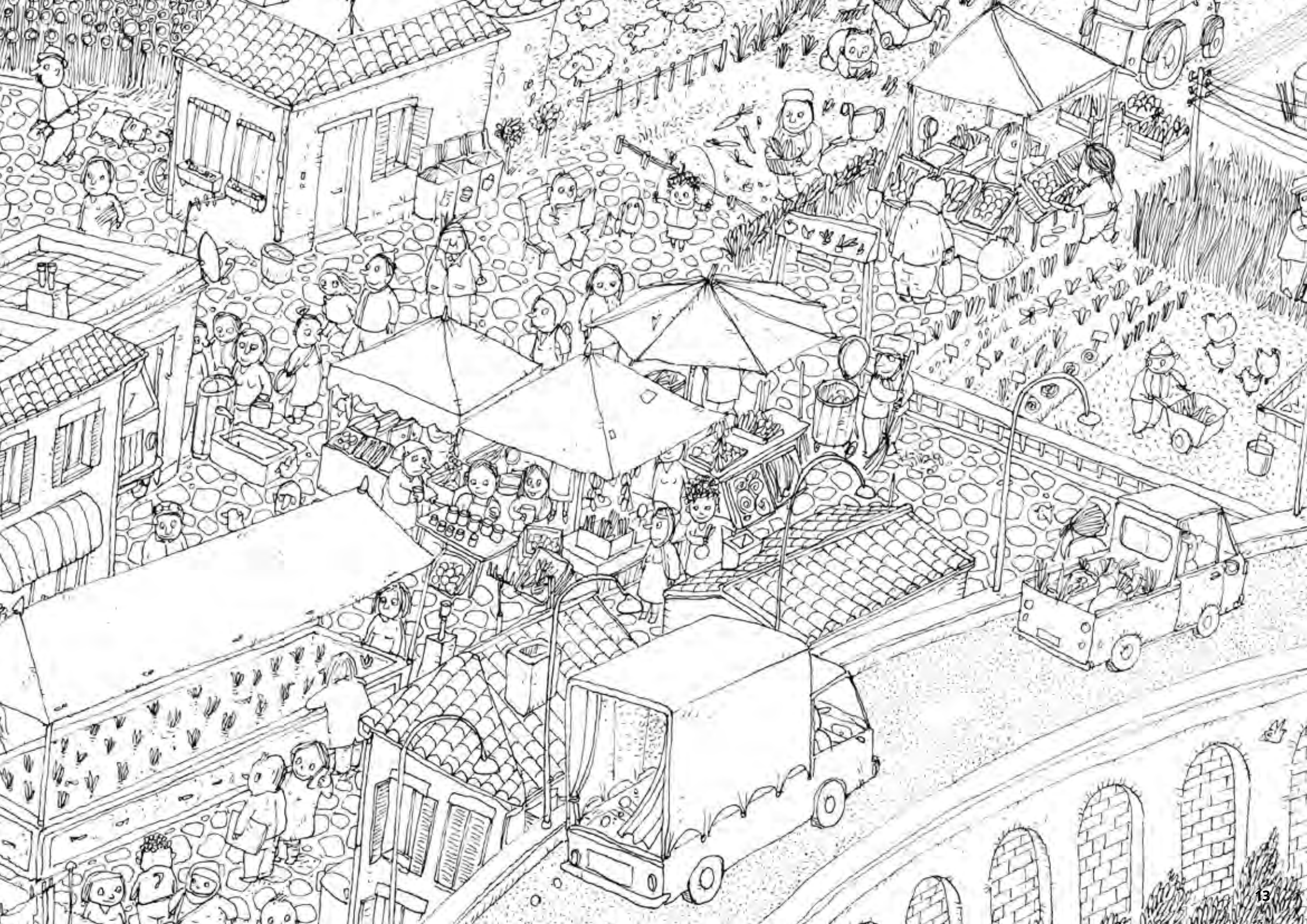
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# The four betters

We have talked about crises, poverty, and inequality but also about solutions. To face today's challenges, FAO is working worldwide on four interlinked programmes to fight hunger, malnutrition and food insecurity.



## Better Production

Better production can only happen if we stop the intensive exploitation of natural resources and labour. Food production in the future must favour sustainable methods that care for our land and waterways, reduce food loss, support small farmers, and respect the rights of workers throughout the agrifood system.



## Better Nutrition

Many people do not eat enough nutritious food. It is essential to make sufficient quantities of healthy food available at a fair price so that no one is left behind.





### Better Environment

When food production does not pollute, when it does not impoverish the land and those who work it, when food brings health and justice, the environment benefits. Our planet is desperate to wake up.



### Better Life for All

The transformation of agrifood systems can improve the lives of every single person on the planet. This can only be done by taking decisions together, without excluding any country or community. As we have seen, activities related to the food system are linked on a global scale.



## Time to start thinking!

What would you do to create a world where no one is left behind? List the three actions that seem most important to you.

1. \_\_\_\_\_

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2. \_\_\_\_\_

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3. \_\_\_\_\_

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Why did you choose these actions?

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# 17 Sustainable Development Goals

The United Nations has set out 17 Sustainable Development Goals to improve people's lives by 2030 and 193 countries have pledged to achieve them! To read about the goals and find out more, visit this website: [sdgs.un.org/goals](https://sdgs.un.org/goals)

At the heart of the Sustainable Development Goals is a commitment to leave no one behind. FAO works for many of the goals, because food is linked to the future of the planet. From ending hunger, to improving nutrition and promoting sustainable agriculture, FAO's efforts with countries aim to reduce inequalities and make sure no one is excluded. Of course, all these SDGs are interlinked. To achieve one, you have to consider them all, starting with the first, that of overcoming poverty in all its forms. Each SDG concerns everyone: reducing inequality and discrimination, and ensuring decent work, education for all, clean water and an unpolluted environment are common goals for every country.

But 2030 is... eight years from now! Can we really do it? Many of these goals won't be achieved unless we transform agrifood systems and make sure those who have been left behind can catch up to those who have experienced greater progress.

Some actions can change things for the better in a short time. FAO believes that community work, for example, is a powerful accelerator of change. Other accelerators are science, technology and innovation. Together we can work faster – and with the right tools we can work even better.

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Let's look at what countries can do and what each of us can do.

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# Actions

**Governments** must encourage production that doesn't pollute or deplete land and water, and that respects biodiversity. We must also defend the rights of workers - the farming, livestock breeding and fishing of the future must be sustainable and able to guarantee a decent living for all. In order not to leave anyone behind, social protection and education services are needed: building the capacities of the most vulnerable benefits society as a whole. Ministries of agriculture cannot achieve this alone. They need the support of private companies and more.

**Academic and research institutions** can focus their scientific work on developing better, more sustainable and fairer food production, as well as greener and smarter food distribution. Every stage of our agrifood systems can become more eco-friendly by sharing knowledge, technologies and innovative solutions. There's a need for greater awareness of the food system worldwide, so it is very important that scientific data is made more accessible.



**The private sector** can do a great deal. It can help governments by creating jobs, providing finance, investing money in services and infrastructure like road connections and respecting human rights. It can also disseminate innovative technologies and support education to train the farmers of the future with a focus on women, youth and other economically marginalized communities. In developing countries, the private sector must work together with organizations such as FAO or nongovernmental organizations to ensure fair and sustainable development.

**Civil society - Citizen's organizations**, among others, can be very important for the civil and social development of countries or communities. Professional associations, family or youth associations, consumer groups or land protection groups make their needs and problems known to governments and individuals. These organizations provide marginalized groups with a voice. By sharing information with administrations and governments, solutions to ongoing problems and challenges can be found.



# What can WE do?

We have seen what the challenges are, as well as what solutions can be put into practice by governments, organizations, and private businesses. But we as individuals can play an important role in ensuring that no one is left behind.

## Be better informed

If you want to do your part, the first step is to know what is happening in the world. You can read newspapers, listen to the radio, or search for news online, but make sure that your sources are verified and reliable.

## Write to your representatives

Letters or emails can be a very effective way of urging decision-makers to act, for example, by asking them to welcome refugees and asylum-seekers.

## Donate to relief organizations

One simple gesture is to ask your parents to donate money to organizations working in humanitarian emergency areas.

## Talk and share

Use your platforms to share information from credible sources on crises or people left behind.

## Take part in collection programmes

Often those who flee take very few things with them. You can donate clothes, accessories, toiletries, toys and more. Find out about collection centres and make sure you only donate items that are in good condition.

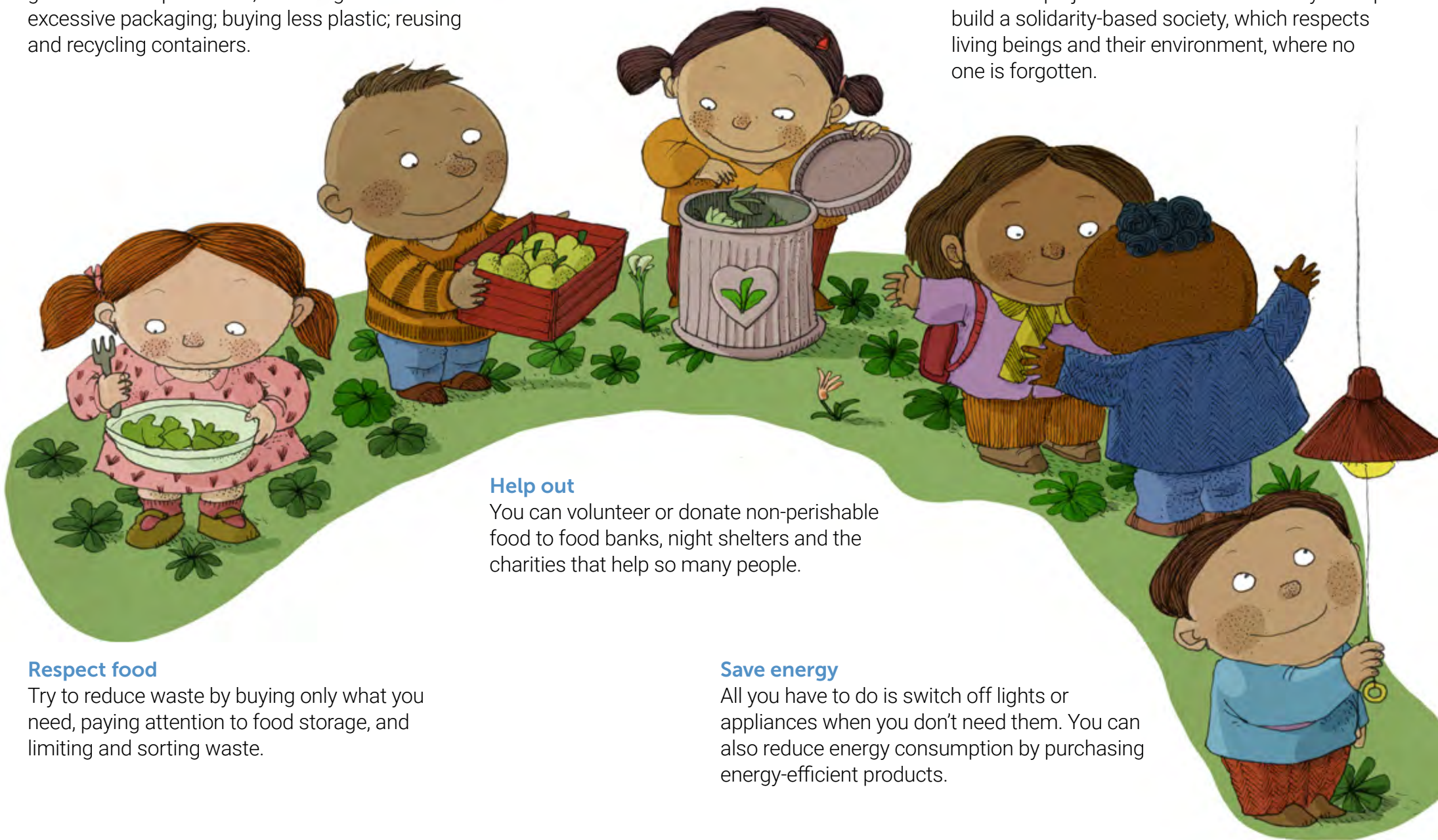


### Help the environment

Even small gestures can bring about change: eating local food, seasonal fruit and vegetables grown without pesticides; choosing food with less excessive packaging; buying less plastic; reusing and recycling containers.

### Set an example

Try to be role models for your communities. Recognize people's abilities, be welcoming and don't hold prejudices. This is another way to help build a solidarity-based society, which respects living beings and their environment, where no one is forgotten.



### Help out

You can volunteer or donate non-perishable food to food banks, night shelters and the charities that help so many people.

### Respect food

Try to reduce waste by buying only what you need, paying attention to food storage, and limiting and sorting waste.

### Save energy

All you have to do is switch off lights or appliances when you don't need them. You can also reduce energy consumption by purchasing energy-efficient products.



## Tales from around the world



My name is **Fatima** and I live in the Syrian Arab Republic, in Aleppo Governorate. I have four young children and my husband passed away. The war forced us to flee to a safer village, and when we returned home, there was nothing left. Even my greenhouse where I grew sprouts had been stolen. Survival became difficult for us. Then FAO gave me and 200 other farmers small tunnel greenhouses, soil, seeds and everything we needed to get back to work. Now I grow aubergines, cucumber, tomatoes and okra and can finally imagine a normal life for me and my children.



My name is **Chhum**, I am 17 years old and I live in Cambodia, on Lake Tonlé Sap. The lake is getting smaller and contains fewer fish due to climate change and dams. People in my community are forced to take their children fishing with them, even though children under the age of 15 can't work by law. FAO and my government are working to ensure that the law is respected and that children go to school. I get up very early to attend classes and only go fishing with my father after lunch. This means I can finish school and maybe one day become a teacher in my village.



I'm **Tristan** and I attend Santa Rosa Primary School in Region 1 of Guyana. I have to walk four kilometres to get to school... it's a long and tiring day. This year, my school set up a free canteen where you can eat really good food! Every day we have a different menu prepared with healthy products grown nearby. The school food programme employs a lot of people and saves my parents money. Having a healthy meal at school also helps me concentrate better during class.



My name is **Kakani**, I live in India and I'm a farmer. Until a few years ago, we used expensive chemical fertilizers in my area. This made the soil very hard and difficult to irrigate. We needed a lot of water and spent a lot of money. Then I took part in FAO's Farmer Field School programme and learned more natural ways of fertilizing the fields, which allow us to grow many different vegetables together and use less water. Now I'm teaching many farmers how to earn more while respecting our land.



# Now it's your turn!

1. Where do Kakani, Chhum, Tristan and Fatima come from?

*Draw an arrow linking each person from the stories with their country of origin.*



Fatima



Chhum



Tristan



Kakani

2. Tonlé Sap is currently the largest freshwater lake in South-East Asia, but its surface area has been greatly reduced due to drought and human activity. Do you know which river it's fed by? Many people from those areas live in an unusual type of village. Do you know what these villages look like?

*Collect information about this lake and share what you've learned with your class.*

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3. Have you ever tried to grow a sprout? You can do this in the classroom and keep a diary describing how different seeds grow. You could even start your own school garden!

4. Is there a canteen in your school? Is the food prepared with packaged ingredients from far away or with locally sourced products? Describe the lunch setup at your school, listing the positive aspects and what could be improved.



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## Want to know more about FAO?

Would you like to find out how FAO works to end hunger, about its history and where world leaders meet? Have a look at our Group Visits website for information on our virtual tours.

[www.fao.org/about/visit-us](http://www.fao.org/about/visit-us)





# Activity Book Series

Download the FAO Activity Book Series and prepare activities or classes on important global issues at the core of FAO's work: [www.fao.org/documents/card/en/c/ca9845en](http://www.fao.org/documents/card/en/c/ca9845en)



► Our actions  
are our future



► Food Heroes



► Healthy Plants  
Healthy Planet



► Eating Healthy Matters



► Change the future  
of Migration



► Climate is Changing



► Working for Zero Hunger



► Your Guide to FAO

## Contact us:

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[www.fao.org](http://www.fao.org)

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Food and Agriculture  
Organization of the  
United Nations



# ACTIVITY BOOK

Our **actions** are  
our **future**

Better production, better nutrition,  
a better environment and a better life.





Required citation:

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## World Food Day

It's YOUR day! Every year on 16 October, people from more than 150 countries come together with a common goal to raise global awareness and action to end hunger and ensure healthy diets for all. On this day back in 1945, nations across the world united with this common goal and founded FAO. This year, become a food hero and join the global celebration!

### Acknowledgements

FAO gratefully acknowledges writer Susanna Mattiangeli and illustrator Lorenzo Terranera for their contribution to this publication. FAO also extends its appreciation to Sony Pictures Entertainment for their support.

Today's lesson won't be like any other.  
It will be a journey across the complex system  
of food and agriculture.

Are you ready to go?  
Ready to travel?  
Where will we start?

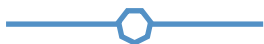
Let's begin with the simple and ancient gesture of planting small seeds in the ground. Did you know that agriculture has existed for 10,000 years? The act of caring for a seed gave rise to a great revolution. Since then, men and women have slowly started changing the world in which they live.

We should never forget that, in the world, each and every part has the power to change the way the system works. Some parts move slowly, and others fast, triggering other movements and bringing about new transformations. Plants, birds, and even rocks participate in their own way in this constant movement on Earth. Just like living organisms, every single detail in the world counts and every action has one or more effects.

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In short, we are all  
connected.

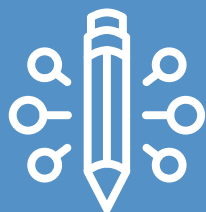
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Setting up a vegetable garden in the classroom or on the school grounds is a fun and educational activity that's suitable for all ages. Do you have one? You can start by studying the spaces available to you. Is there enough light and at what times of day? Think together about the vegetables you would like to grow and check if it's possible. You could even ask professionals, specialised volunteers or your family for help. Whether it's in a pot or in open land, there's always room to plant a few seeds. (For more information visit [www.fao.org/school-food](http://www.fao.org/school-food))



# WFD2021 Poster Contest



If you're between the ages 5 to 19, we want you to use your imagination and create a poster of a food journey.

