

SECONDARY LEVEL



1

lesson 1

What are Hunger and Malnutrition and Who are the Hungry?

Total lesson time: 45-60 minutes



Objective 1

To understand the consequences of hunger and malnutrition

Concepts

- Adequate food is essential for an active and healthy life
- Poor health, growth and development can result from hunger and poor nutrition
- Hunger affects the well-being of people, nations and the world



Objective 2

To know the magnitude of hunger in the world today

Concept

- Despite significant improvements, many millions of people today are hungry and malnourished



Objective 3

To know who is hungry and malnourished in the world

Concept

- Hunger and malnutrition exist in some form in every country

2

lesson 2

Why are People Hungry and Malnourished?*Total lesson time: 45 minutes***Objective 1**

To understand the food system that feeds people

Concept

- The system that provides food is complex

**Objective 2**

To understand what it means to be food-secure

Concept

- To be food-secure means to have access at all times to the food we need for an active and healthy life
- Food security has three fundamental pillars: availability, accessibility and use of food

3

lesson 3

What Can We Do to Help End Hunger?*Total lesson time: 45 minutes***Objective 1:**

To identify the responsibility and ability of individuals to act to fight hunger and malnutrition and to ensure food security for all

Concept

- We can all do our part to help end hunger and malnutrition and each one of us, even in small ways, can be a hero to someone else.

**Objective 2:**

To identify specific actions that we can take to help end hunger and malnutrition

Concept

- We can take action as individuals, communities and nations to reduce hunger



1

secondary level

lesson 1

What are Hunger and Malnutrition and Who are the Hungry?

The lesson has been designed to be covered in 45 – 60 minutes, but it can be covered in greater or less detail to fit the needs of the class.

Teachers are encouraged to cover all objectives and content areas.

For each objective, a variety of activities and discussion points are provided from which teachers can select those most appropriate for their students.

The materials for each lesson can be found in the Materials section beginning on page 75.



Information for teachers

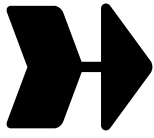
Students should understand that nutritionally adequate food is fundamental for good health, growth and development and that hunger and malnutrition are serious problems with long-term threats to the well-being of people, nations and the world.

Objective 1 provides an overview of basic nutrition concepts and their relationships to hunger and malnutrition. Students may or may not have studied nutrition previously. This is an opportunity either to review or to introduce basic nutrition concepts and discuss the role of food in the body. Food is presented as essential for life, growth and development and such basic body functions as breathing and blood circulation. Food also provides the energy to work, learn and play. The contributions of nutrients are presented in simple, non-technical form; more advanced nutrition concepts can be introduced as appropriate. Additional resources include nutrition education information and dietary guidelines developed by FAO, the World Health Organization (WHO) and individual countries.

Objective 2 provides data on hunger throughout the world and helps students to identify those areas in greatest need.

Objective 3 identifies special groups that experience the most difficulty with hunger and malnutrition, and identifies those most at risk of health consequences.

Additional information providing an overview of the current world situation is available in “Hunger and Malnutrition in the World” in the Introduction.



Objective 1

To understand the consequences of hunger and malnutrition

Materials



Fact Sheets:

- Food Gives Us...
- Vitamins and Minerals

Concept

Adequate food is essential for an active and healthy life

Content



Food is essential for life. To be healthy and well nourished, we must have adequate amounts of a variety of good-quality, safe foods. Without adequate nutrition, children cannot develop their potential to the fullest and adults will experience difficulty in maintaining or expanding theirs.



Food provides us with the energy we need for growth, physical activity and the basic body functions (breathing, thinking, temperature control, blood circulation and digestion). Food also supplies us with the materials to build and maintain the body and to promote resistance to disease.



These different functions are made possible by the nutrients contained in food. The types of nutrients in food are carbohydrates, proteins, fats, vitamins, minerals and water. All foods contain one or more of these nutrients in varying amounts. Each type of nutrient serves particular functions. This is why diversity in our diets is important for good health. We need all of the nutrients, provided by a variety of foods, for all of our body processes.



Too much food or an improper balance of food can contribute to poor health and the risk of chronic diseases such as obesity, heart disease and diabetes.



Good nutrition also depends on keeping food safe to eat and preserving its nutritional quality.

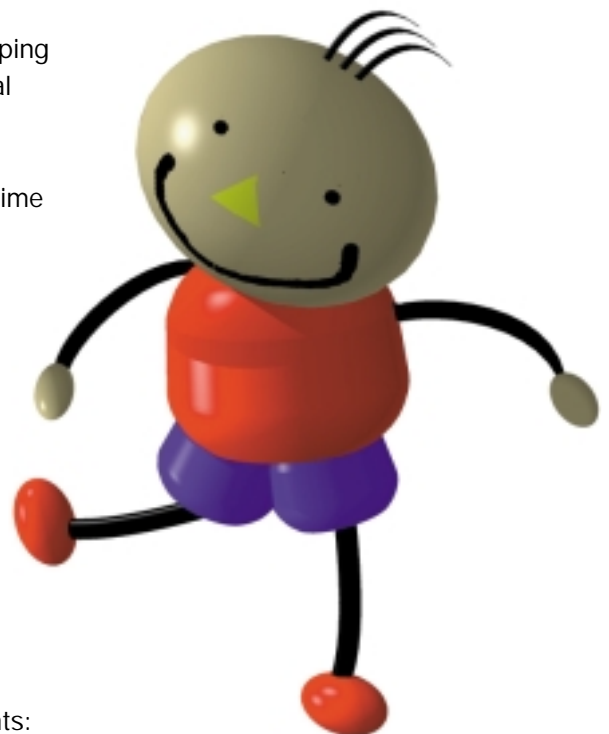
Activities



Discuss the points listed above, as time allows, according to the students' background and needs. Tell students that food contains substances that are essential for life. Some of these are in quantities that are so tiny that we cannot see them, but without them our body systems will not work. These substances are all found in food, but in many different foods, so we must eat a variety of foods to make sure that we get all of them in our diets.




The fact sheet *Food Gives Us...* provides general information on nutrition, including the functions of the energy nutrients:



proteins, carbohydrates and fats. Food sources are listed for these three energy nutrients, as well as for four vitamins and minerals: vitamin A, B vitamins, vitamin C and iron. Ask students to make a list of the foods eaten in a typical day, to see if they provide the variety needed to obtain the nutrients listed. For instance, do their lists contain foods rich in protein, vitamin A, iron? If they do not contain foods rich in one or more of the listed nutrients, discuss with students what foods could be added to their diets to provide the needed nutrients.

Concept Poor health, growth and development can result from hunger and poor nutrition

Content  Major health and nutritional consequences of insufficient food and poor nutrition include:

- **Protein-energy malnutrition (PEM)** results in poor growth, fluid imbalances and lower resistance to infections because our food is not sufficient to meet body needs for energy and protein. Nearly 200 million children under the age of five suffer from acute or chronic PEM.
- **Vitamin A deficiency** can lead to poor night vision, eye lesions and, in severe cases, permanent blindness. Vitamin A deficiency can also lead to increased illness and death from infections. More than 200 million children under the age of five are at risk of Vitamin A deficiency.



- **Iodine deficiency** can cause goitre (swollen thyroid gland), mental retardation, brain damage and reproductive failure. Worldwide, 2 billion people are at risk of iodine deficiency.
- **Iron deficiency** can cause nutritional anaemias, problem pregnancies, stunted growth and lower resistance to infections, as well as long-term impairment in mental and motor development. Worldwide, 3.5 billion people suffer from iron deficiency.
- **Low-birth-weight babies** (less than 2.5 kg) who survive being born too small are likely to remain underweight and sickly throughout childhood and adolescence. About 30 million infants are born each year in developing countries with impaired growth caused by poor nutrition in the womb.



Major health risks associated with the dietary excesses of overnutrition include cardiovascular disease, strokes, obesity and diabetes. The problems are on the rise in both developing and developed countries.



Food contamination is a serious obstacle to nutritional well-being. Children are especially vulnerable to food-borne diseases, which rob them of crucial nutrients through diarrhoea.

Activity



The fact sheet *Vitamins and Minerals* provides information about each of the eight major nutrients or nutrient groups, their role in the body, deficiency symptoms and food sources. Pick one or two (or as many as time will allow) of the nutrients that might be a problem in your area, discuss the nutrient and health symptoms listed in the fact sheet and ask students to identify local food sources of the nutrient. Ask students to suggest ways in which people might receive more of the nutrients through their diets. To determine specific nutrient problems in your area, contact your local health care or extension worker or the Department of Health.

Concept

Hunger affects the well-being of people, nations and the world

Content



The strength of a nation depends on the strength of its people. When people are healthy, strong and well nourished, they have the energy, creativity, security and courage to work and learn, solve problems and live their daily lives with dignity and joy, ultimately advancing civilization to new heights. Well-fed citizens are productive citizens who contribute to their society. People who are not well nourished do not have the energy to work or to learn and often need constant medical care. The costs of hunger in term of lost potential, health care and possible civil unrest can be staggering for a society.

Activity



Discuss the issues listed above with students. With the students, create a list of great people in their community, their country, or the world, from either the past or the present, who have helped to create a better world. Their contributions could be social or humanitarian, or through scientific or artistic creations. Ask students to imagine the difference in the world if these people had been too malnourished, hungry or ill to do the work that they did. Tell them how important it is to all of us that each person in the world be able to function at their full potential. Lost potential hurts us all.



Objective 2

To know the magnitude of hunger in the world today

Material



Picture: Map of World Hunger

Concept

Despite significant improvements, many millions of people today are hungry and malnourished

Content



The world population continues to grow at a rapid pace. In 1999, the official United Nations estimate for the number of people in the world exceeded 6 billion. We will see an additional 2 billion in the next 25 years, mostly from the countries that currently have the most difficulty feeding their populations.



Although the world's population increased dramatically (by more than 70 percent) over the last 30 years, great progress has been made in increasing the quantity and quality of the global food supply and in improving the nutritional status of populations.



In the developing world, where the population has nearly doubled during this period, the proportion living in a chronic state of undernourishment has been reduced by half (from 36 to 18 percent in 1995-97).



Nevertheless, 790 million people – one out of five in the developing countries – still do not have enough food to meet their basic daily nutritional needs. Development has not benefited all people; while some countries have made great progress, hunger has increased in others, especially in those that already have the most difficulty feeding their people.



Access to sufficient supplies of a variety of good-quality, safe foods is a serious problem in many countries, even where food supplies are adequate at the national level.