Three winners in each age category will be selected by our jury and announced here in December. Winners will be promoted by FAO offices around the world and receive a surprise gift bag and Certificate of Recognition.

The deadline for entries is 5 November 2021.

Find out more on:  
[www.fao.org/world-food-day/youth/contest/en/](http://www.fao.org/world-food-day/youth/contest/en/)



## The world is a system,

in other words, a unit composed of many elements working together. When agriculture first began, humans could never have imagined how farming could bring complex systems to life over thousands of years all around the world.

An **agri-food system** is a set of actions that are all linked. It starts with farming and continues to the products that arrive at our homes, all the way to the things we eventually dispose of back into the environment. The cycle includes goods of all kinds because agriculture, as we shall see, does not only produce food but also other products.

The Food and Agriculture Organization of the United Nations (FAO) works with over 190 countries to improve nutrition. One of its main objectives is to study this huge mechanism and improve it at its core. In this book, we will try to understand how agri-food systems work and how we can play a part in making them function better.





# The journey of seeds

Agriculture also includes fishing, animal farming, forest production, the production of plant materials to make textiles and much more. None of these activities are separate, so let's start by talking about seeds. In nature, the air scatters seeds and helps them find new ground to grow, or if dropped in water, seeds are swept away to another destination. Often, animals who eat fruit carry seeds far away with their droppings. A long time ago, farmers used to keep the seeds from their best plants to replant cereals and vegetables. These days, people who cultivate the land can either produce their own seeds or buy them from seed companies, which are actually real industries.

So seeds can be industrial products? What does this mean? It means that there are big farms where cereals and vegetables are only farmed for the purpose of collecting seeds, which then produce plants with specific characteristics. Eventually, these seeds are packaged and sold all over the world. They need to be registered and certified so that people can easily identify them by name, origin and method of production.



*Citrullus Lanatus*, or watermelon, is a plant native to tropical Africa. Although you may only be familiar with one type of watermelon, over 1000 varieties exist. They differ in weight, size and in the colour of their pulp. In 2008, the Global Seed Vault was inaugurated on the Svalbard Islands in Norway to preserve different seeds from all over the world, a treasure that may otherwise have risked being lost.)





In the past fifty years, the cultivation of many different crops was set aside to make room for a small number of fast-growing crops to produce greater quantities of food.

A healthy agri-food system, however, needs to guarantee **biodiversity**, or in other words, keep a variety of species alive. It's important to limit monoculture, or growing a single species, by continuing to cultivate plants and grains that are native to local territories. This guarantees a variety of food for a healthy diet and benefits the land. Biodiversity also attracts bees and birds – the natural enemies of parasites, meaning fewer pesticides are needed.

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Nature needs  
variety

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# The journey of products

Cultivation starts as soon as a seed or seedling reaches the farm.



This is an important step. In a healthy system, products grow without weakening the soil or needing dangerous pesticides and fertilizers.

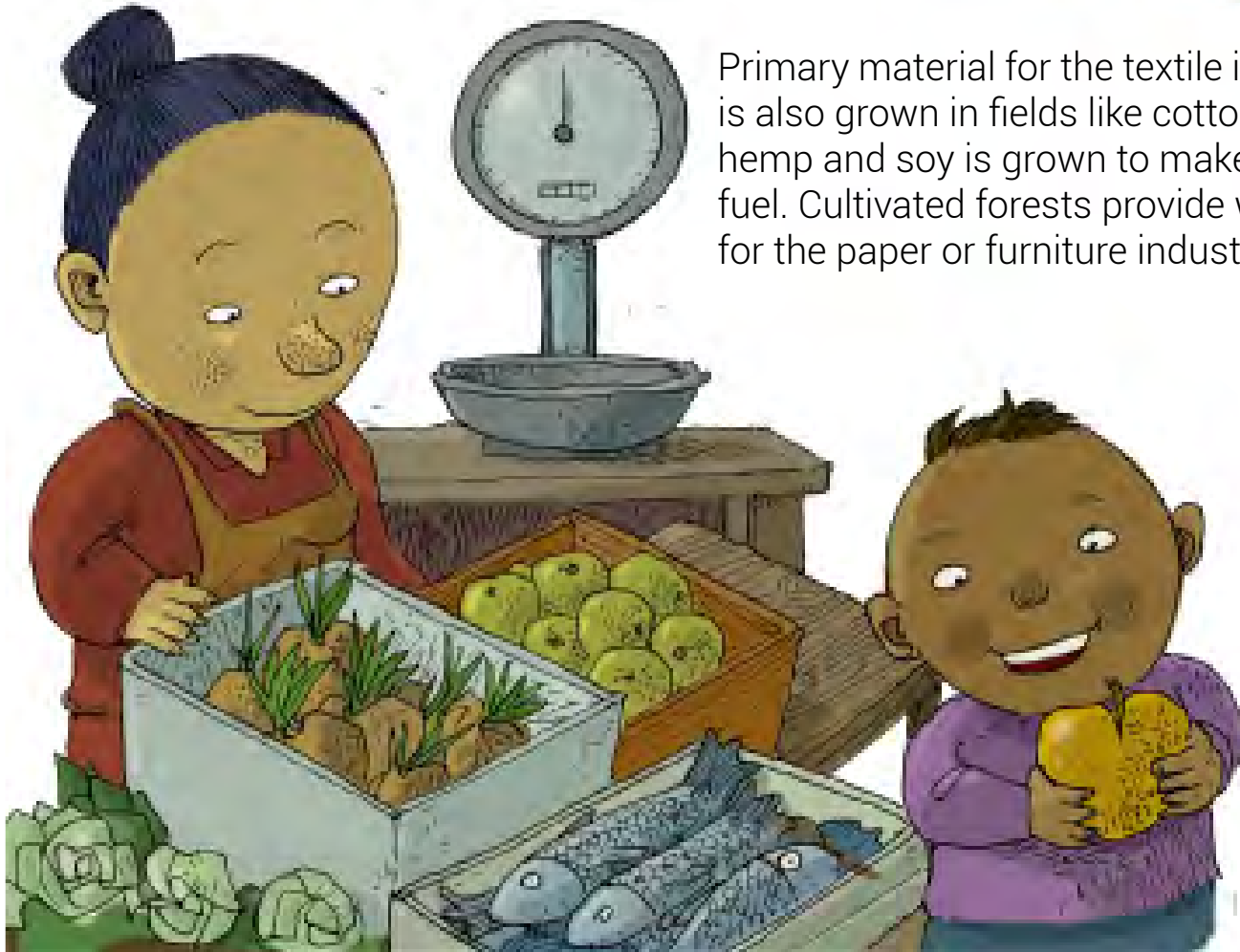


Farm products like fish and meat can be consumed by people that live near farms...  
...or they go on long journeys to distant places  
...or they are bought by food industries that process them...  
...and process them more  
...and more.

A large part of agricultural production is destined for animal feed (mainly composed of corn and soy) for livestock.



Primary material for the textile industry is also grown in fields like cotton, linen, hemp and soy is grown to make plant fuel. Cultivated forests provide wood for the paper or furniture industry.



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The agri-food system doesn't only deal with food

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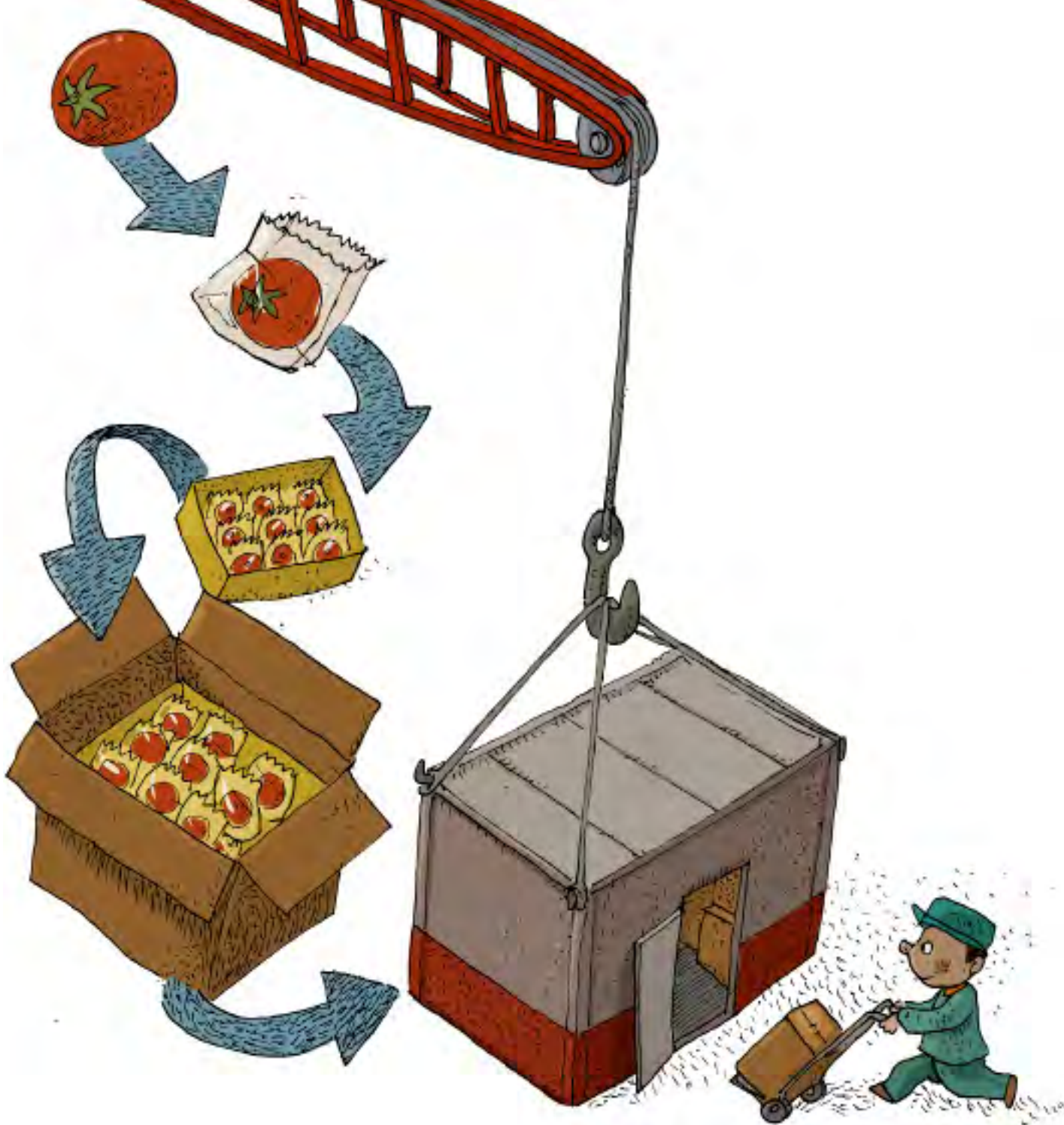


## When products are ready, the distribution phase begins

Fresh produce can travel in simple boxes on trucks to reach local markets, restaurants, hotels or purchasing groups. It is usually already washed but must be washed again and then cut or cooked in order to be eaten. Fresh food doesn't require a lot of packaging, and if the land it comes from is healthy, it's usually even tastier.

Often, however, small-scale farmers suffer losses. They lack modern tools or fridges, or the capacity to predict how their products will sell. If the cost of vegetables drops, for example, it may not seem worthwhile to harvest the fruit or vegetables, and they may be left to rot.

If food products are sent far away, it is washed and packaged even more. Some salads, for instance, are treated with preservatives to keep them fresh. In fact, they can be eaten straight from the packet. It's handy, but food that travels so far is usually not as rich in valuable nutrients as fresh food. And then, what do we do with all the packaging?



Foods that have been processed and are ready to eat are often packaged multiple times. Sometimes packaging takes up more space than the food itself. Long journeys also mean a loss of fuel and water consumption, and a waste of resources.

Have you ever asked yourself who makes food packaging? The food industry assigns the design of boxes, bags and all advertising to agencies that work hard to get people to know about their products. Even videos, billboards or ads about what we eat are part of the agri-food system.

Many governments force companies to record product information on food labels: ingredients, nutritional information, where the product was produced or processed, and where they were packaged. Even non-food products have labels.



Paper, for instance, can come from controlled and sustainable tree cultivations. You should read labels carefully to be sure about what you are buying.

Most packaged food and goods travel by lorries, boats or even planes for mass distribution. They reach shops, local markets, supermarkets, shopping centres but also big restaurant or hotel chains.

As you can see, this is a long journey with many stages. Agri-food systems provide work for a billion people around the world – more than any other sector of the economy. And since we all need to eat (some more, some less, some better, some worse), this sector concerns the whole world.









# We are all connected!

The way in which we produce food affects the entire planet, our natural resources, the way animals live, and the climate. Just consider the fact that we drink two litres of water a day, but 3000 litres are needed to produce what many of us eat on a daily basis.

Right now, agri-food systems are responsible for one third of carbon emissions that cause the greenhouse effect and climate change. Intensive agriculture can occupy a lot of space, destroying the natural habitats of many species. Chemical pesticides reach rivers and lakes, and finally end up in the sea. This has a negative impact on the fishing sector as well.



Besides this, the production of fertilisers consumes fossil fuels such as oil, releasing a lot of CO<sub>2</sub> into the air. Intensive animal farming for meat and milk production requires a lot of space and vast areas of cereal farming for animal feed. Did you know that a cow that doesn't eat the right food can create a lot of pollution? Farming animals in a responsible way is fundamental to reducing pollution and using water and other natural resources in a more sustainable way.

Food processing is often a way to limit food waste. After all, cheese, jams, dried fish and meat are ways of preserving food so they last longer. When, however, processing becomes excessive and chemical preservatives are used, the food we eat loses nutritional properties. Food that has been highly processed is not nutritious, even if it seems that way.

In many cases these ultra-processed foods are made with cheap and unhealthy ingredients that you would never find in your cupboard. When all you can afford is poor quality food, you often get sick and this is very unfair. Today, two billion people are severely overweight or suffer from obesity. Malnutrition, which includes hunger but also obesity, affects more than 3 billion people in the world. FAO is working with countries to reduce this figure to zero.

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## But what can be done? There are solutions

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We need to persuade governments to encourage the sustainable production of affordable and nutritious food by providing incentives for environmentally friendly behaviour and helping small-scale farms. These are, in fact, the most at risk of poverty in the event of natural disasters or emergencies. Small-scale farms produce 33% of the world's food and often don't earn enough. In addition, in poor and rural areas, women are the least paid category of all. It is only fair to support them. Governments need to invest in their education and they should have a say in decisions that concern them.

The COVID-19 pandemic has proven that we all have to work together for change. For example, due to the crisis, small farmers worked even harder than usual to sell their harvests. They only escaped poverty where governments found solutions to support them.



Agri-food systems are linked to health, education and even finance. The private sector – companies, banks and donors – has to make responsible investments. It has to fund sustainable projects and innovation in the search for new and more eco-friendly ways of crop farming, fishing and animal farming.

In September 2021, the Secretary-General of the United Nations will convene the first Food Systems Summit. This great gathering of leaders, researchers, private and international organizations will decide on courageous actions to change the way food is produced and consumed in order to reach the Sustainable Development Goals (SDGs) – read more on page 22.

Naturally, our help is also needed to stop climate change, defend the environment and combat injustice.





## Four steps forward

**Everyone's effort is needed to change the situation. But how? Where can we start?**

There are four key steps: we have to be committed to better production, better nutrition, a better environment and a better life for all.

Better production respects small farms, soils and occurs without waste or unfair labour.

Better nutrition is achieved when a large variety of healthy food is available at the right price: nobody goes hungry and nobody gets sick because of what they eat.

In this way, you create a better environment, where crops don't impoverish the land, biodiversity is maintained and aquatic life respected.

14% of food in the world is lost because of poor harvesting, storage and transport. Another 16% is wasted by sellers, restaurant chains and consumers. Think about all the labour and water that goes into food that nobody actually eats.



It's clear that all of this contributes to creating a better life for all men, women and children - one that is fairer, healthier and more beautiful. An agri-food system that doesn't pollute, in which nothing is wasted and where the rights of workers are respected is a safe and healthy system. It can recover easily from difficulties such as natural disasters or epidemics.

Now, let's get to work! We also have a contribution to make. Do you know who food heroes are? They are the people who dedicate themselves to improving our agri-food systems.

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There are food  
heroes all  
over the world:  
you can become  
one too.

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# Our four improvements



## For better production

We too, young and old, can influence governments and private companies by buying responsibly, talking about sustainable food at home or at school and educating ourselves. Let's read product labels, pick healthy, fresh, organic, seasonal food, and, if possible, food that is produced close to where we live. Buying is a choice that has an impact on everyone's health and on the planet's health too.



## For better nutrition

Let's watch our diet. Ultra-processed foods can be very tasty but they're high in fat, heavy, very salty or far too sweet, and full of preservatives. They don't contain nutritional properties that are necessary for a healthy living. Let's try to have a varied diet without ever forgetting fruit and vegetables. Let's avoid eating too much meat by replacing it sometimes with pulses or an all veggie meal. Let's pay attention to hygiene by washing vegetables and our hands when we eat. And, if we can, let's grow our own vegetables at home or at school.

## For a better environment

Let's reduce waste. Keep an eye on what's happening at home, at school or in the restaurants you go to. Learn how to read expiry dates on products. If we see a 'Use By' date on a label, it means that the product can no longer be eaten the day after that. On the other hand, 'Best Before' means that the product can still be eaten the next day even if it's not in the best condition. Try to consume what we buy and only buy what we really need. How is waste managed in our area? If sorted waste collection is not possible where we live, let's to recycle fabrics and containers.



## For a better life

Our life only improves together with other lives: those belonging to men and women, plants and animals. This may not be obvious to us at first, but sooner or later it makes sense. We might know and then forget, but a single exceptional event is all it takes to remind us that we really are all part of one world. Food cannot be a source of injustice and destruction because it is connected to everything. It is life, culture and joy. Giving value to what we eat means respecting oneself, others and the planet.