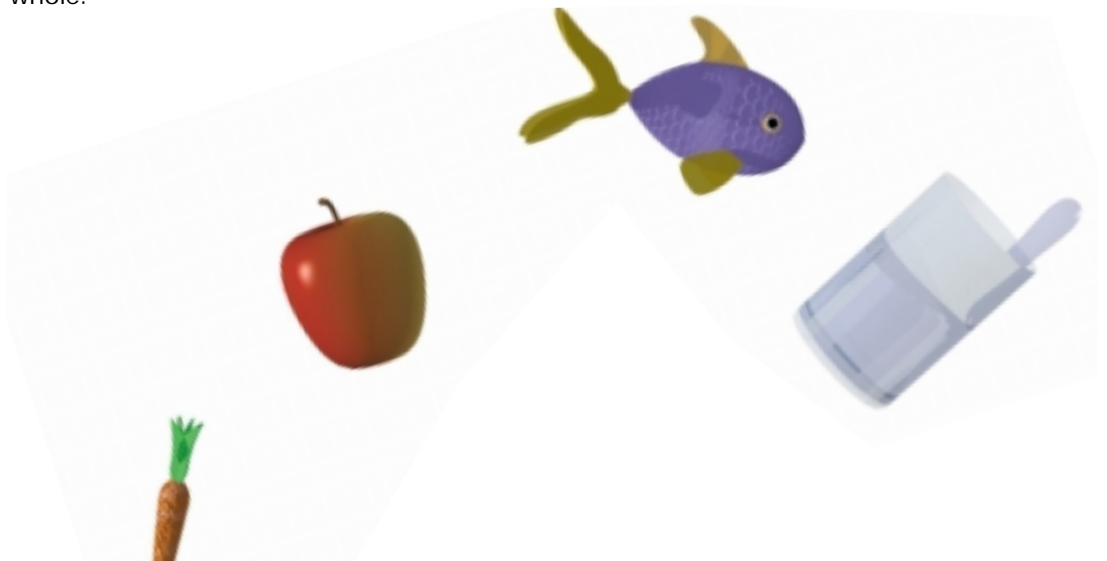
Activities



Hold up the picture *Map of World Hunger*, which indicates areas with serious hunger and malnutrition problems. Explain how the map shows the areas where many people do not get all of the foods that they need to eat. Point out the areas with the largest number of hungry people. Explain that all countries have some hungry people.




Identify your area/region of the world, and discuss the degree of your own area's problem with hunger compared with surrounding areas and the world as a whole.








Objective 3 To know who is hungry and malnourished in the world


Material  Fact Sheet: Who is Vulnerable?

Concept Hunger and malnutrition exist in some form in every country

Content  Although some countries have more hungry people – both in terms of total numbers and as a percentage of the population – no country is free from hunger and malnutrition. To work toward solutions to the problem of hunger, we must know who the hungry are.

 The fact sheet *Who Is Vulnerable?* provides a list of vulnerable groups throughout the world.

Activities  Review the list of vulnerable groups given in the fact sheet. As time permits, ask students why each group is vulnerable to hunger and malnutrition.

 Relate the hunger problems in your area to the vulnerable groups. How many of the hungry people are from the vulnerable groups listed? For instance, is your local problem with hunger related more to victims of conflict, to those who are socially disadvantaged or to migrant populations? Ask students if they can think of other groups in their area who might be vulnerable to hunger, and why.

Summary

Lesson 1 introduced students to the importance of food for growth and body functioning, in order to provide a context for the discussion of hunger. An overview of basic nutrition concepts was presented along with their relationships to hunger and malnutrition. The scope and global perspective of hunger were presented, as well as an overview of the groups who are vulnerable to hunger throughout the world. After completion of Lesson 1, students should be able to list:

- Food sources for major nutrients listed in the lesson.
- Problem nutrients in the local diet in their region.
- The health consequences of insufficient protein and energy, vitamin A, iodine and iron.
- Health consequences of dietary excesses.
- The countries with the greatest problems with hunger.
- The groups that are more vulnerable to hunger.

2

secondary level

lesson 2

Why are People Hungry and Malnourished?

The lesson has been designed to be covered in 45 minutes, but it can be covered in greater or less detail to fit the needs of the class. Teachers are encouraged to cover all objectives and content areas.

For each objective, a variety of activities and discussion points are provided from which teachers can select those most appropriate for their students.

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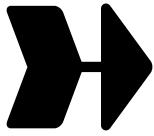


Information for teachers

Students should understand that hunger and malnutrition are caused and perpetuated by a number of factors, all of which need to be addressed to ensure that all people get the food they need for an active and healthy life. Poverty, social inequality and lack of education are primary among these causes and are major obstacles to ending hunger and malnutrition in the world.

Objective 1 provides an overview of the food supply system in order to help students understand where food comes from and how any breakdown in this complex process can affect the food supply, creating hunger in an area or among certain populations.

Objective 2 introduces the concept of food security – having access at all times to the food we need to lead an active and healthy life – and emphasizes the need to ensure that all people are well nourished and food-secure. The three fundamental pillars of food security – availability, accessibility, and use of food – are discussed, using case studies to learn from actual country experiences in fighting hunger and malnutrition. If time permits, these case studies can be presented in detail and studied for several class periods; if not, teachers can provide brief summaries of the major points of each case study for use in class discussions.



Objective 1 To understand the food system that feeds people

Materials



Table: Food System Chart

Concept

The system that provides food is complex

Content



Steps involved in the food system include:

- Getting ready to grow the food
- Growing the food
- Moving food from the field
- Processing, selling or storing the food
- Preparing and eating the food.



Each of these steps involves many processes and considerations (table *Food System Chart*). And each process may involve many people such as bankers, agriculture suppliers, farmers, farm workers, truck drivers, food handlers, millers and bakers, as well as different conditions, such as weather, roads and economic and political stability. It is this complexity that makes our food supply vulnerable.



The number of steps involved and the processes in each step depend on the specific situation for each community and family. The *Food System Chart* outlines steps and processes that may be involved in local and commercial food systems.