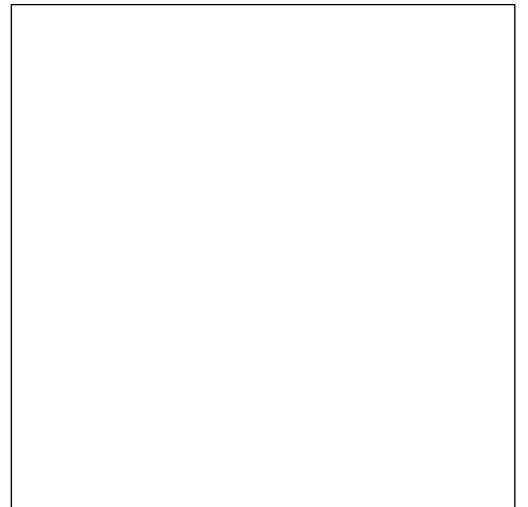
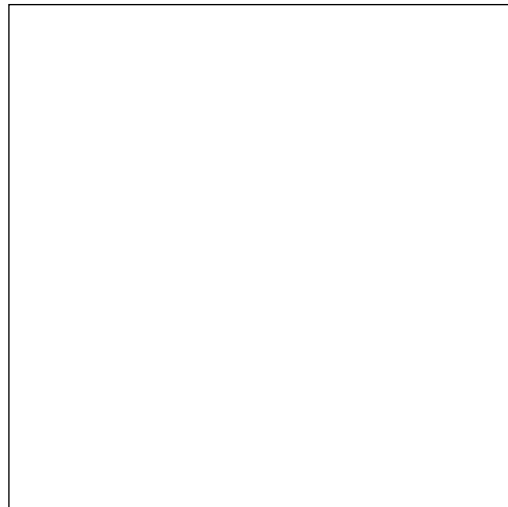
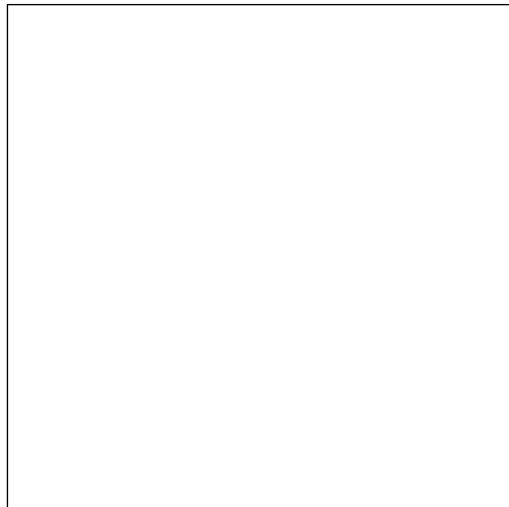
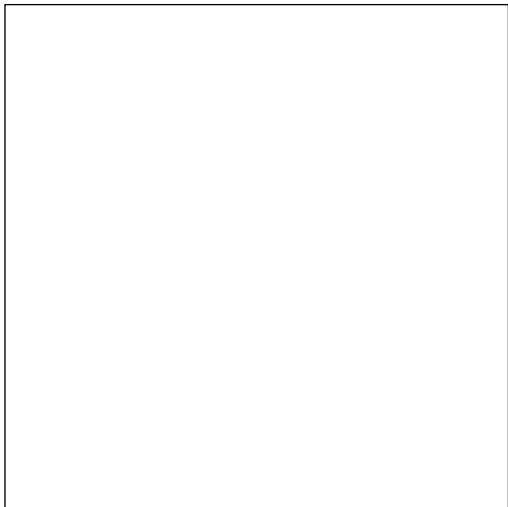
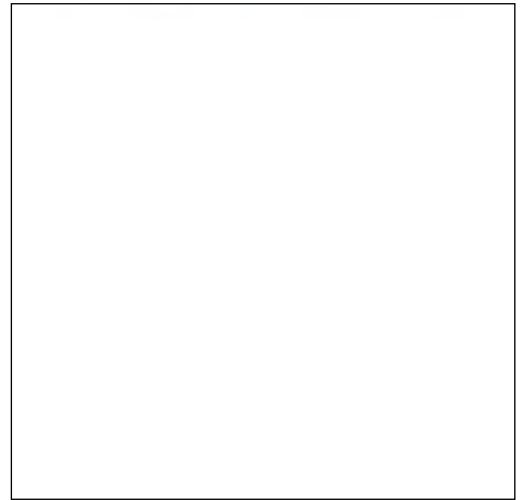
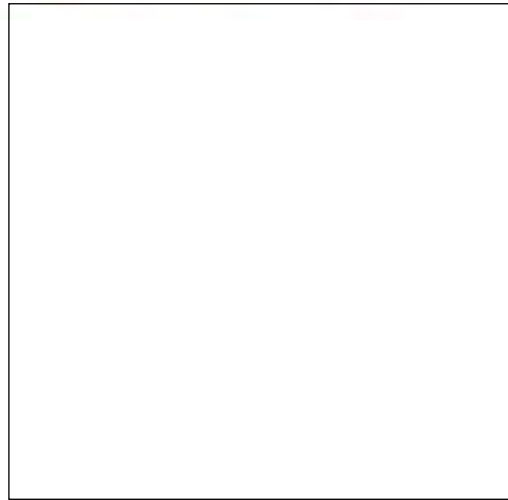
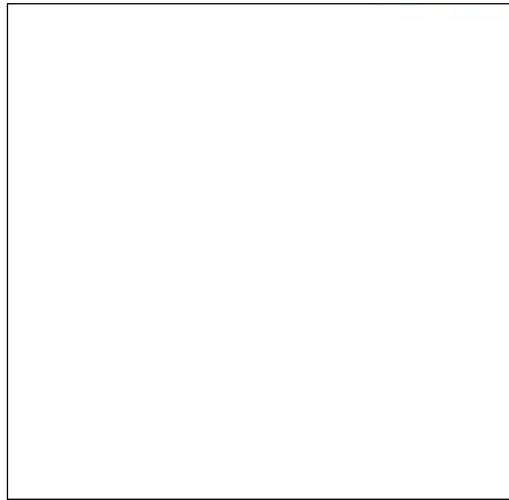
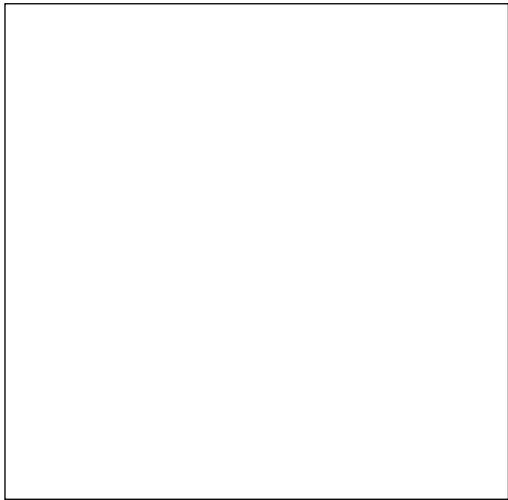






**Or do you prefer drawing?**

Imagine the story of a vegetable, cheese, jam or whatever you prefer in the form of a comic strip. (Don't forget that there's a Poster Contest especially for you. See page 3 for more information).





## Peter Rabbit Food Hero

As we have seen, #FoodHeroes are dedicated to improving the way food is produced, our diet, our environment and our life. Peter Rabbit is now one of them as #PeterRabbitFoodHero.

By following his example, you can discover how to help the planet by eating more fruit and vegetables. You can also buy food locally, where possible, or grow vegetables at home or at school. There are many actions that can improve the lives of everyone everywhere. Discover more at: [www.fao.org/world-food-day](http://www.fao.org/world-food-day)

The United Nations has established 17 Sustainable Development Goals to reach by 2030. As food is linked to the future of our planet, FAO is committed to many of these objectives. A significant milestone is SDG2, Zero Hunger, which we all have to work towards. Zero Hunger means defeating all types of malnutrition: a lack of food but also obesity and other illnesses that are caused by the wrong type of diet.

Find more information on the SDGs here: [www.worldslargestlesson.globalgoals.org](http://www.worldslargestlesson.globalgoals.org)



### What does sustainable mean?

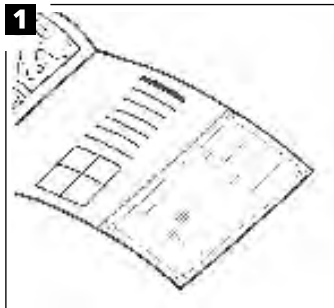
It means that the actions taken to produce a commodity, service or object don't have negative effects on the planet. It means that the Earth's future inhabitants will thank us.

## INSTRUCTIONS

Now that you have completed the Activity Book, we want you to become a Food Hero by doing your part.

Follow the steps below to complete your Food Hero Passport:

1. Carefully tear out the passport on the right.
2. Fill in the details on the inner left page.
3. Draw a picture of yourself or glue a photo in the box provided.
4. Take a Food Hero pledge. Choose 1-3 actions to commit to and write them down in the space provided in your passport. Get some inspiration from the actions in this activity book, or think of some of your own! Then sign your declaration.



Remember to fold your passport down the middle

As a **Food Hero**, I commit to:

1 \_\_\_\_\_

2 \_\_\_\_\_

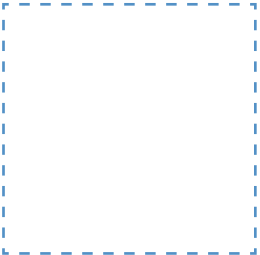
3 \_\_\_\_\_

Sign on the line above \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Country: \_\_\_\_\_







Food and Agriculture  
Organization of the  
United Nations



With your actions, this passport  
will be valid for a sustainable world.

Date . . . / . . . / . . .  
#FoodHeroes

[www.fao.org](http://www.fao.org)



# FOOD HERO PASSPORT

# Activity Book Series

You can download the FAO Activity Book Series on our "Building the #ZeroHunger Generation" portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO's work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



► Food Heroes



► Healthy Plants  
Healthy Planet



► Eating Healthy Matters



► Your Guide to FAO



► Change the future  
of Migration



► Climate is Changing



► Working for Zero Hunger

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# Climate is changing.

## Food and agriculture must too.

### About FAO

FAO helps countries to fight hunger and malnutrition, making sure that everyone has enough nutritious food to lead active, healthy lives. We work mostly in rural areas, where nearly 80 percent of the world's poor and hungry people live. Our main goals are to end hunger and poverty, make sure that people eat nutritious food, and help countries to better manage their natural resources. FAO is present in over 130 countries around the world, and is headquartered in Rome, Italy.

Every year, we celebrate World Food Day on 16 October to remember the birth of FAO in 1945 and call on people to join the fight against hunger. Over 150 countries across the world celebrate with us to raise awareness about hunger and the need to ensure that everyone has access to safe and nutritious food. The theme for World Food Day 2016 was "Climate is changing. Food and agriculture must too."





Colour the white sections to complete the picture.



## Climate is Changing

What would happen if we cut down all the forests and if we did nothing to protect our oceans or the people affected by climate change? This Activity Book looks at key issues related to climate change and agriculture in an enchanted world, through illustrations by Lorenzo Terranera. Each illustration explores an important message related to the 2016 World Food Day theme. Join your favourite fairytale characters in finding

solutions to climate change and hunger. Each of these solutions can become a reality if we all do our part, and the tips we provide at the end of this book are a great place to start! Every picture is incomplete, and we need you to use your imagination to colour in the white spaces. Show us how by working together, we can fight climate change, protect our planet and end hunger.

## Climate change, food and agriculture

Our everyday actions, decisions and behavior all have an impact on the climate. Climate change is affecting the health of our planet and changing our world. It is causing more natural disasters and environmental problems, which make it harder for us to grow food. Growing food is part of the problem too, as we have been taking shortcuts and harming our planet, to produce what we need.

In order to feed a growing population, set to reach 9.6 billion by the year 2050, we will have to learn to grow what we need in a way that doesn't continue to destroy the planet.

## Adapting to climate change

Adapting to climate change means changing how we grow food to make sure that our planet remains healthy and able to produce the food we will need in the future. It also means protecting the poorest people, affected most by climate change, by preparing them for natural disasters such as drought and increasing their ability to recover faster from disasters that can't be avoided.

We need to adapt food and agriculture to climate change in a sustainable way. Sustainability is all about the future – it's about building and maintaining a healthy planet that can feed our growing population and the generations to come.

## We are the Zero Hunger Generation

Did you know that around 1 in 9 people go to bed hungry every night? That's more than 800 million people. We already produce enough food in the world to feed everyone, so why are there still hungry people? Hunger exists for many reasons: poor people may not have the money to buy food; war can prevent people from having access to food; natural disasters can cause hunger; and too much food is wasted. The good news is that leaders around the world want to end hunger. In 2015, 193 countries committed to 17 Sustainable Development Goals, with an overall aim to end hunger by 2030. But leaders can't do this alone. They need the help of international organizations, farmers, schools, universities, companies and you. We can become the first generation to cancel hunger from the planet – the Zero Hunger Generation – if we work together. Ending hunger is everyone's responsibility and all of us have a role to play, even through changing our simple day-to-day actions and decisions.



## Seven areas for change

This book looks at seven different areas related to food and agriculture where change needs to happen if we want to deal with climate change. This is the only way that we can end world hunger.

These are:

- **Forestry**
- **Agriculture**
- **Livestock management**
- **Food Waste**
- **Natural Resources**
- **Fisheries**
- **Food Systems**





## Forestry

Many people around the world live in forests or depend on them for food. Forests not only provide shelter and food for people and other creatures, they also produce oxygen, clean the air we breathe by absorbing gases like carbon dioxide, and give us plenty of fresh water. Our forests are quickly disappearing, with thousands of trees being cut down each year to clear land for farming, among other uses. We have to protect and care for our forests to keep our planet and those who live on it healthy.



Colour the white sections to complete the picture.



## Agriculture

As the climate changes, the way food is grown and produced must change too. Climate change is making it harder to grow food because of natural disasters, like floods, droughts, and warmer seasons. Food and agriculture need to adapt to the effects of climate change in order to produce more for a growing global population in a sustainable way. Many of the world's poorest people are farmers, who are hit hardest by the increase in natural disasters caused by climate change. We need to strengthen their ability to prepare for bad weather, but when it's particularly bad and disasters are unavoidable, we need to help them recover by reducing the damage and losses.



Colour the white sections to complete the picture.



## Livestock Management

The way that farmers look after animals, including cows, goats, sheep, pigs, donkeys and camels, produces most of the greenhouse gases that come from agriculture. Changing the way farmers look after these animals is an important step in making sure they produce less harmful gasses. This is especially important, considering that we will need even more animals in the future to feed the growing population. More natural resources are also used to provide meat than vegetables or pulses (e.g. lentils, beans, peas and chickpeas), especially water. Eating at least one meat-free meal every week is something you can do to help.



Colour the white sections to complete the picture.



## Food waste

A large amount of greenhouse gases are released to produce the food we eat every day. But the worst thing is that over one third of the food produced worldwide is lost or wasted. Wasting food means wasting the money, labour, and resources such as energy, land and water that go into producing the food. Wasted food usually ends up in landfills where it rots, and rotting food is harmful to our environment, because it releases methane gas, one of the most powerful greenhouse gases. You can throw away less food by saving leftovers, freezing portions of food, helping your parents to plan your meals, buying only what you need at the supermarket and trying to buy ugly fruits and vegetables.



Colour the white sections to complete the picture.



## Natural Resources

At the moment, we're using far more natural resources than we need to produce food. There are only a limited amount of these resources and they need to be available for families in the future. We're also using the earth's precious resources poorly and damaging important ecosystems. We're cutting down forests, polluting our water systems and ruining our soils. When managed sustainably, soils can store a large amount of carbon and therefore they have a huge potential to decrease the greenhouse gases in the atmosphere. If we manage our natural resources sustainably, not only can we help to end hunger, but we can also fight climate change.



Colour the white sections to complete the picture.



## Fisheries

Many people around the world depend on oceans and wetlands to make a living and feed their families. Oceans also store a large amount of carbon dioxide in their depths and are home to over half of all life on earth. Rising ocean levels, warmer water temperatures, pollution and over-fishing mean that our oceans and wetlands are no longer healthy, and that among other things, we will run out of fish soon, unless we do something. Changing how we fish and what fish we eat will help to keep our oceans full of fish for years to come.



Colour the white sections to complete the picture.



## Food Systems

One of the things that will help us to end hunger by 2030 is to make sure that we create sustainable food systems. What is a food system? Food goes through many stages before making it onto your plate, travelling from farms and fields to the market and supermarkets, and finally to your home. This long process is linked like a chain and is known as a food system. If a link breaks (or doesn't work like we expect it to because there isn't enough food for example), the whole process is interrupted. A sustainable food system can feed our growing population without damaging the planet. It's the key to ending hunger for good and becoming the Zero Hunger Generation. You can help by choosing to buy food that is sustainably produced, locally grown and has the fair trade stamp.



Colour the white sections to complete the picture.





# What can I do?

## Climate actions to change our world

*Our planet is heating up. Glaciers are melting, sea levels are rising, and extreme weather events like droughts, cyclones and floods are becoming more common. All of these events have two things in common: 1. they have the worst effect on the world's poorest people, many of whom work as farmers, and make it harder for them to grow food; and 2. they threaten the global goal to end hunger by 2030.*

*The good news is that we can help. We need to waste less food, save our forests, consume less energy or use energy sources that cause less pollution, and protect the earth's precious natural resources like water and land, among other things.*

*What can YOU do about it? You can tackle climate change by changing your daily habits and making simple decisions. We challenge you to pick four of the actions and stick to them.*

## Preserve the earth's precious natural resources

The earth provides us with everything we need to grow food and live healthy lives, in the form of natural resources. These resources are land, water, animals and plants. We can't grow food without water and soil, and we will have a much harder time growing enough healthy and nutritious food if the water we have is polluted and the soil has been stripped of all the rich minerals that make it fertile. If we want to be able to continue to grow enough safe and nutritious food for everyone on the planet we have to protect our natural resources.





**Don't waste water.** Take a short shower rather than a bath. Bathtubs use gallons more water than a 5-10 minute shower. And turn off the water while brushing your teeth. Cleaning your teeth with the tap running uses 6 litres of water, while cleaning them with the tap off uses less than 1 litre of water. Remind your parents to fix any leaks - a leaky tap can waste more than 11,000 litres of water in a year! The plants in your garden can also be watered with collected rainwater and 'grey water', which is the water you use to wash your hands and/or dirty dishes.

**Eat new things.** Try to eat an all-veggie meal (including pulses like lentils, beans, peas and chickpeas) instead of one meat meal a week. More natural resources are used to provide meat than plants or pulses, especially water. Millions of acres of rainforest are also slashed and burned in order to turn the land into grass pastures for livestock including cows.

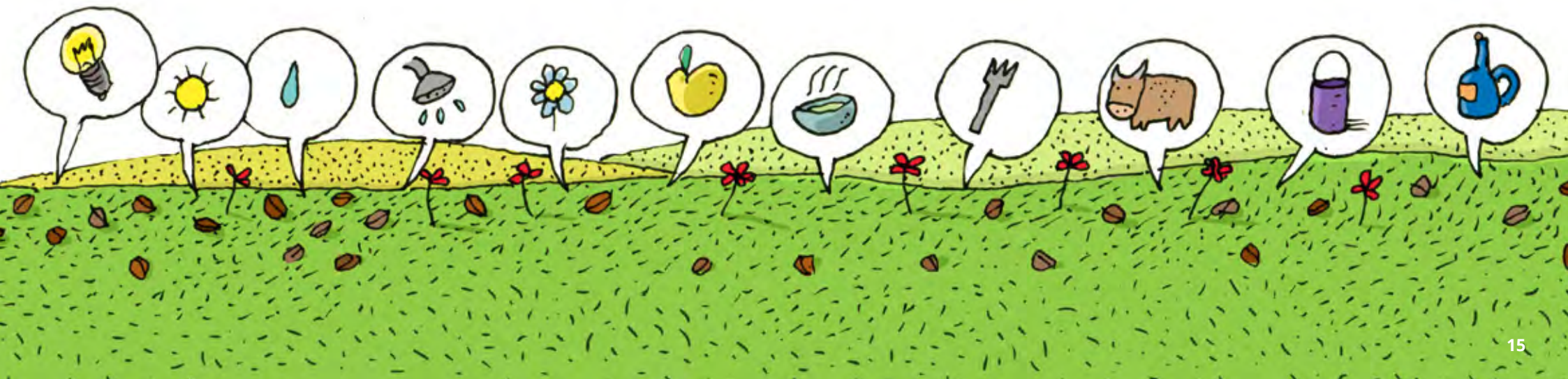
**Keep our oceans full of fish.** Convince your friends and family to eat fish species that are more abundant, such as mackerel or herring, rather than those that are at risk of being overfished, like cod or tuna. You can also buy fish that has been caught or farmed sustainably, such as eco-labelled or certified fish, and if you order seafood at a restaurant, always ask if it's sustainable.

**Energy efficient is best.** If your family is thinking of replacing household appliances, like a fridge or a washing machine, you can recommend that they buy energy-efficient appliances, that use less electricity. Save energy also by turning off the lights when you leave a room, unplugging your TV, stereo or computer, rather than leaving them on standby, and by using energy efficient light bulbs. You could also put on an extra jumper in the winter and ask your parents to turn down the heating, or shade the windows from the sun in summertime.

**Buy organic.** Organic farming helps our soil to stay healthy and retain its ability to store carbon, which helps reduce climate change. Help your parents to find organic and fair-trade products in your local supermarkets or farmers' markets.

**Keep soils and water clean.** Pick up litter and ask your parents to choose household cleaners, paint and other products that are free from bleach or other strong chemicals. By reducing litter and using eco-friendly products we can limit water contamination and soil degradation.

**Use solar panels or other green energy systems.** Find out if you can do so at home, school or at work by asking your teacher or parents to research available grants and government incentives.





## Waste less and reduce your footprint

Just like the carbon footprint we produce every year, through the release of greenhouse gases like carbon dioxide (by travelling in cars or planes and using electricity for example), we also produce a foodprint through the hidden emissions of the foods we choose to eat. Unlike a car, you can't see the release of greenhouse gases from your dinner, but the hidden trail of a meal's entire trip from the farm to your plate is filled with carbon-emitting processes. In addition to eating more vegetables or pulses and less meat, we can also reduce waste in the following ways:

**Buy only what you need.** Help your parents to plan family meals by preparing a weekly shopping list and stick to it! Not only will your family waste less food, they will also save money!

**Pick ugly fruit and vegetables.** Funny fruit or vegetables are often thrown away because people don't want to buy them but in fact, they taste the same, if not better. Talk to your parents about buying ugly fruit and vegetables and make use of food that might otherwise go to waste.

**Don't let labels fool you.** There's a big difference between "best-before" and "use-by" dates. Sometimes food is still safe to eat after the "best before" date, whereas it's the "use by" date, which tells you when it's no longer safe to eat. Teach your family the difference and ask your parents to check things carefully before they throw them out.

**Limit your plastic.** Ask your family to buy food with less packaging, bring their own bags when they shop, and use refillable water bottles and coffee cups.

**Recycle** paper, plastic, glass and aluminum and reduce the amount of waste that goes to landfills (pits of buried rubbish).

**Store food wisely.** When your family stacks up the cupboards or fridge, suggest that you move older products to the front and new ones to the back. Once open, use air-tight containers to keep food fresh in the fridge or close packets to prevent insects from spoiling them.

**Love your leftovers.** If your family has cooked too much, don't throw it away! Ask your parents to freeze a portion for another day or to transform it into something else for the next day's meal. If you're at a restaurant, less is more. Ask for half a portion if you think a full one might be too big and ask to take your leftovers home. Again, you'll save food and money.

**Make plant food.** Sometimes food waste is unavoidable, but that doesn't mean it needs to end up in a landfill. Instead of throwing your fruit and veggie peelings and eggshells in the rubbish bin, ask your parents to help you to set up a compost bin. This is a great way to recycle foods that otherwise release greenhouse gases into the air, and at the same time, you can give your garden a nutrient-filled boost.



## Other ways to be climate smart

We've shown you different ways to look after the earth's natural resources and waste less food, but there are other things you can do that will also help us to keep our planet healthy and to end hunger. Do you do any of these things already? Is there something you could try?



**Be rubbish-savvy.** In addition to reducing, re-using and recycling, learn about how to recycle or dispose of items that should never be thrown in a regular rubbish bin – batteries, paints, mobile phones, medicine, chemicals, fertilizers, tires, ink cartridges, etc. These are terrible for the environment, especially if they get into water systems.

**Bike, walk or use public transport.** Reduce your family's carbon footprint by asking if you can walk or cycle to places close by or, if possible, suggesting that you sometimes take public transport.

**Shop locally.** Shop KM 0. By buying local produce, your family can support neighbourhood businesses and lower your foodprint, for example, by preventing trucks from driving long distances.

**Make cities greener.** Add some green to the scene by encouraging your teacher to help create and maintain a school garden. You could also create your own vegetable garden at home, or a container garden on your rooftop or balcony. If there's no space available, talk to your family about teaming up with neighbors to grow a community garden on a vacant lot. Plants or green areas create shade, clean the air, cool the cityscape, and reduce water pollution.

**Protect forests and save paper.** Use as little paper as possible: photocopy and print on both sides and print only when you really need to. Collect scrap paper at school and at home to use for drawing and notes and encourage your school and family to buy and use forest-friendly recycled paper, paper towels, toilet paper, etc.

**Keep up to date on climate change.** Follow your local news and stay in touch with FAO's climate change website or social media at @FAOclimate.

**Spread the word!** If you see an interesting social media post about combating climate change, click share rather than like. And make yourself heard! Find out more about your local and national authorities and think of ways they could be engaged in initiatives that are aimed at helping the planet.

**Pass it on.** See what clothes, toys or books you can pass on to friends, family and charity organizations. Better yet, buy second-hand books, clothes and other goods as much as possible to save energy and money.

**Be an eco-traveler.** When you go on holiday with your family, consider not travelling by plane if you can. Planes emit a huge amount of CO<sub>2</sub> into the atmosphere. If you can't avoid it, either try to choose air companies that have carbon emission offset programmes, or participate in a tree planting campaign or renewable energy project to help to offset your emissions.





Tell your friends and family about the actions you have chosen to combat climate change, and ask them to choose some of their own!

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_



### Look at the pictures to the right.

What do you see? Does one scene look better than the other? What do you think they both mean?

Climate change can change our world in many ways, some for the better, but others for the worse. We need to make sure that families don't suffer because of climate change, and that these changes don't stop future families from being able to grow enough food to feed a growing global population.

To make sure that climate change doesn't change our world for the worse, we need to change the way we do things TODAY. The four actions you picked may seem small, but if everyone joins in and does their part, we will be able to keep our world and its people fed, and become the Zero Hunger Generation.







# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



► Your guide to FAO



► Working for Zero Hunger



► Change the future of Migration

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SUSTAINABLE  
DEVELOPMENT  
GOALS



working for Zero Hunger

# ACTIVITY BOOK

# Change the future of migration





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# Change the future of migration.

Invest in food security and rural development

## About FAO

A **world free from hunger and poverty** is at the heart of our work. The Food and Agriculture Organization of the United Nations (FAO) works with governments, companies, farmers, other organizations, and individuals to reach **#ZeroHunger**. A large part of our work is carried out in rural areas (the countryside), in places where most of the world's poor and hungry live. Although our headquarters is in Rome, Italy, we have offices in over 130 countries all over the world.

Every year we celebrate World Food Day on 16 October to remember the birth of FAO in 1945 and call on people to **join the fight against hunger** and to make sure that we all have enough nutritious food to lead healthy and active lives. The theme for World Food Day 2017 was "Change the future of migration. Invest in food security and rural development."

## We are the Zero Hunger Generation

Over 800 million people go to bed hungry every night. **That's about 1 in 9 people.** We produce enough food to feed everyone on our planet, but for many different reasons, people still suffer from hunger. In 2015, 193 countries committed to the Sustainable Development Goals SDGs to help us to create a better world for all and end hunger by 2030. But world leaders can't do it alone. Achieving the 17 SDGs is everyone's responsibility, from farmers to companies, schools to universities, and from international organisations to YOU.

Let's work together. Let's become the first generation to make hunger vanish from the planet – **the Zero Hunger Generation**. We all have a role to play in ending hunger, so keep reading to find out how YOU can be part of the Zero Hunger Generation!

## Change the future of migration

Did you know that 1 out of every 7 people on the planet was a migrant in 2017? In the last few years, there has been a huge increase in the number of people migrating around the world. **Most migrants are quite young** – about one-third of them are between the ages of **15–34**. Why are people migrating today and how can we give them the choice to stay at home, if it's safe to do so? This Activity Book on migration has packed some creative answers to these questions in a series of suitcases illustrated by Lorenzo Terranera. Suitcases open to show how FAO is helping to give people more choices to stay at home, and how the global goal to reach Zero Hunger is connected to migration.

This book is about migration and migrants. Whether you are a migrant yourself, know a migrant, or are related to a migrant, **migration is an issue that affects us all.**



## What is migration?

Migration is the movement of people, including children, within a country or across an international border. Migrants can be divided into 2 main categories: international migrants, who cross country borders; and internal migrants, who move within the country where they were born (from a rural area to a city for example). The estimated number of international migrants in the world is 258 million, while around 760 million people move within their own nation. There may be **more internal than international migrants**, but moving to a town or city is often the first step before crossing international borders. Migration has always existed. It is part of the growth and change of a country, with people looking for better jobs and lives in their home country and beyond it too. **So why is migration such a big challenge today?**

## Challenges and benefits

Migration is a challenge today partly because **people are arriving in countries or towns in huge groups**, often seeking protection. Many international migrants arrive in developing countries that have less money, food, job opportunities and natural resources to share with newcomers. Having to share these resources among more people can sometimes create problems or tensions. Rural communities can also suffer from the loss of young workers who migrate, often meaning that less food is produced or available. Similar challenges are faced with internal migration.

On the other hand, **migrants can bring new skills, knowledge and cultures to their host countries** and contribute to **economic growth** provided they are given access to more and better jobs. They can increase the workforce in communities where there aren't enough people to do all the work and also free up jobs for young people in the country they leave. Once they settle down, they often invest in their host community or support their home country by sending money.



## Why is migration often the only choice?

Sometimes people move because they want a new start, a new job, to study or to be reunited with family. But sometimes people are forced to migrate because of life threatening events including fighting and war or natural disasters that destroy their homes like earthquakes or tsunamis. Often migration can be the only option to improve people's lives when faced with poverty and hunger, no jobs, no support from the government, limited natural resources (like water or healthy soils), or climate change impacts.

Read through the next pages to find out more about these challenges and how FAO is working with countries to help people to stay at home when it is safe to do so, or build a new life after a natural disaster or conflict.





**HUNGER AND POVERTY**



**CLIMATE CHANGE**



**CONFLICT**

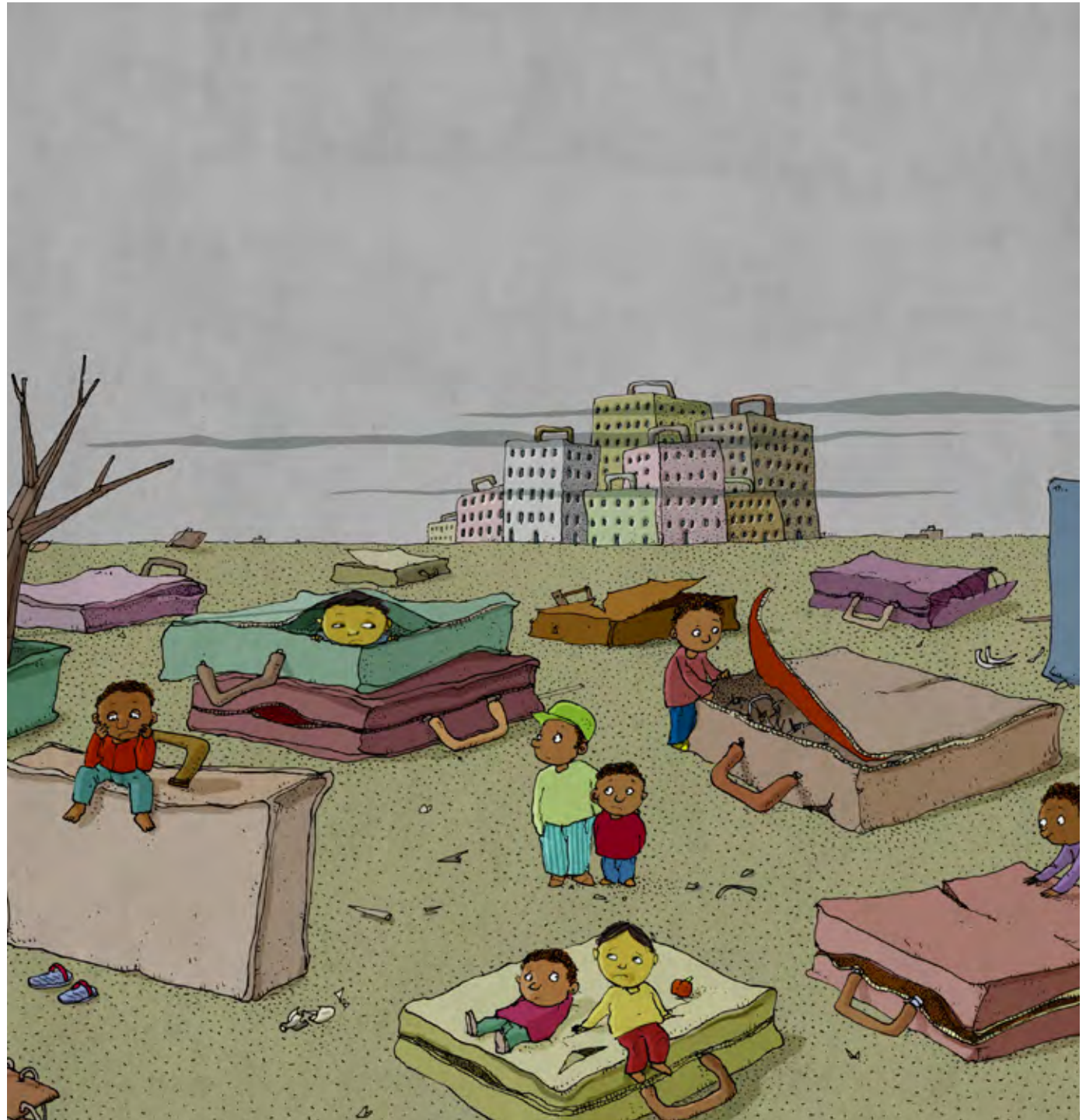




## HUNGER AND POVERTY

Did you know that there are **2.1 billion poor people** and **over 800 million hungry people worldwide**, and that most of the world's hungry **live in rural areas**? What do you think poor and hungry people in the countryside do when they realize that they can't buy or grow enough food for themselves and their families? Many of them move to towns or cities in search of a better life, hoping to find work so that they can send money back home to feed their families.

Some people remain in rural areas because they are farmers and have always worked their land, but they can barely grow enough food to feed themselves and their families, and they certainly don't grow enough to sell in markets. They may not even have access to banks so that they can take a loan to start a new activity that can bring in money for their family. This is especially true for women and young people. Others may grow enough food to sell, but don't have a market nearby, or can't get to their market easily, so this extra might go to waste. Many farmers don't have any money saved for emergencies and their governments don't have a system in place to help them, so when something bad happens (like crops failing, a drought, or livestock dying), they are more likely to go to bed hungry or feel that they have no choice but to leave their land in search of food or work.









## CLIMATE CHANGE

If you read our Activity Book "Climate is changing. Food and agriculture must too.", you might remember that climate change is affecting the health of our planet and changing our world, in part by causing more natural disasters and severe weather events. When a natural disaster strikes, did you know that people often have to leave their homes for other areas, towns or cities?

**In 2015, more than 19 million people had to move after surviving a natural disaster.** In our Activity Book on climate change, we taught you that the people who suffer most during and after a natural disaster are poor farmers, fishermen, pastoralists and forest dwellers.