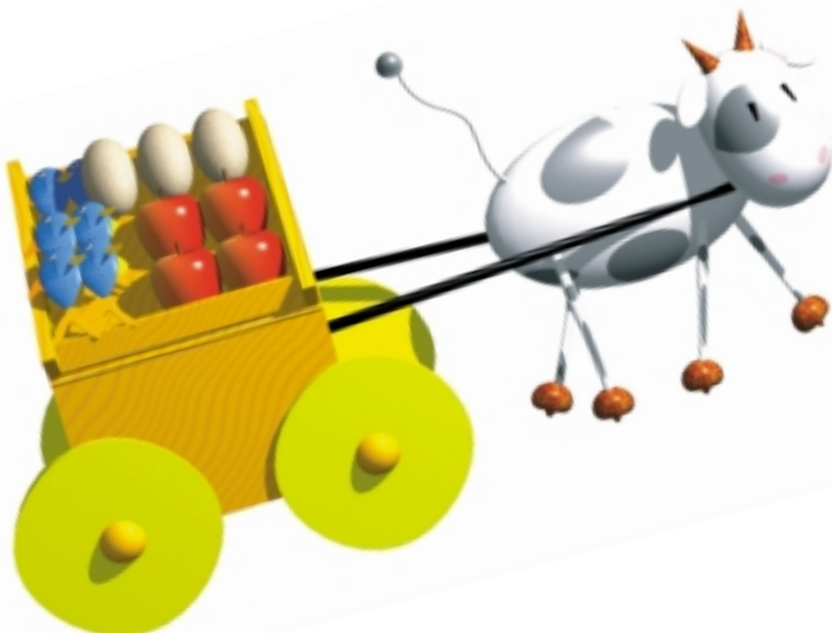
An important concept to consider is the waste of food that happens because of pests and spoilage at the commercial and home levels. Protecting the food supply from insects, rodents, moulds and spoilage can greatly increase the amount of food available for people. Every year, poor post-harvest handling and contamination ruin millions of tonnes of food.

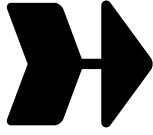
Activity



Using the *Food System Chart* have students develop and complete the listing of the processes and considerations of each of the steps involved in the food system that they depend on for food in their community. Pick one or more commonly eaten foods and trace these from their origin, as an example of how the local food system

works. Discuss where the food system is vulnerable. For instance, if the food system depends heavily on commercial agriculture, what would happen if farm labour were not available, if a severe drought happened, if suddenly all of the roads leading into the city were closed, etc.? If the local food system depends heavily on family gardens, discuss what would happen if conditions (floods, droughts) interrupted the crops.





Objective 2

To understand what it means to be food-secure

Materials



Fact Sheets: Country Case Studies

Concept

To be food-secure means to have access at all times to the food we need for an active and healthy life

Content



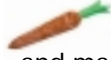
Food security is defined as access by all people at all times to enough nutritionally adequate and safe food (quality, quantity and variety) for an active and healthy life.



We must create the conditions in which all people can secure the food they need and be well nourished in a dignified and sustainable way.



Food security is affected by a number of factors including, primarily, the food supply and access to jobs and such basic services as education, health facilities, sanitation, clean water and safe housing.



Poverty, social inequality and lack of education are primary causes of hunger and malnutrition and are major obstacles to obtaining food security.

Concept

Food security has three fundamental pillars: availability, accessibility and use of food

Content



Although the global supply of food has increased, the global population continues to grow at a rapid rate. To keep pace, food security for all can only be achieved by producing more food.



Food security, however, cannot be ensured solely by producing more food. If, for example, people cannot afford the food that is available, if their diets lack essential vitamins and minerals or if poor handling during processing and distribution makes their food unsafe to eat, they will not have food security.

To have food security depends on three pillars, or legs of support:

- Food must be **Available**, meaning that adequate amounts of good-quality, safe food must be produced or imported at the national and local levels.
- Food must be **Accessible**, meaning that it must be distributed and available locally, and it must be affordable to all people.
- Food must be **Used** in the best way possible for each person to be healthy and well nourished (sufficient in quantity, quality and variety for each individual's needs).



To achieve national food security, a country must be able to produce or import the food it needs, and be able to store it, distribute it and ensure equitable access to it.




For families to achieve food security, they must have the means to produce or purchase the food that they need and they must have the time and knowledge to ensure that the nutritional needs of all family members are met.





Building on an understanding of the complexity of the food system, students can analyse specific situations faced by countries in order to determine whether


existing hunger issues relate to availability, accessibility or use of food. Understanding the associated factors is a first step in developing solutions.

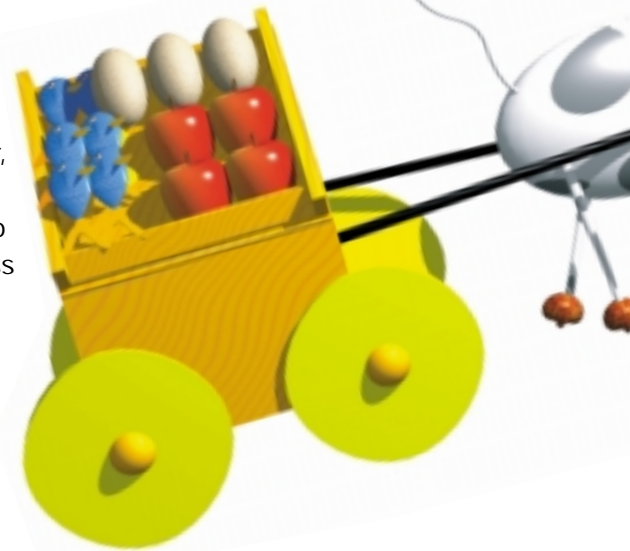
 Valuable lessons can be learned by looking at countries that have been able to reduce hunger and by contrasting their situations with those of countries that have declined in nutritional status. Contrasting the situations and looking for patterns can illustrate the factors that contribute to the problems and solutions of hunger around the world. Case studies of countries with declining and increasing problems with hunger are given in the fact sheets.

Activities

 Discuss how conditions are vastly different from one place to another, and how certain combinations of situations create problems of food security. By analysing countries with varying degrees of change in their food security status, and comparing the situations that exist in each country, trends can be identified that indicate the future of food security in each country.

 Case studies are provided that contrast past and present conditions in selected countries where changes in hunger and food security have taken place over the past few decades. The case studies are presented in pairs, by region, contrasting a country that has made an impact on hunger with a country that has faced setbacks in feeding its people. Assign individual students or groups of students to read one pair of case studies each, or discuss selected cases in class as a group discussion. With input from the teacher, as appropriate, have students consider the factors causing the current situation related to hunger in each country. Have students discuss the conditions related to hunger in terms of availability, accessibility and use of food.

 Building on the discussion of the food system, discuss how a similar case study would apply to their local situation.



Summary

Our goal is to be sure that all people are food secure. Getting our food involves many steps. We must understand where our food originates in order to make the right decisions about how to feed everyone in the world. Lesson 2 illustrated the complexity of food systems to explain the many reasons that people may be hungry, and explored the pillars of food security. After completion of Lesson 2, students should be able to list:

- The steps in the food supply system.
- For each step in the food supply system, factors that can put people at risk of hunger and food insecurity.
- The three pillars of food security.
- Factors that lead to either an improvement or a worsening of food security, as shown in the case studies.

We can work together to reduce hunger. Lesson 3 will explore what we can each do to help reduce hunger in our world.

3

secondary level

lesson 3

What Can We Do to Help End Hunger?

The lesson has been designed to be covered in 45 minutes, but it can be covered in greater or less detail to fit the needs of the class. Teachers are encouraged to cover all objectives and content areas.

For each objective, a variety of activities and discussion points are provided, from which teachers can select those most appropriate for their students.

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Information for teachers

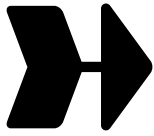
Students should understand that hunger anywhere affects all people, everywhere, that we are all involved in the problems of hunger and malnutrition, and that there are specific actions that can be taken by each of us to achieve a world free from hunger. The lesson should instil in students a sense of caring and commitment towards their fellow human beings and it should show them that they have an important role to play in fighting hunger for themselves, for their families, for their communities and for the world. The method used to present these messages is through the exploration of legends and stories to illustrate the moral, ethical, spiritual and practical reasons for the unacceptability of hunger and how we can all be heroes to help end hunger.

Many legendary figures, real and mythological, are heroes because of their work against poverty and hunger. Drawing from the wealth of local stories, teachers can use their own or students' favourite legends, myths or actual people to introduce the concept of heroes and discuss the qualities of a hero relative to ending hunger.

Objective 1 identifies some courageous people throughout history who have worked to make the world a better place for all of us and encourages students to think about local "heroes" who have made a difference in their communities and countries. It presents the idea that we all have a contribution to make in ending hunger and malnutrition and that each one of us, even in small ways, can be a hero to someone else.

Objective 2 suggests actions that can be taken by students to help fight hunger and malnutrition for themselves, their families and their communities.


It presents the Rome Declaration on World Food Security, signed by the heads of state of over 180 countries, as a basis for discussion of the commitments and strategies adopted by world leaders to ensure food security for all. Teachers can select from the many questions provided for structuring classroom discussions appropriate for their situation, as time allows.





Objective 1


To identify the responsibility and ability of individuals to act to fight hunger and malnutrition and ensure food security


Concept We can all do our part to help end hunger and malnutrition and each one of us, even in small ways, can be a hero to someone else

Content  Great heroes have existed throughout time. Legends about the struggle against poverty and hunger tell the stories of courageous people who have changed our world.

Activities  Who are our heroes? Ask students to list three of their heroes, living or dead, real or mythical. Discuss what personal qualities these heroes have in common. Discuss what personal qualities we value as people.

 From the list the students and teacher generated, select several heroes and leaders who have worked against poverty, hunger or injustice and briefly describe their contributions. Ask students if these heroes are very different from the rest of us, or can we all find the qualities within ourselves to work for change?


 Ask students if they know people in their community who are caring and have courage to help others in emergency and day-to-day situations. Do they think they are heroes? Why or why not? Have students describe the contributions of some of the local people who are helping others.

 Ask students what they themselves would like to do to help their families, their community or their world. Ask students to write a story about, or draw a picture of, what they would like to do to end hunger.




Objective 2

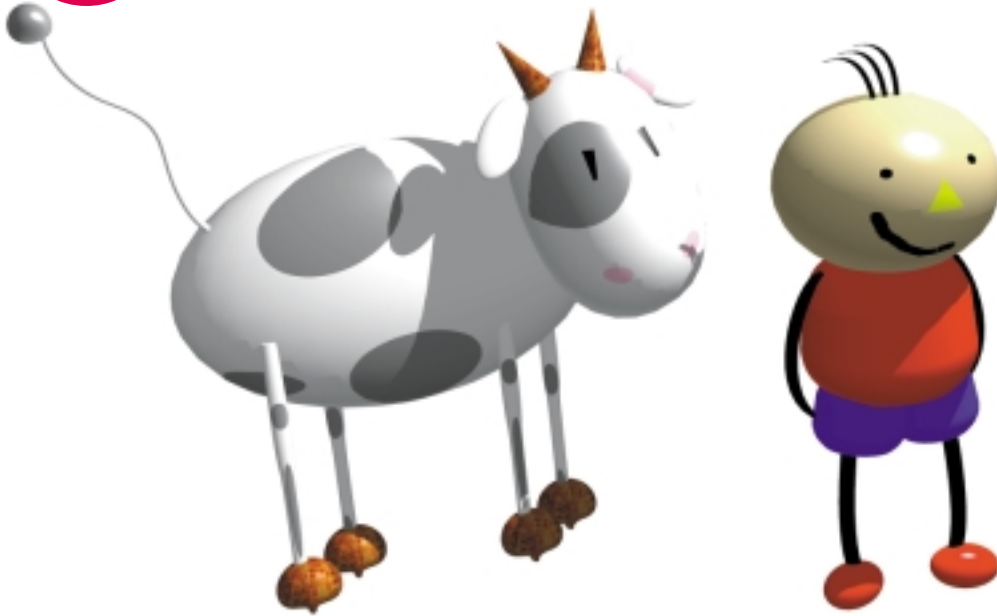
To identify specific actions that we can take to help end hunger


Materials  Fact Sheet: Rome Declaration on World Food Security
Statements:


- About World Food Day
- Feeding Minds, Fighting Hunger


Concept We can take action to reduce hunger and malnutrition

Content  **World governments** have committed to work together on the problem of hunger. Students should become familiar with the commitments their government, along with other nations, has made to end hunger.