If these people are lucky enough to avoid a natural disaster, they may still have to leave their homes because they can't grow enough food anymore. Climate change and rising temperatures can change the environment so much that where once a farmer could grow food, seedlings no longer survive, or grass no longer grows for animals to eat. It can turn healthy soil into unhealthy, dry and infertile soil, which means that people can no longer work, and there is less food produced. This means that the people who used to work the land are more likely to become poor and hungry because they can't produce food to eat or sell.





## HOW IS FAO HELPING?

One way to make sure that both people and their lands are better able to recover from the shocks of climate change and natural disasters is to **help to prepare** for them where possible. It is important to **protect our lands**, and FAO helps farmers to do this by teaching them about Climate-Smart Agriculture (CSA). CSA means working land and growing food in sustainable ways that don't damage or strip it of precious nutrients and limiting the greenhouse gasses produced. CSA helps farmers to grow more food on the same amount of land, often using even less water, which means that the farmers can earn more money. It means that farmers and land can prepare for disasters like droughts.

FAO is also teaching farmers to use seeds that are more resistant to drought and disease, to breed livestock that are used to hotter temperatures, create storm-proof ponds and cages for fish, and plant trees that are heat and drought tolerant. When natural disasters can't be prevented, **FAO helps farmers to get back on their feet** or return home after a short period away, by supplying seeds and tools to begin planting again, providing easy-to-grow, and nutritious crops. FAO works with partners to set up monitoring systems to try to limit the effects of crises. These are called **early warning systems**, which are alerts that tell people and governments when to prepare for a disaster so that fewer lives, money and resources are lost.



Now it's your turn to help us. Colour the white sections to complete the picture.



## CONFLICT

Did you know that over **65 million people were forced to leave their homes because of conflict in 2015?** People are still leaving their homes today because of ongoing conflicts. Many come from rural families – farmers, herders, pastoralists, and fishermen. They are often already at risk of going hungry or falling into poverty. In fear of their lives, they flee their homes. They see no end to the fighting and have lost, or risk losing, everything. People who move to a different part of their own country are called **Internally Displaced Persons (IDPs)**, while those who leave their own country are termed **refugees**. Most IDPs and refugees live in developing countries. This is a challenge for developing countries who may already be struggling to support their own populations.

Hunger, ineffective and weak governments, livestock movements, sharing limited natural resources (especially water and land), and climate change impacts can all lead to conflicts between local farmers, or between locals and displaced people.

It is also worth remembering that not everyone can, or wants to, flee. **Did you know that in most conflicts over 80% of rural people remain behind?** Farmers don't want to abandon their land or animals. Even if it is very hard to reach them, people that stay behind also need help to survive.





## HOW IS FAO HELPING?

Although FAO cannot stop wars and conflict, we can help host countries and communities, the people that flee conflict, people remaining in conflict areas, and countries affected by conflict to recover. FAO supports people in crisis and, once war has ended, helps farmers to get back on their feet to produce food again. **We provide emergency assistance** through cash transfers, crop seeds, like quick growing and nutritious vegetables, livestock and basic tools. FAO is working in some of the worst war-torn countries including Syria, where we are helping farmers to produce food, and in Yemen, by helping IDPs and their host communities to start rural activities and make money.

We help those who have fled due to conflict to settle into their new homes, and give support to the communities hosting new groups of people. It is important to remember that refugees and IDPs deserve protection, respect, safety and dignity, and **we all need to stand together against acts of discrimination.**

**FAO can also help to prevent and reduce tensions that might lead to conflict.** We work with communities to better manage their natural resources, encouraging farmers to solve arguments over livestock or natural resources in a peaceful way through discussion and negotiation.



Now it's your turn to help us. Colour the white sections to complete the picture.



# Take a closer look

Find out which page each of the drawings below belongs to. Then complete the sentences to the right of each image.



This drawing is from page\_\_\_\_, which talks about

This drawing shows \_\_\_\_\_

It is important because: \_\_\_\_\_



This drawing is from page\_\_\_\_, which talks about

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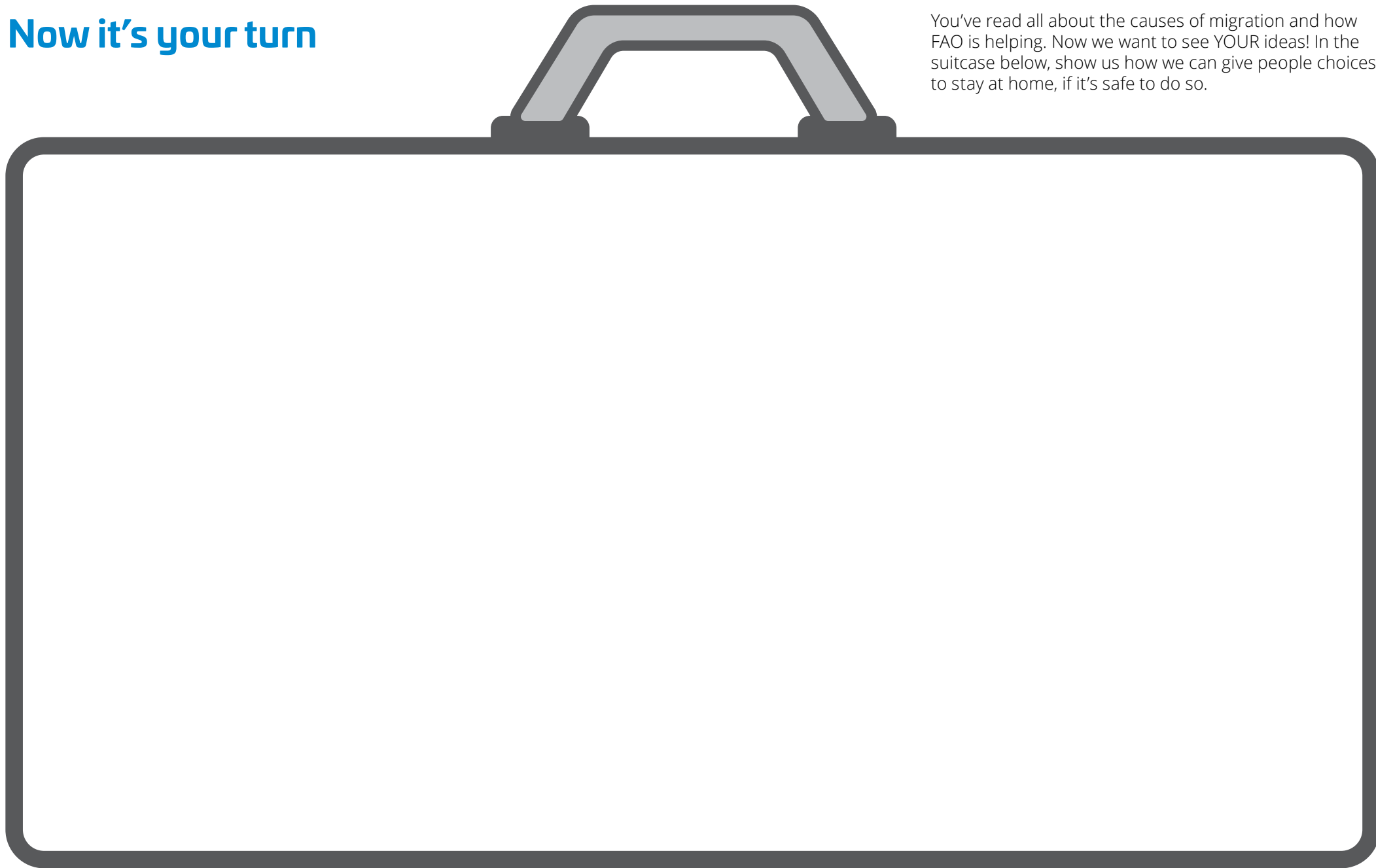
This drawing is from page\_\_\_\_, which talks about

This drawing shows \_\_\_\_\_

It is important because: \_\_\_\_\_

## Now it's your turn

You've read all about the causes of migration and how FAO is helping. Now we want to see YOUR ideas! In the suitcase below, show us how we can give people choices to stay at home, if it's safe to do so.



Scan or take a photo of your poster and post it on Instagram with the hashtag **#ZeroHunger**. Remember to also tag @FAO.



# 17 Goals for a ZERO HUNGER Generation

How old will you be in 2030? Did you know that 193 countries have agreed to end hunger and create a better world for all by then? They plan to do this by completing 17 goals, the Sustainable Development Goals (SDGs). **These goals are everyone's homework** until 2030 and they belong to us all, whether we are from the developing or developed world. The only way we can achieve them is if we work together.

## How does FAO contribute to the SDGs?

FAO's work contributes to many of the SDGs but our **main focus is SDG2: Zero Hunger**. And we can't achieve Zero Hunger without tackling many of the issues that cause people to migrate. It is possible to feed our growing population and help them rise out of poverty without threatening the health of our planet for future generations.

## Migration CAN contribute to achieving the SDGs

If governments learn to manage migration better, and to stop and prevent conflicts, it can lead to economic growth and bring us closer to achieving the Sustainable Development Goals. **Safe, orderly and regular migration can contribute to development**, if migrants are able to find a job, learn the local language or receive training to acquire new skills.

Migrants can also contribute to growth in their country of origin by sending money back to their families, which can improve food security and rural people's lives. If migrants are able to go home when conflict has ended, they can bring new skills they learnt while they were away, back to their community. In addition, addressing the root causes of migration – climate change, poverty and hunger, conflict – helps us to reach our ultimate goal: Zero Hunger. **Achieving the SDGs means involving all people, including migrants!**

## What can you do?

You can try to encourage governments to address climate change, and work towards solving long-term conflicts that are forcing people to flee from their homes. You can also convince governments to give people alternatives to migration, where possible, by providing new and better work opportunities at home.

By changing some simple everyday habits that have an effect on our climate, for example by wasting less food, saving water and recycling, **we can become the Zero Hunger Generation** – the first generation to make hunger vanish from the planet. Have a look at our **Climate Actions in the Activity Book** on Climate Change to find out more:

[bit.ly/WFDBOOK16\\_EN](https://bit.ly/WFDBOOK16_EN).



# SUSTAINABLE DEVELOPMENT GOALS

**1** NO POVERTY

**2** ZERO HUNGER

**3** GOOD HEALTH AND WELL-BEING

**4** QUALITY EDUCATION

**5** GENDER EQUALITY

**6** CLEAN WATER AND SANITATION

**7** AFFORDABLE AND CLEAN ENERGY

**8** DECENT WORK AND ECONOMIC GROWTH

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE

**10** REDUCED INEQUALITIES

**11** SUSTAINABLE CITIES AND COMMUNITIES

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**13** CLIMATE ACTION

**14** LIFE BELOW WATER

**15** LIFE ON LAND

**16** PEACE, JUSTICE AND STRONG INSTITUTIONS

**17** PARTNERSHIPS FOR THE GOALS



## The importance of choice

Deciding to stay at home, or to leave home when it's safe to do so, should always be a choice for everyone. FAO is working to give people choices. This means investing in people's abilities and dreams and lifting them out of poverty and hunger. But some people choose to go and find ways to contribute to their new home or country of origin. Migration Champions are doing their part to achieve the SDGs. They come in all shapes, ages, colours and sizes; what counts is that they **stand up for others and help to make our planet a better place.**

Have a look at some of our favourite Migration Champions, be they young or old, from the past or the present, individuals or organisations. Many of them are also **Zero Hunger** Heroes, actively fighting hunger around the world.

**Can you think of any others?**



**Shakira Mebarak**

Shakira started her singing career in Colombia before becoming an international star and moving to Spain. Shakira is a Migration Champion because she founded the Pies Descalzos Foundation, which provides education and meals to 4,000 Colombian children. She is also an active advocate for children's rights all over the world.

**Self Employed Women's Association (SEWA)**

SEWA has lifted over 2 million women out of poverty in Asia. They work with FAO to help women and young people in Africa too. They create jobs, spread knowledge, offer health services and provide education to give people a better future. SEWA is a Migration Champion because they are giving millions of people the choice to stay at home when it's safe to do so.

**Grameen Bank**

The Grameen bank in Bangladesh provides poor people with access to money to start profitable activities. The founders were awarded the Nobel Peace Prize in 2006 for their groundbreaking work. Grameen bank is a Migration Champion because it is giving people new opportunities, lifting them out of hunger and poverty.

**Yusra Mardini**

When fleeing home during the Syrian civil war, Yusra and her sister pushed a sinking boat for over 3 hours until it reached Greece. Yusra is a Migration Champion because she helped to save the lives of 18 other refugees. She also swam in the 2016 Summer Olympics in Rio as part of the Refugee Olympic Team and today, she continues to advocate for refugees everywhere.

**Albert Einstein**

Einstein fled Germany for the USA because of the rise of the Nazi party shortly before World War 2. He received the Nobel Prize for his revolutionary work in physics. Einstein is a Migration Champion because he worked tirelessly to save the lives of German Jews by helping them to escape their country and settle into their new community.

**Migrant money-senders**

When people leave home and start a life in a new country, they are sometimes able to send money to family or friends who stayed behind. When migrants send money home, they are sending what we call cash remittances. In 2015, migrants sent over \$600 billion in remittances to their countries of birth. They are Migration Champions because they help their old and new countries to grow and develop.



## The heart of the matter

Now that you have finished reading about some of the causes of migration and how FAO is helping, you can answer the following questions.

1. What are the 2 main types of migration?

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2. Do more people move within countries or across international borders?

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3. List the main causes of migration explored in this book.

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4. Out of everything FAO does to help migrants, what do you think is most important?

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Look at the two pictures to the right. What differences do you notice?

Addressing the main causes of migration – climate change, conflict, poverty and hunger – will help us to reach our ultimate goal: Zero Hunger. It is important to remember that if we work to make migration safe, orderly and regular, countries can gain wealth, and food security and rural peoples' lives can be improved. Migrants, of all types, can also help countries to make our world a better place if they are quickly welcomed into their new countries and able to work.

Look around your classroom and at the people in your life. Are you or any of them migrants? Think about how your life or classroom would be different without migrants. Think about the good things migrants bring to your life, and the challenges they have faced.

**Remember that migrants everywhere deserve protection, respect, safety and dignity.**



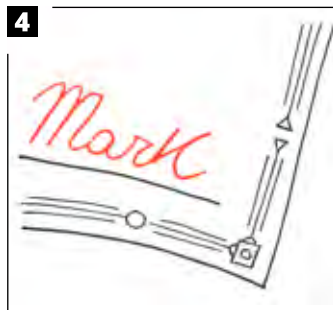
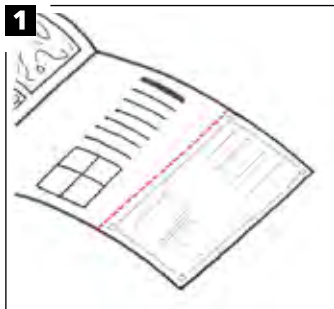
## INSTRUCTIONS

Now that you have completed the Activity Book, we want you to become a Zero Hunger Citizen by doing your part and helping us to achieve our goal by 2030.

If you need some inspiration for things you can do to help create a Zero Hunger World, look at our climate actions, available at:  
[www.fao.org/world-food-day/2016/climate-actions](http://www.fao.org/world-food-day/2016/climate-actions).

Follow the steps below to complete your Zero Hunger Passport:

1. Carefully tear out the passport on the right.
2. Fill in the details on the inner left page.
3. Draw a picture of yourself or glue a photo in the box provided.
4. And finally, read the declaration under your picture, write your name in the blank space and sign on the line at the bottom of the page.



Remember to **fold** your passport down the middle

Name: \_\_\_\_\_ Age: \_\_\_\_\_

Surname: \_\_\_\_\_

School: \_\_\_\_\_

Country: \_\_\_\_\_

As a **Zero Hunger** Citizen, I commit to spreading the word and doing my part to end hunger.

Sign on the line above \_\_\_\_\_



# PASSPORT



Date / /  
#ZeroHunger



to a **Zero Hunger** World

[www.fao.org](http://www.fao.org)

## Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



► Your guide to FAO



► Working for Zero  
Hunger



► Climate is changing

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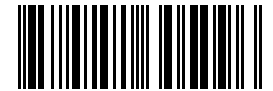
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Activity Book

Junior



# Maria's story

Climate action



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### World Food Day

Every year on 16 October, people from more than 150 countries come together to mark World Food Day (WFD). FAO was founded in 1945 and, since then, nations around the world have joined together with the common goal of raising global awareness and taking action to end hunger and ensure healthy diets for all. But WFD is YOUR day too! Become a food hero and inspire others to take action to help create a more sustainable world where no one is left behind.

### Note to teachers

This Activity Book tells an engaging story that is suitable for children aged 5 and over. Adult help is required with reading and comprehension. The book encourages children to play an active role in building a sustainable world.

This book is part of the FAO Activity Book Series. Though it is aimed at children between the ages of 8 and 12, it can be a valuable teaching aid for younger and older students.

### Acknowledgements

FAO would like to thank author Susanna Mattiangeli and illustrator Lorenzo Terranera for their contributions to this publication.

## Maria's story



This is the story of Maria, who lives in a little village right on the ocean, the big sea.

Maria's village has long beaches surrounded by mountains that form cliffs, some very high. The view is amazing because there are islands too.

This area is home to many fishing families, like Maria's, but also **farming** families, and families that fish and farm.

Many people in the world live this way, selling what they can grow, fish or rear. Of course, they don't sell everything because they keep some to eat at home. I can't tell you how much fish Maria has eaten.

Mainly cod, but other types too. Maria has tasted all kinds of food from the ocean. Where she lives, you can find so much more than just fish – oysters, mussels and other shellfish too. Even seaweed!

**Underlined** words are explained in more detail on pages 22–26.





The most skilled fishers in the whole region come from Maria's family. When her father and mother were young, they would go out to sea together and always come back to the port with lots of cod in the boat. Then they sold it to a company that took it far away and turned it into frozen fish sticks.



But then things changed. **Pollution** spoiled the marine environment and some fisherfolk started to overdo things. They fished too much and used methods that damaged the seabed.

There used to be lots of fish, but there is less now. So, the government decided that fishers had to stop overfishing and review their fishing methods. They thought that if they set rules, sea life would recover. This would mean that the fishers could carry on fishing while still taking care of the environment.