 The International Conference on Nutrition. In 1992, 159 states and the European Economic Community released a *World Declaration on Nutrition*. All nations involved at the conference agreed that “hunger and malnutrition are unacceptable... and that access to nutritionally adequate and safe food is a right of each individual”. An action plan was developed to fight hunger and increase food security.


 The World Food Summit. In 1996, more than 180 nations participated in a World Food Summit and committed to decreasing the number of undernourished people to half their present level no later than the year 2015. Two documents were adopted: the *Rome Declaration on World Food Security*, listing seven commitments that the participating governments would make to increase food security; and the accompanying *World Food Summit Plan of Action*, listing specific objectives to accomplish the goals stated in the *Declaration*. All nations involved agreed and signed the statements, including “We emphasize the urgency of taking action now to fulfil our responsibility to achieve food security for present and future generations”.

 We can learn about hunger in many ways. Organizations and agencies have resources to help us. Hundreds of organizations have been set up to work on various aspects of the problems of hunger and malnutrition. Organizations include private groups, governmental agencies, international organizations and regional coalitions. The scope of their missions includes relief, research and advocacy. Some groups concentrate on specific countries; some groups concentrate on specific areas, such as education or agriculture.


Activities


 Either provide as handouts to each student, or to small groups of students, or read aloud to students, the fact sheet *Rome Declaration on World Food Security*. Discuss their government’s participation in the World Food Summit in 1996.

 Discuss the major points outlined in the *Declaration*, as time permits, using the discussion questions provided.

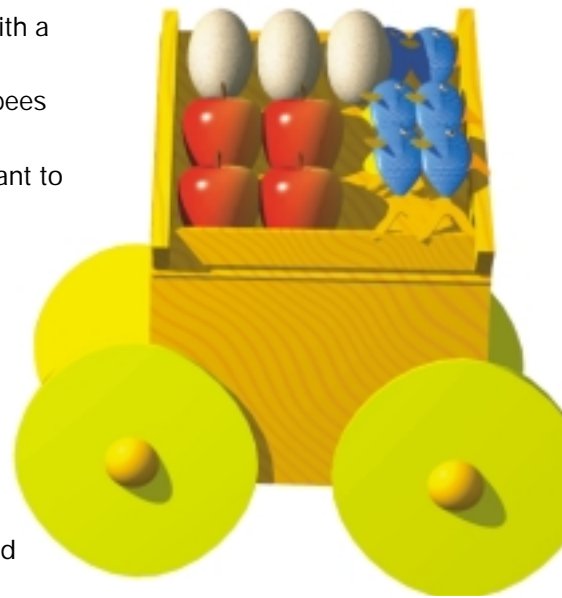
 This project – Feeding Minds, Fighting Hunger – has been developed to provide education to help end hunger. Read or paraphrase the statement describing the project goals and ideals. Discuss how the students could benefit from exchanging the information that they have gathered on hunger, malnutrition and food security with other classes in their country or around the world. Send these suggestions to the


Partners in Feeding Minds, Fighting Hunger listed in the Introduction.


 World Food Day is an annual, global activity with the objective of raising awareness of hunger and malnutrition in the world and encouraging people worldwide to take action against hunger. Discuss how the students' classroom is one of thousands of classrooms all over the world participating in World Food Day lessons. Students around the world are learning how they can work together, to be a part of ending hunger. Read or paraphrase the statement *About World Food Day*, 16 October, to students to let them know some of the efforts being made worldwide to fight hunger.


 Hunger is a global problem, but part of the solution involves many small steps at the local level. Some examples of cooperative projects that have increased food security for families and communities are listed below. Read these project descriptions to students and discuss how these and similar projects might be implemented locally to help others. Also discuss how projects such as these could be funded.

- Women fish vendors in Burkina Faso bought insulated boxes to mount on the backs of their bicycles. Packed with ice, they keep 10 to 15 kg of fish fresh, ensuring that the catch receives a top price at the local market.
- Beekeepers in the Islamic Republic of Iran were able to purchase a bee colony and hive with a small amount of donated money. Besides producing 15 kg of honey each year, the bees pollinate nearby fruit trees.
- In Nicaragua, farmers obtained a small grant to purchase metal silos to protect harvested maize from humidity and pests. Each silo holds 550 kg of grain, enough to feed ten people for a year.
- With a small amount of funding, 40 women farmers from Ghana bought the materials to make 50 1-square-meter covers to protect their banana seedlings from the harsh African sun.
- A group of Senegalese farmers cooperated to purchase a treadle pump capable of irrigating up to 2 500 square metres of vegetables from a hand-dug shallow well.
- A farmers' cooperative invested in enough high-quality seed to plant 20 hectares of cabbages, onions, cauliflowers and potatoes plus forage seeds to grow food to feed their animals.



 We can get information on hunger in our communities and in the world from many sources. We can write letters, make visits to people or calls to offices and libraries. (Where accessible, searching on the Internet.)

 Contact, or have students contact, the international organizations that are Partners in Feeding Minds, Fighting Hunger. Some of these organizations have country representatives or local project officers who could be contacted and invited to the school to talk about their work. Ask the organizations to send information on their projects or on their activities to end hunger that could be shared with the class.

 Have the class contact others involved in hunger organizations, and local, national, regional or international leaders and ask what is being done about each of

the pillars of support for food security (as discussed in previous lessons). In addition, have students look up or request information indicating how much hunger there is in their areas.



Contact local civil authorities and invite them into the classroom to talk about what local actions are being taken to prevent hunger and malnutrition. Have students interview a variety of public officials about local hunger projects or actions. Each student or group of students could then write a small summary report and present it to the class.



Gather information (or have students gather information) about what steps are being taken in the area to insure a consistent food supply. Invite members of the food and education system into the classroom to discuss how food security is protected in your area. Attempt to discover how much food is stored in your area in case of an emergency. Do people know what to do in a food emergency? Building on the information about local problems with hunger from Lesson 1, ask students how local problems with hunger could be improved.



Discuss the importance of education in fighting hunger. Much hunger is related to poverty resulting from a lack of education. Students should be encouraged to stay in school and learn as much as they can about agriculture and nutrition in addition to basic skills.



Discuss the benefits of a career in social services and fighting hunger and how students can learn to help in this area. Invite local health and extension agents into the classroom to discuss how many people are needed in careers related to fighting hunger.



Ask the students for their ideas on actions that they, and others, can take in their communities and in the world to help solve the problems of hunger and malnutrition. List those actions and identify who could carry them out. A list of some actions that are being taken around the world is provided below. Pick one or two examples from the list created by the students or from the list provided, and explore how these actions could be carried out and the ways in which these actions could help fight hunger in the local area or in the world.

Examples of actions:

- Help improve food supplies by increasing the quantity and variety of foods available:
 - plant home, community and school gardens
 - find ways to raise poultry, small animals or fish to eat and/or sell
 - re-discover forgotten foods that grow in the area
 - grow the best crops for sale and use
 - match crops to soil and water conditions
 - use the best tools available for farming in the region
 - find the best balance between sale and home use of crops
 - become involved in co-operative efforts to grow and sell foods
 - support local farmers; buy locally grown foods
 - establish centers or food banks to share food.
- Help keep food safe to eat:
 - keep food clean
 - keep food preparation areas and utensils clean
 - keep stored food dry and away from insects and animals.
- Help all people meet their needs for food and nutrients:
 - know your own needs for food and nutrients

- know the different needs for different people (life stages)
- seek the most nourishing foods available
- volunteer to work for hunger issues
- volunteer to work in food or meal distribution centres
- establish food centers or food banks to share extra food
- work with the food industry to redistribute surplus food
- invite commercial food growers and producers to be part of the solution for community hunger problems.
- Learn about foods, nutrition and hunger and share knowledge and ideas with others:
 - learn about the food system in your area
 - know who in the community is working to fight hunger, listen to them, and share ideas with them
 - know who in the community has knowledge about health and farming, listen to them, and share ideas with them
 - take information home to families and neighbours
 - share school projects and reports in community spaces
 - share ideas with leaders in the community and nation
 - urge community leaders and service providers (doctors/nurses/hospital workers/librarians) to become involved with school projects around issues of hunger and nutrition.



Summary

In the three lessons in this curriculum, originally developed for World Food Day, 16 October 2000, we have focused on the problems of hunger in the world. The goal of World Food Day is to end hunger as soon as possible in the new millennium. Many millions of us today still do not have enough to eat every day. We must all try to understand why this is. Young people have the creativity and energy to tackle great problems such as hunger. When we can all share the vision of a world without hunger, the confidence that we can make a change, the knowledge of the steps to take and the will to take action, we can solve the immense challenge of feeding all of the people of the world. And our young people, who have inherited the problem of hunger in our world, will be the key to finding the solutions.

END OF SECONDARY LEVEL



Fact Sheet: Food Gives Us...

Food gives us the energy and nutrients the body needs to maintain health and life, to grow and develop, to move, work, play, think and learn.

The body needs a variety of nutrients – proteins, carbohydrates, fats, vitamins and minerals – and these come from the foods we eat.

- **Proteins** are needed to build and maintain muscle, blood, skin and bones and other tissues and organs in the body.
- **Carbohydrates and fats** mainly provide energy, although some fats are also needed as building materials and to help the body use certain vitamins.
- **Vitamins and minerals** are needed in smaller amounts than protein, fat and carbohydrates, but they are essential for good nutrition. They help the body work properly and stay healthy. Some minerals also make up part of the body's tissues, for example, calcium and fluoride are found in bones and teeth and iron is found in the blood.
- **Fibre** (or roughage) and **clean water** are also needed for a good diet.

All foods contain nutrients but different foods contain different amounts of various nutrients.

- **Foods rich in proteins** are all types of meat, poultry, fish, beans, peas, soybeans, groundnuts, milk, cheese, yoghurt and eggs.
- **Foods rich in carbohydrates** are rice, maize, wheat and other cereals, all types of potatoes, yams and starchy roots and sugars.
- **Foods rich in fats** are oils, some meat and meat products, lard, butter, ghee and some other milk products, margarine, some types of fish, nuts and soybeans.
- **Foods rich in vitamin A** are dark-green vegetables, carrots, dark-yellow sweet potato, pumpkin, mango, papaya, eggs and liver.
- **Foods rich in B vitamins** are dark-green vegetables, groundnuts, beans, peas, cereals, meat, fish and eggs.
- **Foods rich in vitamin C** are fruits and most vegetables, including potatoes.
- **Foods rich in iron** are meat, fish, groundnuts, beans, peas, dark-green leafy vegetables and dried fruits.



Fact Sheet: Who is Vulnerable?