Before Maria was born, other things were happening in the world. Her parents told her that those were strange times. People talked about **global warming**. They said that pollution and other factors were heating up the whole planet and this would change the **climate**. In some parts of the world where it didn't rain a lot, there would be rains and floods, even sudden hurricanes. In other places where there was usually plenty of rain, it would not rain for a long time.

Maria's parents heard that glaciers on mountains like those in southern Patagonia would break off, melting into the ocean and causing its level to rise, just as the water does when you climb into a bathtub. Some believed it, others did not.

Most people did not think that this news would change their lives.





Just before Maria's older brother was born, the effects of global warming began to be felt in the village. The rain fell as it had never done before, vegetable gardens flooded, and strange things happened in the sea. The ocean was changing and so were the animals that lived in it.

This time it wasn't because of overfishing, it was something different: carbon dioxide was making the sea more acidic.

Naturally enough, fish don't like this bad acid, so they migrate somewhere else, where the sea is more pleasant.

### What is carbon dioxide?

It is a gas that is naturally part of the air we breathe, but its levels have increased over the last hundred years due to pollution. When it comes into contact with water, carbon dioxide turns into an acid that is absorbed by the ocean.

When Maria was born, her parents were very happy, but they were worried too. They had three other young children, and they had less work than before. Fewer fish, less money, less food. How could they support their children, feed them, clothe them, buy them books and school supplies? Fishing was all they knew, just like their fathers, mothers, grandfathers and grandmothers before them. All their ancestors had done that job forever and passed it on to their children. At least they were not alone at that difficult time.



Many villagers and people from neighbouring areas – farmers, fishers, traders – had the same problem, because the effects of climate change have an impact on water, land, air and life as a whole.

In small towns, people are used to giving each other a helping hand when needed. Everyone soon realized that it was time to help each other even more than before, so they started making plans to find solutions together.



First, they talked among themselves: some talked about one problem, some talked about another; some made suggestions, some just complained. In the end, they made a list of problems and possible solutions.

Then they all got together to write a letter to their government representatives. These are the people who make decisions, pass laws and hopefully solve people's problems.

In the meantime, they carried on working but never stopped trying to find solutions. They read a lot and shared what they found out. They learned that there are people throughout the world who study the problems of those who farm the land, those who raise livestock and those who fish.

They found out that organizations like FAO were exploring solutions to help people like them.





After some time, Maria's parents and her friends' parents received an offer to take part in some government and FAO projects. They would attend courses to learn how to work in a new way. So, while Maria and her brothers and sisters were growing up and going to school, their mother and father were learning new things too.

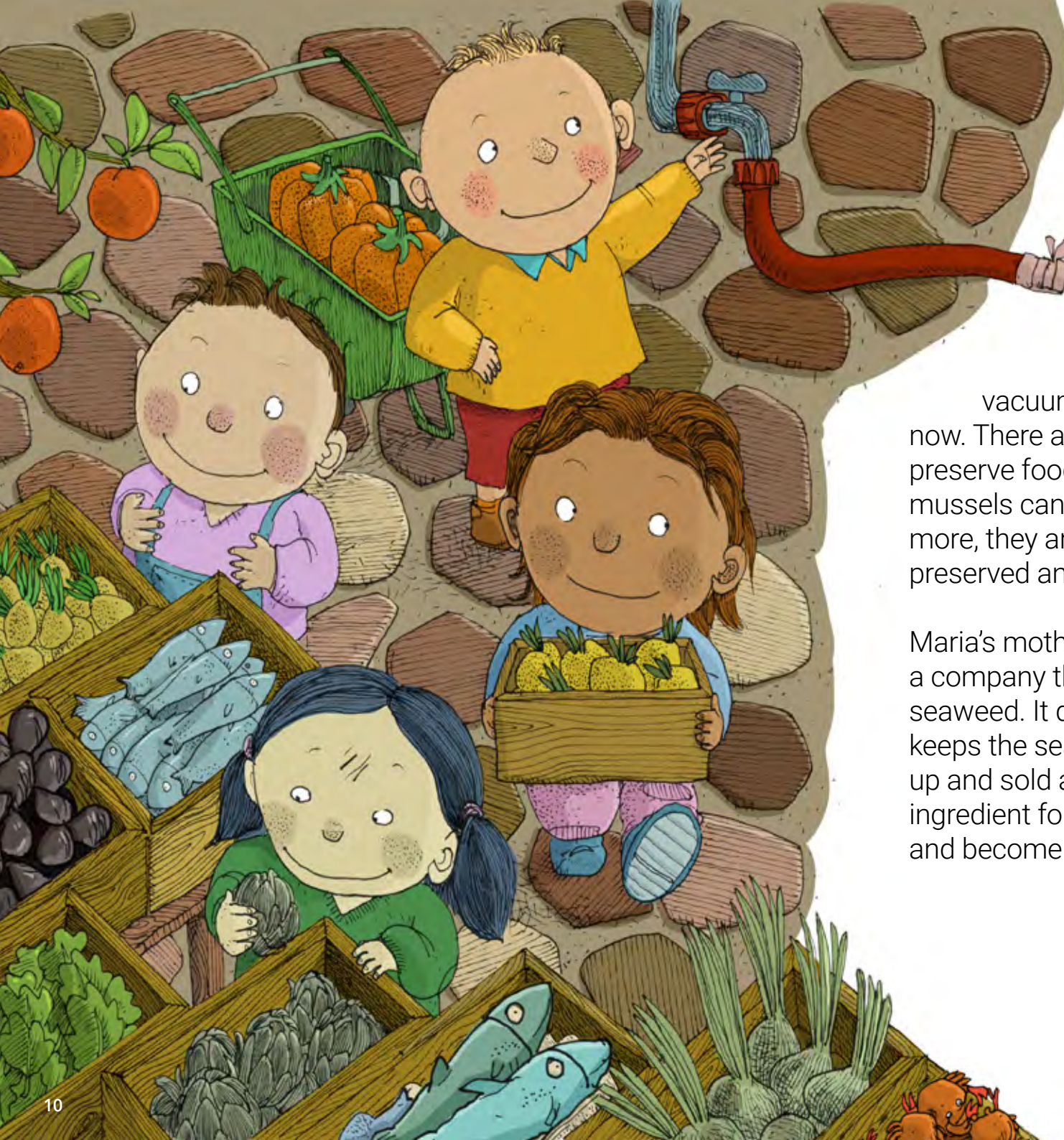
They learned when and how fish migrate, and where they go; they studied systems for regularly checking

how clean the sea is; they found out how to use fish waste to fertilize the land without polluting it.

The main thing they learned was that they could no longer just fish and sell. Instead, they had to start thinking of new ways to live a good life while protecting the environment and all its inhabitants: humans, animals and plants. By listening to and watching their parents, Maria and her friends also got used to respecting the land and the sea.







If the climate changes and the environment is more fragile, you have to do things differently, work differently. For example, even if there are fewer cod, you can make good money by selling smoked or vacuum-packed fish, as Maria's father does now. There are many simple and healthy ways to preserve food – even shellfish such as oysters or mussels can be seasoned and put into jars. What's more, they are delicious. Even seaweed can be preserved and made into face or body lotions.

Maria's mother and a group of her friends started a company that breeds oysters, mussels and seaweed. It doesn't take up too much space and keeps the sea clean. They can also be ground up and sold as building material or used as an ingredient for chicken feed. All waste can be reused and become a source of income.



Maria is a curious child. She asks a lot of questions and never stops learning. She sees her mother's passion for her work and helps her every now and then. She wants to carry on studying and perhaps help find new ways to protect the beaches and countryside where she grew up. In the meantime, she and her friends play and watch the grownups. They know that climate change can't be stopped. This is easier to notice in certain places in the world because the signs are everywhere. Maria lives in one such place.

This community of people has now started to produce different types of food, to **nourish** themselves with a greater variety of foods than before and to reuse waste. Many problems have been solved and everyone is better off. Will they carry on like this? Will they come across other challenges? We do not know. One thing is for sure – and Maria is very clear about this now – respecting the environment and fighting waste helps us and our planet.





Maria's story tells us what happened in a small town by the seaside because of pollution and climate change.

Had you ever heard of climate change?

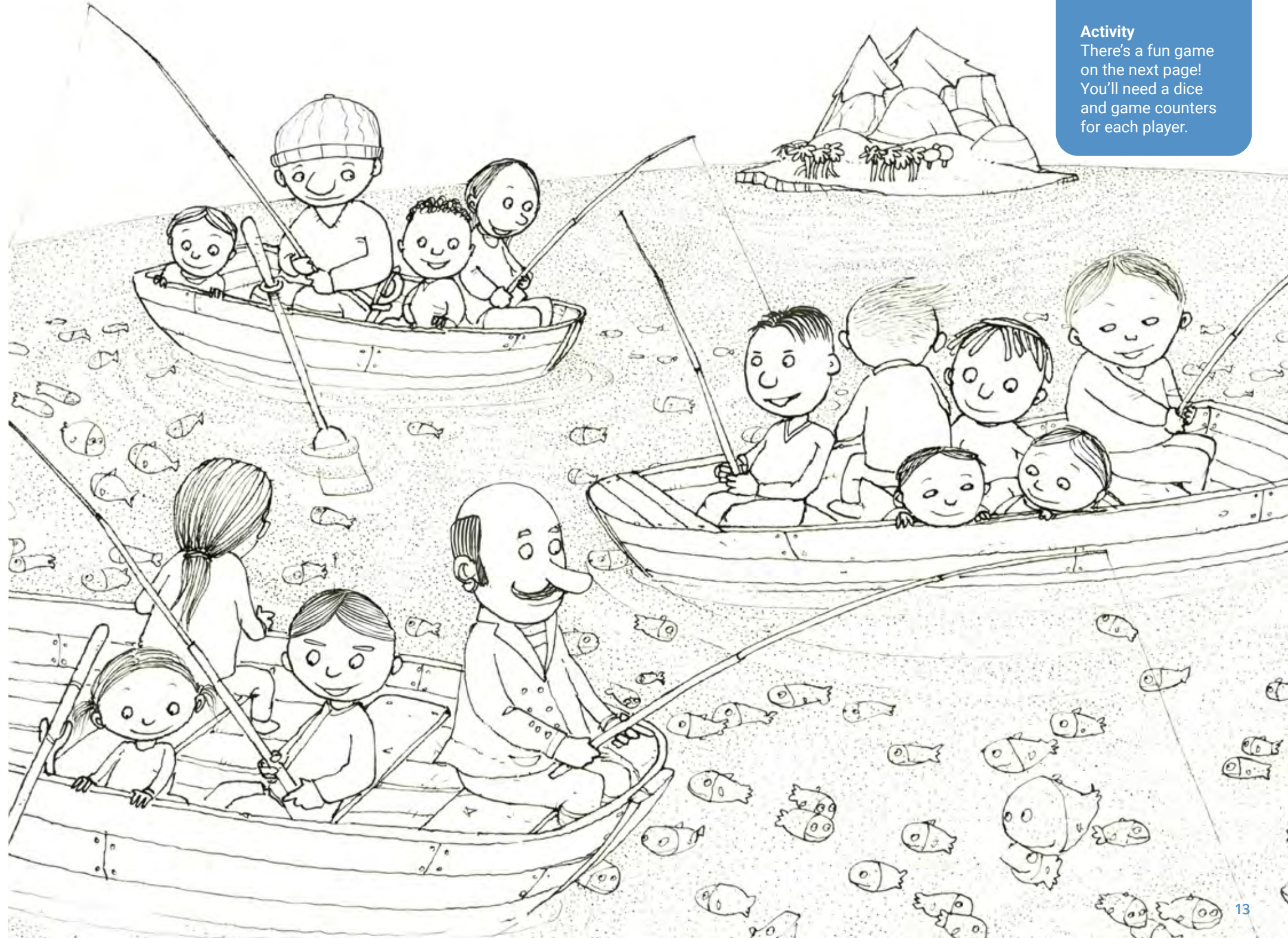
Have you ever seen signs of these changes where you live?

**Activity**  
Colour in the pictures any way you like.





**Activity**  
There's a fun game on the next page!  
You'll need a dice and game counters for each player.





You bought lots of junk food and refused to try new fresh or minimally processed foods. Go back three spaces.

You chose products that use resources responsibly.

You added plants to your home or balcony. Move forward three spaces.

You reduced water by taking a short shower and collected rain water for your plants. Take the shortcut to 28.

You didn't care for your plants and littered public green spaces. Skip a turn.

You joined cleaning initiatives in your local community to improve your city parks. Move forward two spaces.

You added climate-friendly foods (beans, peas, nuts, and lentils) to your diet. Roll again.

You shopped for local foods that travel short distances from farm to table. Move forward two spaces.





Products from companies that are responsible. Roll again.

You disposed of detergents and batteries properly, avoiding harm to our precious soils. Jump to 19!

You threw away good leftovers instead of using them for lunch the next day. Go back two spaces.

You didn't buy that apple just because of its imperfect look. Go back two spaces.

You planned a shopping list to limit waste and composted food scraps. Move forward four spaces.

You cut down on excessive plastic food packaging and shopped with a reusable bag. Roll again.







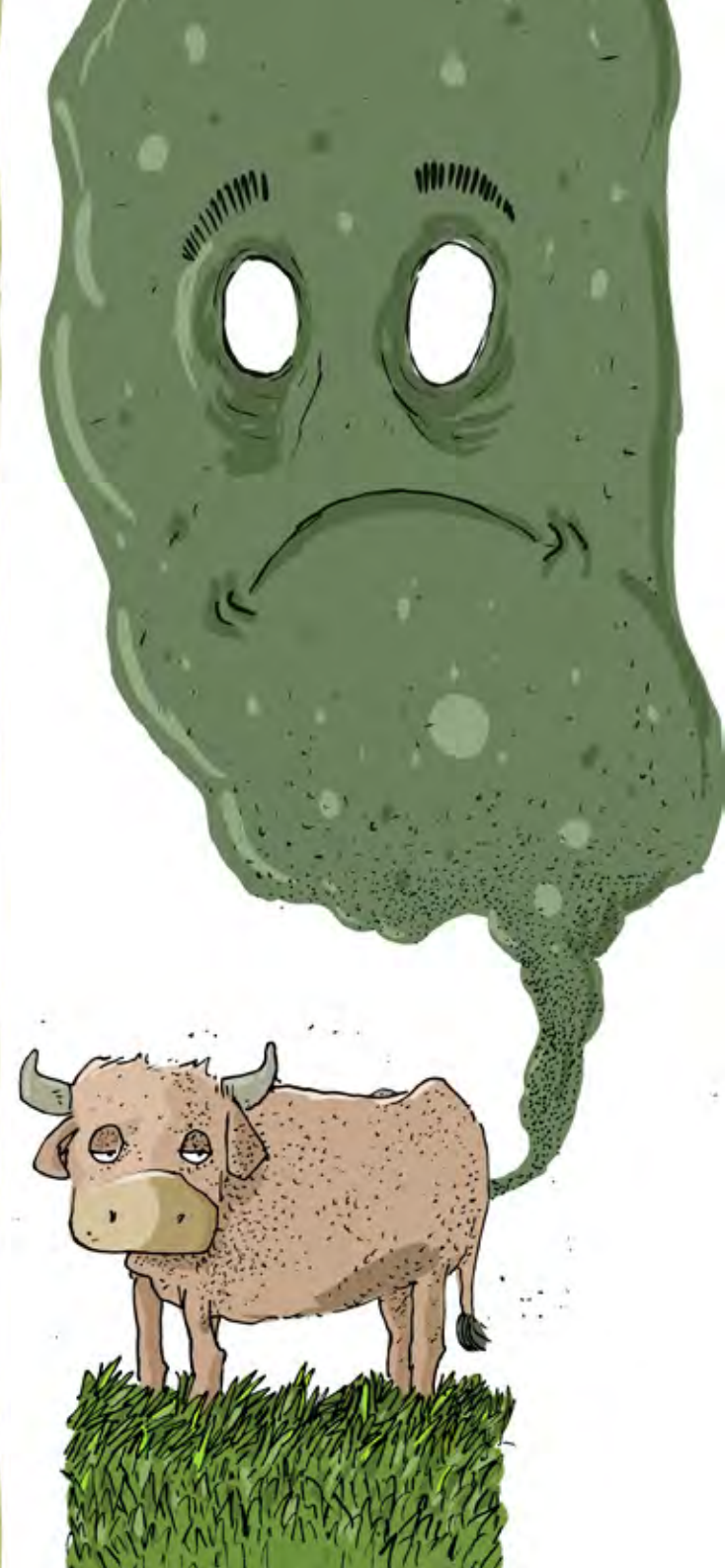
The way food is produced in the world is linked to global warming and changes in our climate. It's all part of a big chain.

For example, animals must be reared in a **sustainable** way. Did you know that a cow that eats the wrong food can release bad, polluting gases into the air?

Farming the land using too many insecticides to kill harmful bugs and without due consideration for **biodiversity** is harmful to the environment too.

And the problems don't end with production. Think of the long journey by truck to get food to the shops and supermarkets. This is not good for the air we breathe either. Think about how much food is wasted and the waste that's produced.

Imagine how much less polluted our planet would be if we produced what we eat in a better way.



# What does FAO do?

Villages like Maria's, like all places where smallholdings or family farms are found, suffer most from the effects of climate change. This is why FAO helps prepare the people living in those areas for difficult times.

For example, it provides information on how to predict disasters, **floods** or **droughts**, and materials to work better, without waste, in a sustainable way. It helps communities become stronger, store food and respect their resources.



## What is FAO?

FAO is the Food and Agriculture Organization of the United Nations. It is an organization made up of many people working to ensure that no one in the world suffers from hunger or malnutrition.

One of FAO's main goals is to help improve **agrifood systems** for producing, harvesting and obtaining food to protect the environment and fight global warming.





UN stands for United Nations, which is a collection of people from all over the world who work to make sure countries cooperate for the good of the planet.

---

The UN has 17 goals to be achieved by 2030, called the Sustainable Development Goals.

---

FAO is committed to many of these goals, because food, as we have seen, is linked to the future of the planet. One of the key goals is Zero Hunger, which means ending hunger and malnutrition; achieving fair and responsible consumption and production; respecting life below water and on land – and, of course, combating climate change and its effects.

You will find more information on the Sustainable Development Goals at

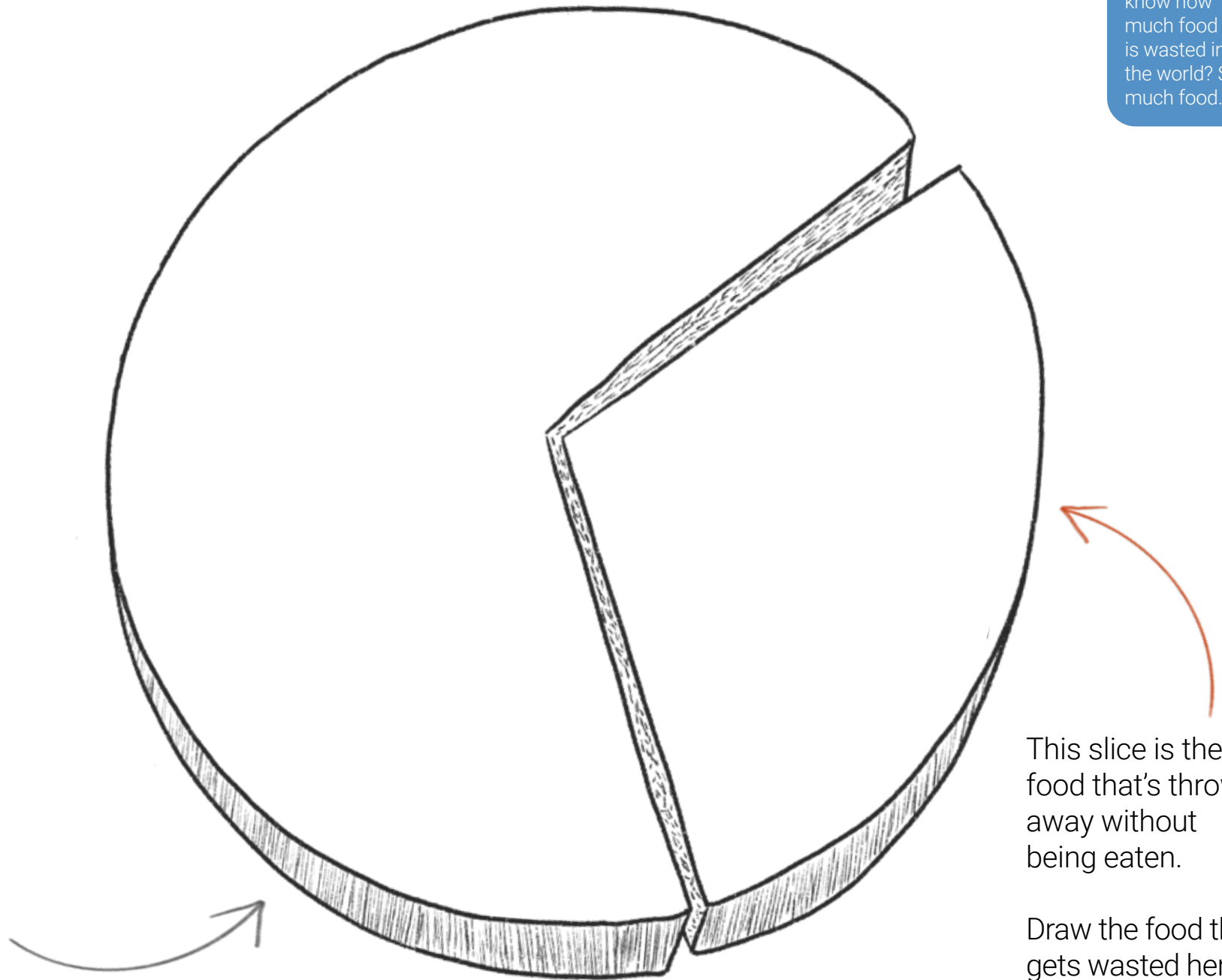
[www.worldslargestlesson.globalgoals.org](http://www.worldslargestlesson.globalgoals.org)





# Food waste.

Imagine that this circle represents all the food that's produced in the world.



**Activity**  
Do you know how much food is wasted in the world? So much food.

Fill in the circle by drawing the food that gets eaten here...

This slice is the food that's thrown away without being eaten.

Draw the food that gets wasted here.

# Do you know how to recycle?

**Activity**  
Link each type of waste to its container.



**Plastic**



**Organic**



**Paper**



**Glass**





## Do you know these words?

Draw what comes to mind under each definition.

### Farming.

This is the practice of cultivating land, rearing animals to produce meat and milk, fishing or rearing fish, seaweed or shellfish.

### Nourish.

This is the act of eating to carry on living. Your health depends on your diet, for example, the food you usually eat.

#### Activity

Draw what comes to mind under each definition.

**Climate.**

This is the set of conditions in our atmosphere: hot or cold; raining, snowing or hailing; windy or calm – and whether the air is humid.

**Flooding.**

When a place is submerged because a river or other watercourse overflows, it's said to be flooded. It spells disaster for humans and animals.



**Pollution.**

When certain liquids or gases change an environment and upset its balance, it's said to be polluted. The sea, air and land can also be polluted by natural causes such as a volcano erupting or fire. Over the last hundred years, environmental pollution has been mainly caused by humans.

**Agrifood system.**

We can imagine a large chain of people at work. Agriculture produces food, but also many other goods (textiles, furniture, paper) that enter our homes, continuing into the environment, in a continuous cycle.

**Drought.**

This word is used to describe a long period without rain or with very little rain. In a drought-stricken area, the air is dry, and it is difficult to get water to drink and to water the fields. When a drought lasts for months or even years in a given place, nothing can survive there.

**Sustainable.**

Everything that's produced without harming the planet is sustainable. For example, if we produce food sustainably, the world's future inhabitants will thank us.



**Global warming.**

Pollution has thickened certain gases such as carbon dioxide and methane in the atmosphere. Scientists all over the world have realised that over the last fifty years, our planet has become warmer and warmer because of these gases.

**Biodiversity.**

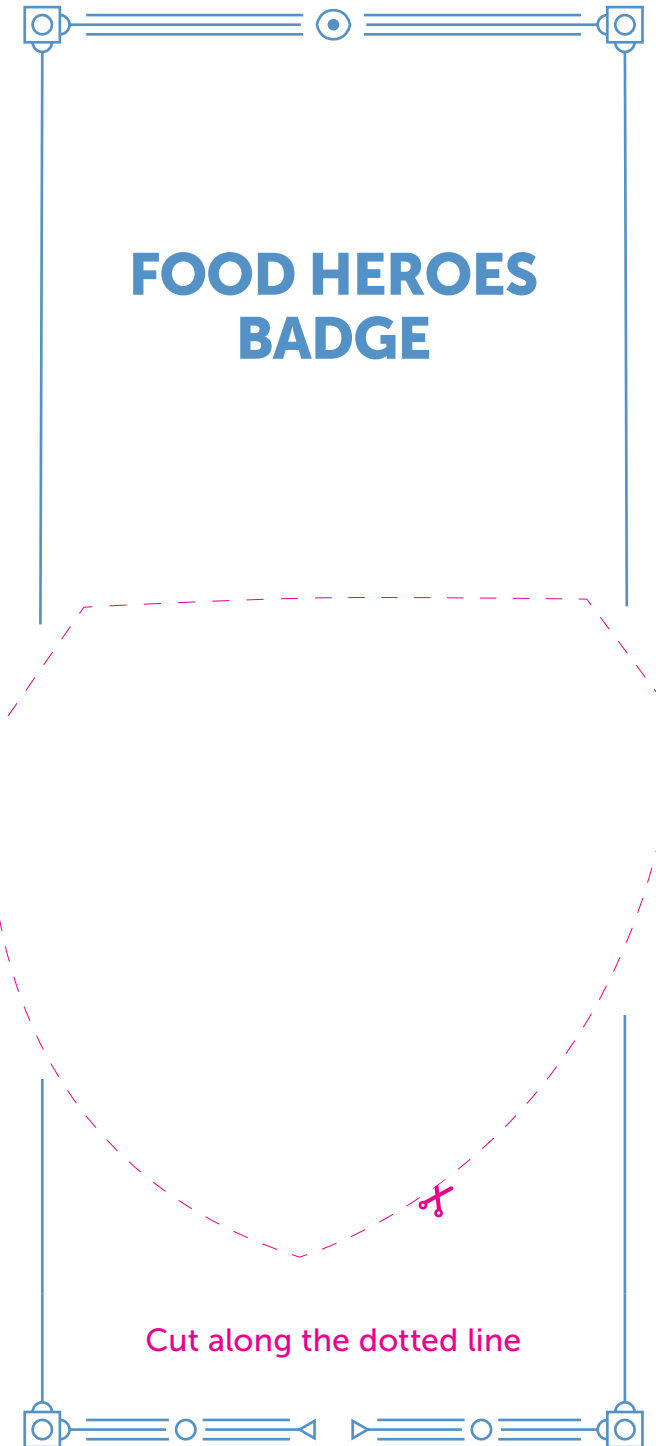
It is the variety of life on earth. There are millions of species of animals, plants, fungi and tiny organisms on our planet. Each of these species contributes to life. Diversity is an asset that must be protected and sustainably managed.



**Are you ready to  
become a Food Hero too?**

Cut out the badge on this page,  
decorate the back and show everyone  
that you're a food hero now!

CUT ALONG THE LINE



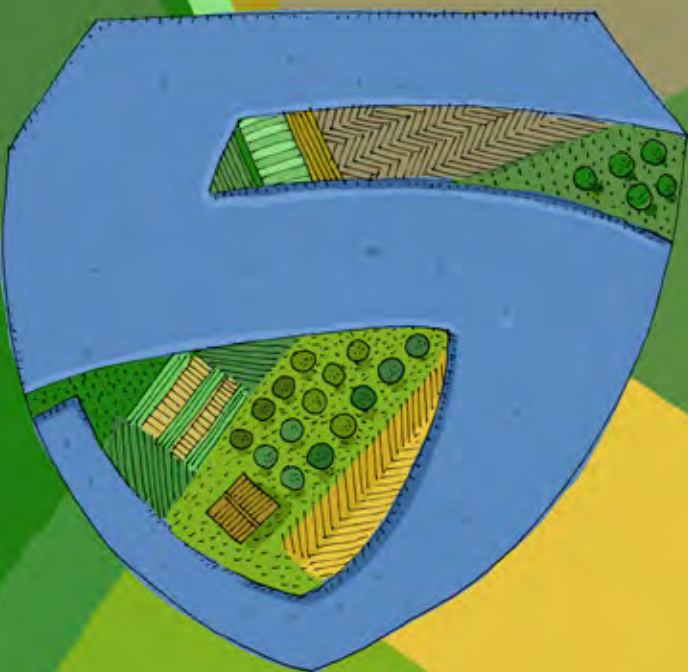
Cut along the dotted line





Food and Agriculture  
Organization of the  
United Nations

# FOOD HEROES BADGE



# Activity Books Series

Download the FAO Activity Book Series for activities or lesson tips on important global issues at the heart of the Organization's work: [www.fao.org/documents/card/en/c/cc0239en](http://www.fao.org/documents/card/en/c/cc0239en)



▶ Leave no one behind



▶ Our actions are our future



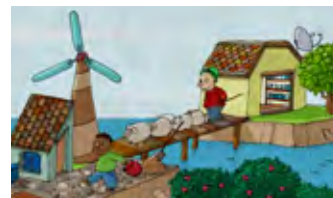
▶ Food Heroes



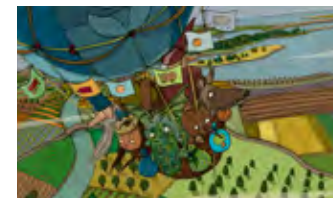
▶ Healthy Plants,  
Healthy Planet



▶ Eating Healthy Matters



▶ Change the future  
of migration



▶ Climate is changing



▶ Working for Zero Hunger



▶ Your Guide to FAO

## Contact us:

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**Food and Agriculture Organization  
of the United Nations**

Rome, Italy

## Want to know more about FAO?

Would you like to find out how FAO works to end hunger, about its history and where world leaders meet?

Check out our Group Visits website for information on our virtual and in-person tours! [www.fao.org/about/visit-us](http://www.fao.org/about/visit-us)

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Food and Agriculture  
Organization of the  
United Nations



working for Zero Hunger

# ACTIVITY BOOK

# Your Guide to FAO





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# Welcome to FAO's World!



## ▶ FAO

- 197 members – 194 nations, 2 special members and the European Union
- Present in 130 countries around the world
- 5 regional offices
- Headquarters in Rome, Italy

## Introduction

This book will take you on a journey through FAO's history. Since its foundation in 1945, the Food and Agriculture Organization of the United Nations has always striven to make the world a fairer place for all, and a large part of this means fighting to eliminate hunger. Zero Hunger is the ultimate goal, to be achieved by the year 2030 – find out how and be part of the change!



# A Story with deep roots

## The seed of an idea

*Find out the meaning of all words marked with a \* in the glossary on page 19.*

FAO (Food and Agriculture Organization of the United Nations) was **founded in 1945**, thanks to the willingness of 44 nations that signed their commitment to the fight against hunger. This took place as the whole world was recovering from devastation and food shortages following the Second World War.

In 1904, someone had already had the idea of bringing the world's leaders together to share problems and knowledge on the topic of food and agriculture. **David Lubin**, a Polish immigrant in America, had presented a proposal for an International Institute of Agriculture (IIA) to King Victor Emmanuel III in Italy. He neither wore a hat nor gloves, as the customs of the time dictated. Yet, the king received him anyway, and was enthusiastic about his small but great idea.

## A tree that grows

Lubin's IIA continued its programme through both highs and lows. The First World War had left various tensions between nations, who were unwilling to collaborate. Getting along appeared to be impossible. The outbreak of the Second World War, a few years later, certainly did not improve the situation. **Frank McDougall** continued in Lubin's footsteps. A brilliant economist and nutritionist—he believed in the importance of agriculture to combat malnutrition\* and to create a more just economic model.

McDougall explained his idea to the president of the United States, **Roosevelt**: how could one not start from the single fundamental element of human existence, food, to solve conflict and inequality? What was needed



was a global organization to represent countries around the world and **unite them in the fight against hunger**. Roosevelt understood that McDougall was right. The first United Nations conference on Nutrition and Agriculture was held in Hot Springs, America in 1943. The issue of surpluses was discussed: how to reconcile the fact that some countries in the world had an excess of food while in others people were dying of hunger? Many aspects of this problem still remain unresolved today. On **16 October 1945**, Lubin's IIA was closed and FAO was born, which became the first specialised organization of the United Nations, when the UN formed 8 days later. Its foundation was signed by 44 governments. Yet, today it has 194 member nations, 2 special members, and a member organization, the European Union, that have and continue to share every sacrifice and victory they have experienced.

#### What are the United Nations?

The UN logo unites 193 world states (out of 196) in the effort to promote peace and cooperation between countries, and to defend human rights. Looking at the news is enough to understand that the UN is always very busy... FAO is one of the UN's specialized agencies leading efforts to achieve Zero Hunger.

#### World Food Day

Every year, on 16 October, FAO celebrates its birthday, World Food Day. This international day dedicated to food is a time to call governments, businesses, farmers and individuals to action. With events organised in over 130 countries around the world, World Food Day is one of the most celebrated days in the UN calendar.



#### FOOD FOR THOUGHT

Imagine being a new David Lubin or Frank McDougall. In your opinion, what problem needs to be solved to make the world a better place for all girls and boys? What type of International Organization would you propose to solve it?

---

What was needed  
was a global  
organization  
to represent  
countries around  
the world and  
unite them  
in the fight  
against hunger.

---





# Working for Zero Hunger



**Ending malnutrition:** in the future people should not be obese or underweight, but rather healthy and well-nourished.



**Ensuring the economic security\*** of the most populated parts of the planet, which are also the most dependent on agriculture, fishing and natural resources.



**Reducing poverty in rural\* areas.** This is not an easy task. However, through more modern and productive agriculture, the creation of new work opportunities and forms of social protection\* that protect farmers in times of crisis, we can change things for the better. But considering that hunger is on the rise, we need to make a bigger effort to get back on track!



**Protecting family farms,** which account for 90% of farms around the world, to make sure they are not swept away by mass, industrial farming on a global scale. Keeping small farms up-to-date with the latest information and giving them access to tools and technology is the best way to increase production in a sustainable way and help rural communities to thrive.

## Fighting hunger in five steps

Despite being capable of feeding each and every one of its inhabitants, over 800 million – 1 in every 9 people on our planet – wake up every day knowing that they will not have anything, or almost anything to eat. In wealthy countries too, many kids go to school on an empty stomach, or only eat junk food, which is low-cost but lacking in nutritional substances. However, even more people are overweight. In some parts of the world more people die from obesity than homicide. This means that **malnutrition is a global problem.**

FAO has developed five objectives to reduce the number of undernourished people from **over 800 million to ZERO** and improve nutrition.



**Facing challenges as we work towards Zero Hunger** including natural disasters such as earthquakes, floods, drought and man-made disasters like war and violent riots. Preparing populations to face shocks, and when they can't be avoided, helping them to recover faster.

## SEVEN FACTS ABOUT HUNGER



Is eradicating hunger really possible? Of course! It has been calculated that around 160 dollars a year for every poor person would be enough to end hunger by 2030. The cost of the impacts of malnutrition to governments is already a lot of money (as high as USD 3.5 trillion per year) so it makes sense to invest in a solution.



Hunger is not "appetite"! It is a total lack of energy to get through the day: a hungry person is like a car without fuel.



Food insecurity' is what happens when there is no food, not enough money to buy it, or, when there is enough, but it is of bad quality. Though we produce enough food to feed everyone, it doesn't get to those who need it because of poverty, conflict, natural disasters linked to climate change, and even food loss and waste\*.



Malnutrition is not only a lack of food: an obese child and a child that does not eat enough are both malnourished. Too much and too little are two sides of the same coin.



One third of all food produced is either lost during its journey from the farm to our plates, or wasted.



The reason for almost half of childhood deaths in the world today is malnutrition. Children who are stunted due to malnutrition are smaller in size, sick more often and can't learn as well at school.



'Hidden Hunger' affects over two billion people. What defines it? The absence of one or more nutrients\*, which are essential for growth and health. You may eat, but you may not be eating everything you need.





## A perfect plan

Getting countries with different cultures to agree on an issue such as food may really seem like mission impossible.

**How can we put FAO's five steps into practice?** FAO's answer can be summed up in three key words: knowledge, sharing, action. FAO's staff is composed of agronomists, specialists in forestry, fishery and animal resources, nutritionists, sociologists, anthropologists, scientists, and information management, legal, communication and statistical experts.

FAO's  
answer can be  
summed up in  
three key words:

**knowledge  
sharing  
action.**

All of these people, men and women, contribute to collecting an enormous quantity of data and information on food, agriculture and natural resources, climate change and more, sharing them as much as possible.

**FAOSTAT** is the biggest database in the world that collects data on food and agriculture from 200 countries. This data is used to create statistics on climate, the environment, poverty, health and many other topics. It is a precious goldmine that is growing every day.



**Knowledge sharing** is indeed a crucial element for FAO strategies. The flame of knowledge, in fact, does not die down with the participation of many, rather, it grows and grows casting an enormous light on the world. It is for this reason that FAO puts those holding 'the flame' in touch with those who need to light their candles: farmers, but also governments, companies and institutions that somehow influence the production of food in the present and future, including children and young people – the adults of tomorrow.

**Fall Armyworm (FAW)** is a ruthless pest which feeds on more than 80 different crop species, and when it arrived in Africa from the Americas, farmers panicked. It was new to their continent and they didn't know what to do to save their crops! They were tempted to overuse chemical pesticides that can be hazardous to human health, but FAO stepped in immediately, provided the technical and practical advice they needed, developed a special App for farmers and helped South America and Africa to exchange important information. **Knowledge can save crops and lives!**

---

But knowledge  
and study are  
not enough:

we must take  
**action!**



The support that FAO offers member states to develop action plans is necessary to transform data and information into concrete change.

Not only do **FAO school feeding programmes** improve nutrition, they also show students how to grow fruit and vegetables in inexpensive ways, and encourage them to try out their newfound skills at home. The greater community also benefits from the programmes as other food ingredients are sourced from local farmers. In this way, the children eat healthily, and the local economy grows.

Working with FAO and local organizations empowers young people to imagine and start building their own future! Taking action means making the most of personal and environmental resources but in a sustainable way, with **people as the change-makers** and governments and local authorities encouraged to recognize their respective responsibilities.



The term, 'farmer' actually refers to a wide range of people tied to food production: crop farmers, fishermen, shepherds, forest smallholders\* and nomads.

### Fun Fact!

Are you mad about drones? Did you know that FAO experts use these incredible technological gadgets for some of their special missions? Although they were originally made for war, they actually make excellent and friendly aerial scouts.

They are used to monitor forests and coasts, check that crops aren't being attacked by pests, assess where farmlands are most at risk from natural disasters, and quickly check damages after they strike. Science and technology for the common good!



## Mediating to win

Governments and political leaders, representatives from private companies, farmers and common citizens need a **mediator\* to aid communication and understanding** between the various parties. Different interests, diverging cultures and politics can compromise dialogue in the absence of a neutral organization such as FAO. FAO brings together the people or bodies that can share their resources or information with those who need them, defending the rights of the most vulnerable people in society by encouraging governments and institutions to introduce fairer policies.

Take FAW, for example, and how FAO is helping Africa to communicate with the right people in Latin America, so they can learn how to manage this new pest. FAO has a delicate role to play because the projects which can guarantee a future without hunger depend on helping all stakeholders involved to reach agreement.

# #ZeroHunger

Zero Hunger means bringing the number of people who suffer from hunger and malnutrition to ZERO. **Zero Hunger is the name of FAO's most important operation.** It springs from the Fome Zero project (zero hunger in Portuguese) launched by the Brazilian government in 2003, which saved 36 million Brazilians from poverty, food insecurity\* and malnutrition.

It has also been internationally recognised as one of the UN's 17 **Sustainable Development Goals (SDGs)** to be reached by 2030. Zero Hunger is key to achieving the other 16 objectives, since you can't have education and good health for all without first tackling hunger.

---

Without food  
and dignified  
living conditions  
we are like kites  
without wind:

**unable to fly.**

---





## SDGs

The **17 SDGs are what the world needs** to become a happy and safe place for everyone: the Sustainable Development Goals of the United Nations. Zero Hunger is therefore in pretty good company, standing next to innovation, peace, justice, clean energy and health, just to mention a few. UN member states officially pledged to do as much as possible to ensure that all 17 are reached by 2030. An impossible challenge? Not at all, but it depends on each and every one of us.

BE PART  
OF THE  
**CHANGE!**

To learn more, check out the incredible website for young people devoted to the SDGs.  
[worldslargestlesson.globalgoals.org](http://worldslargestlesson.globalgoals.org)

### FOOD FOR THOUGHT

What age will you be in 2030? How can you help to reach the Zero Hunger goal? Try to make a list of your proposals and share the best ones. Your ideas and actions are important! Get some tips from the FAO Activity Book "Working for Zero Hunger".



1963

1

**A code that is no secret**

Year 1963, name Codex Alimentarius – or food code. If a type of food endangers health because, for example, it contains too many poisonous pesticides for humans, and it does not pass the standard of the Codex, it cannot be sold. FAO only approves quality food for everyone, in every household, in every corner of the world.



1970

2

**The Green Revolution**

Norman Borlaug, Nobel Peace Prize winner in 1970, crossed a species of Mexican grain with two Japanese varieties. He obtained a species resistant to diseases, and another to bad weather. Thanks to these super grains and to new experimented techniques, millions of people in Asia were able to escape chronic hunger and cultivate what they needed to survive.



1974

3

**A tough life for Onchocerciasis**

The black fly breeds along rivers and like mosquitos, it feeds on blood. Besides irritating people and animals, bite by bite, it also transmits the terrible onchocerciasis – or 'river blindness. However, in 1974, FAO sponsored a programme with other institutions, which eliminated this disease from 11 West African countries over time, saving millions of people from blindness. The challenge continues in other parts of the world!



2010

7

**Prices under control**

It ensures that the prices of the world's most consumed foods – wheat, rice, soya and corn – do not rise suddenly causing economic crises and widespread hunger affecting millions of people. It is called the Agricultural Market Information System (AMIS) and it draws on a broad range of data, such as energy prices or the moves of the most powerful companies, to prevent a crisis. Once again, the knowledge and sharing of collected data is crucial.



2011

8

**Goodbye, rinderpest!**

For centuries this disease killed livestock, bringing farmers and shepherds to their knees and causing famine. But in 2011, rinderpest was declared eradicated from the face of the earth! This is the second virus to have been eliminated by man after smallpox in 1980.



2012

9

**The right to land**

The Guidelines for land and natural resources tenure remind FAO member states that land first and foremost belongs to indigenous populations, or those living on it, and that big corporations acquiring large quantities of land should take their rights into consideration, in addition to the natural ecosystem or environment.



It is not a song chart or must see movie list, but the list of incredible goals reached thanks to FAO's field work, shoulder to shoulder with nations, farms and farmers. Years of hope and hard-work have finally paid off!

1995

#### 4 Fish: A+ in Conduct!

In order to preserve the aquatic world, fishing has to be reduced, but then how can the well-being of fishermen be guaranteed? The FAO Code of Conduct explains how to gain the maximum benefits and profits from sustainable fishing by creating new work opportunities and minimizing waste. For those of you who think there are plenty of fish in the sea, there aren't, so act responsibly!



2001

#### 5 A refuge for endangered seeds

Seeds from which fruit, vegetables and grains develop are important for preserving biodiversity\* on earth. Researchers need them to create new species that are resistant to climate change and can produce more abundant harvests. But, who do they belong to? To the country in which they grow, or, to the ones investing money and resources in their harvesting, cataloguing and use? Seeds are a world heritage, and FAO developed the Treaty on Plant Genetic Resources in 2001 to regulate how governments, local farmers and international companies use seeds on a global scale. Special seed banks, in which seeds are catalogued, conserved and protected for future research and experiments, have also been created.



2009

#### 6 A fantastic committee

In 2009, the Committee on World Food Security became bigger and more efficient. It involves the three primary organizations that focus on nutrition (FAO, IFAD and WFP), government experts to discuss strategies, and programmes to guarantee global food security, namely: quality food for everyone.



2013

#### 10 From reducing hunger to ZERO Hunger

In 2013, FAO elevated its main goal from reducing hunger to completely eliminating it. Latin America and the Caribbean was the first region in the world to commit to ending hunger by 2025. The countries also promised to protect family farmers and develop rural areas to guarantee food security. Shortly after, Africa followed in its footsteps. From 1990 to today, the number of people suffering from hunger in South America has halved! The Zero Hunger concept is based on the belief that hunger is a human creation and does not follow any natural law – which means it can be defeated!



#### FOOD FOR THOUGHT



Write your top ten special goals to improve the neighbourhood or city you live in. Which one is your number one and why?





# On the road with FAO

Being a part of FAO means considering the world as one's home. **Six official languages** are spoken at FAO: Arabic, English, Chinese, French, Russian and Spanish.

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There are over 130 regional and national **FAO** offices spread around the globe.

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Although the headquarters are located in Rome, Italy, there are over 130 regional and national FAO offices spread around the globe. Roughly **eleven thousand people work for FAO**, and they come from all over the world: diversity is considered an added value.

Projects developed involve people from different countries, and frequently youth. In developing countries they are very important in the fight against poverty and unemployment among younger generations in several villages, offering a better future to those who usually cannot even picture one.



# Moswen

Moswen, **16 years old**, is from the Manica region of **Mozambique**, where the merciless AIDS epidemic kills hundreds of thousands of people every year. Like many other children he is an orphan, and would have risked malnutrition, poverty and abuse if he hadn't joined a local FAO Junior Farmer Field and Life School (JFFLS).

In a JFFLS orphaned children are taught how to live off the land, respect each other as men and women, and prevent the spread of diseases, HIV in particular. They can feed themselves and get an education, but also have fun! To keep tradition alive, what better way than singing and dancing to beautiful music that lifts the spirit and helps concentration? Then, once a week, boys and girls are encouraged to take part in a theatre session, to embrace gender equality for a safer and healthier life.

Moswen has been enjoying his training so much that he now works as a facilitator to new students. Manica orphans can find a new family at the JFFLS, and they become important members of their community as mentors to other local farmers, advising them on the latest techniques. Moswen and his friends get the skills and confidence they need to achieve a better life!





# Yuwadee

Yuwadee is also **16 years old** but she lives in **Thailand**; she goes to Wana Luang School, where only 60% of the food necessary to feed all the students is government-funded. That's why the principal and teachers asked FAO for help.

FAO doesn't buy the food, though: instead, it offers life-long skills to gain food independence and security. So Yuwadee and her schoolmates were taught how to save water for the dry season, grow vegetables, and keep a chicken farm that provides protein-rich food and natural fertilizer (commonly known as... chicken poo).

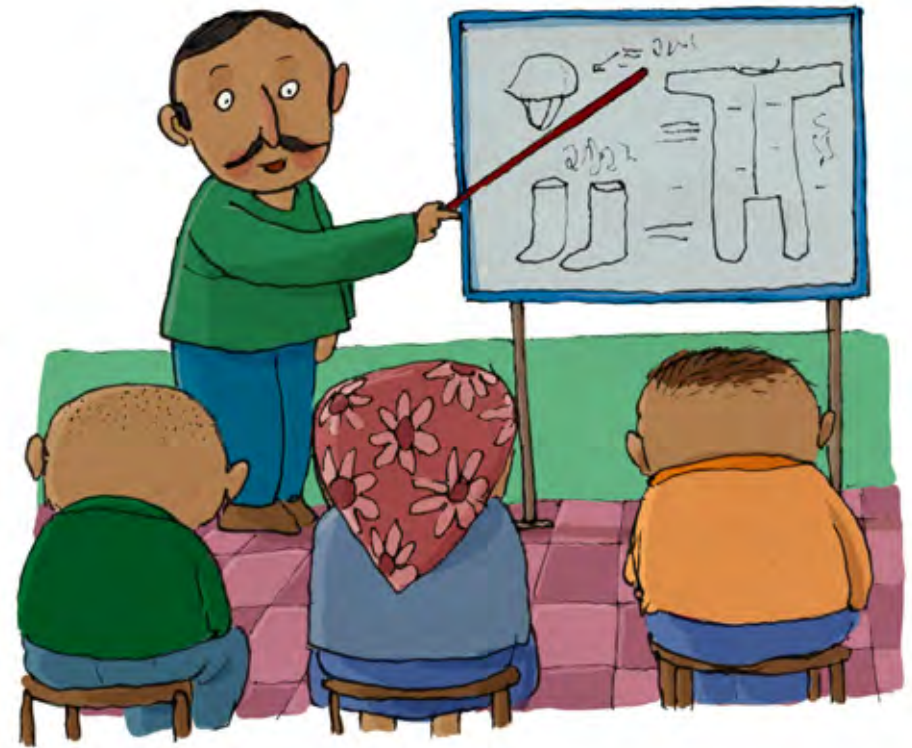
Their school garden now provides food for everyone in the school as well as a surplus to be sold locally. But what Yuwadee enjoys most is cooking vegetables and rice in giant frying pans! In fact, all the meals at Wana Luang are cooked by students, which is amazing fun, even though the results may vary...



# Fouad Wansa

In the meantime, in **Lebanon**, Fouad Wansa is fighting child labour and the hazards it brings to young people. All over the world, almost 108 million boys and girls work in agriculture to help their families and communities. This does not only mean that children can't go to school and develop other skills, but also that they are exposed to various dangers, chemicals in particular. An Extension Officer and Head of an Agricultural Centre in his country, Fouad works with FAO to protect young people by raising awareness among farmers about

the risks of pesticides. Children working in the fields are often exposed to these toxic chemicals with no protection gear! When Fouad talks about this, parents are always shocked to have unknowingly exposed their own children and themselves to harm, and thank him and FAO for sharing this important information. Fouad uses the visual guide "Protect Children from Pesticides!" in the classrooms he visits, and he's happy to see that now more and more farmers are willing to reduce child involvement in agricultural practices. He knows the journey towards a world free of child labour is still in the early stages but that it will make a difference, one day at a time, one child after another.



# The young people of Chocó

Whenever the Baudó river swells, in Chocó, **Colombia**, the three small villages along its banks are flooded. People then have to move around in canoes, and while this may sound like great fun, the truth is that the crops are also flooded which is no fun for anyone. Communities run out of food, children go hungry. Then one day FAO organized a series of workshops on storytelling and photography to teach young people aged between 10 and 15

about the practical measures necessary to manage and reduce the threats to agriculture caused by climate events in their region. Children had a lot of fun learning about photography, and they also found out how to protect crops from flooding, contributing to the safety and wellbeing of their people. The workshops combined technology, education and storytelling and connected children from rural areas, allowing them to tell their communities' stories from their own perspective. Stories which tell us about the tremendous effects of climate change, but also that the future may be brighter than we imagine if we are prepared to change too.

These are just a few of the many projects FAO is developing to build the next generation of scientists, food entrepreneurs, agronomists, farmers and nutritionists.





Make cities greener.



Eat healthy food.



Spread the word.



Don't waste food.

# Growing with FAO

FAO is not only 'for grown ups'. What age will you be in 2030? What type of world would you like to live in?

**How can you contribute** to building it? Take some inspiration from the pictures on the left and read our Activity Book, Working for Zero Hunger, to find out what you can do! These are fundamental questions to ask yourself as the adults of tomorrow. As the African proverb says: if you think you are too small to make a difference, you haven't spent a night with a mosquito.

## Towards Zero Hunger!

If this short tour of the gigantic FAO universe has inspired you, all you have to do is join all those who are actively working to reach the Zero Hunger goal. Every small gesture, each and every person that you involve, and all actions you take, are steps towards a more just world in which nobody has to worry about food.



### FOOD FOR THOUGHT

Think about what is needed to make your school a better place for everybody. Is there space to create a school garden? A library to put back in order, or one to build from scratch? Is there a cause or charity that you would like to start a fundraising project for? Start a project with your classmates and talk with your teachers. Start your mission (im)possible: sometimes we start from a small idea and reach big targets!

# Glossary

- Biodiversity:** the variety of plants and animals that live in perfect balance in one environment (ecosystem) and keep it alive and well. If a species dies, the entire ecosystem is endangered.
- Economic security:** stable standard of living in a country or area where all people are guaranteed jobs and therefore a regular income to live a decent life.
- Food insecurity:** the absence of food or nutritional substances. For a human being, this means not knowing if, when and how to obtain the food necessary for healthy living.
- Food loss and waste:** food waste is part of the greater issue of food loss and can be addressed in a variety of ways. In both cases, however, food that is fit for human consumption is being thrown away, used in the wrong way or allowed to rot through bad storage or lack of care.
- Food system:** all the stages of keeping us fed, from growing to harvesting, packing, processing, transforming, marketing, consuming and disposing of food.
- Forest smallholders:** farmers who live and make a living off of forests and their resources.
- Malnutrition:** bad nutrition that either causes an excess or lack of nutrients. Obese people and undernourished people are two different sides of the same problem.
- Marginalized:** a powerless person or group of people who is treated as unimportant within a society or community.
- Mediator:** a person or organisation who helps other people or organisations to come to an agreement or reach common decisions in a peaceful and satisfying way for everyone.
- Nutrients:** the “building blocks” of all living beings. They provide the nourishment that we need to live and grow healthily.
- Obesity:** being overweight, which is not an aesthetic problem but a health risk.
- Rural:** tied to land and fields. A rural community primarily lives on agriculture.
- Social protection:** now common in all developed countries, it guarantees education (schools), health (doctors, hospitals and medicines), and other essential services for a decent standard of living. For farmers it can include assistance from governments to recover from a crisis where the crop fails.



# Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: [www.fao.org/building-the-zerohunger-generation](http://www.fao.org/building-the-zerohunger-generation)



▶ Working for Zero Hunger



▶ Change the future of Migration



▶ Climate is Changing

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