Victims of conflict

- internally displaced people
- refugees
- landless returnees
- landmine disabled
- war invalids
- war widows and orphans

Migrant workers and their families

- migrant herders tending other people's herds
- migrant labourers seeking seasonal work
- female-headed households left behind by migrant male labourers

Marginal populations in urban areas

- school dropouts
- unemployed people
- rickshaw and motorcycle taxi drivers
- recently arrived migrants
- people living in slums on city outskirts
- dock workers and porters and construction workers
- workers in the informal sector
- homeless people
- orphans
- street children and people living alone on small fixed incomes or without support (elderly, pensioners, widows and widowers, divorcees, invalids, handicapped people)
- beggars

People belonging to at-risk social groups

- indigenous people
- ethnic minorities
- illiterate households

Some or all members of low-income households within vulnerable livelihood systems

- subsistence or small-scale farmers
- female-headed farming households
- landless peasants
- agricultural labourers
- fishers
- nomadic pastoralists
- sedentary herders, small-scale livestock producers and agropastoralists
- forest dwellers
- peri-urban small-scale agricultural producers and market gardeners
- day or contract labourers

Dependent people living alone or in low-income households with large family size

- elderly people
- women of childbearing age, especially pregnant and nursing mothers
- children under five years old, especially infants
- disabled and ill people



Fact Sheet: Vitamins and Minerals

Vitamins and minerals are called micronutrients. They are needed in much smaller amounts than protein, fat and carbohydrate but are essential for good nutrition. They help the body to work properly and stay healthy. Some minerals also make up part of the body's tissues, for example, calcium and fluoride are found in bones and teeth and iron is found in the blood.

- **Iron** is a major component of red blood cells and is necessary to keep all of the body's cells working properly. Iron deficiency anaemia is the most widespread nutritional problem in the world. It can be very serious in children and women of childbearing age, especially during pregnancy, but it also affects men and older women. It leads to lethargy (low work capacity), learning difficulties, poor growth and development, and increased morbidity (illness) and maternal mortality, especially at childbirth.
The best sources of iron are meat, fish, poultry, liver and other organ meats. Iron is also found in legumes, dark green leafy vegetables and dried fruits, but this iron is not absorbed as well by the body as is the iron from animal products. Increasing the intake of **vitamin C** along with the vegetable sources of iron can help more of the iron to be absorbed and utilized.
- **Vitamin A** is needed for building and maintaining healthy tissues throughout the body, particularly eyes, skin, bones and tissues of the respiratory and digestive tracts. It is also very important for effective functioning of the immune system. Vitamin A deficiency can lead to poor night vision (night blindness), severe eye lesions and in severe cases permanent blindness. This occurs mainly in undernourished children, especially those with measles and other infections. Vitamin A deficiency can also lead to increased illness and death from infections.
Vitamin A is found naturally only in foods of animal origin, notably breast milk, liver, eggs and many dairy products. However, many dark-coloured fruits and vegetables contain pigments, called carotenes, that the body can convert to vitamin A. Foods rich in vitamin A include carrots, dark-yellow and orange sweet potatoes, mangoes and papaya.
- **Thiamin, riboflavin, niacin, vitamin B6, folate, pantothenic acid, vitamin B12 and biotin** belong to what is sometimes called the vitamin B complex. The B-vitamins are necessary for converting carbohydrates, fat and protein into energy and for using them to build and repair the body's tissues. Deficiencies of these vitamins can lead to serious effects including muscular weakness, paralysis, mental confusion, nervous system disorders, digestive problems, cracked and scaly skin, severe anaemia and heart failure.
- **Folate** (folic acid, folacin) is needed to make healthy blood cells and its lack is a common cause of anaemia among women and young children. Folate deficiency during pregnancy can lead to birth defects.
Adequate daily intake of the B-vitamins is important. Food rich in B-vitamins are dark-green vegetables, groundnuts, beans, peas, cereals, meat, fish and eggs.
- **Vitamin C** is needed to increase absorption of dietary iron, to make collagen (connective tissue) which binds the body's cells together, and to serve as an antioxidant. Prolonged vitamin C deficiency can lead to scurvy. The signs of scurvy are bleeding gums and sore, swollen joints, and it can lead to death.
Most fruits, especially citrus and guava, and many vegetables, including potatoes, are good sources of vitamin C. Eating fresh fruit and vegetables is important for both adults and children.
- **Vitamin D** is particularly important in the use of calcium by the body. Vitamin D is found in fish oils, eggs and milk, and is also produced by the body when the skin is exposed to sunlight. Lack of vitamin D can lead to rickets, a disease that causes soft and deformed bones in young children.
- **Calcium and phosphorus** are important to body maintenance and to having strong healthy bones and teeth. Milk and dairy products are excellent sources of calcium and phosphorus.
- **Iodine** is important for proper growth and development. Lack of iodine in the diet can cause goitre (swollen thyroid gland) and mental retardation. Iodine is found in seafood and in foods grown on iodine-rich soils. In areas where soils are low in iodine, steps should be taken to add iodine, to the diet, usually through iodized salt.



Fact Sheet: Rome Declaration on World Food Security

We, the Heads of State and Government, or our representatives, gathered at the World Food Summit at the invitation of the Food and Agriculture Organization of the United Nations, reaffirm the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.

Discussion: *Do you agree that everyone has the right to have access to safe and nutritious food and to be free from hunger? Why or why not? What does it mean to have a "right"? How can we make this happen?*

We pledge our political will and our common and national commitment to achieving food security for all and to an ongoing effort to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015.

Discussion: *While progress has been made, it now appears that this goal will not be met. Based on what we have studied in this lesson on hunger, when do you think the number of undernourished people in the world could be reduced to half their present level? Do you think this goal can be met? What needs to be done for this goal to be met?*

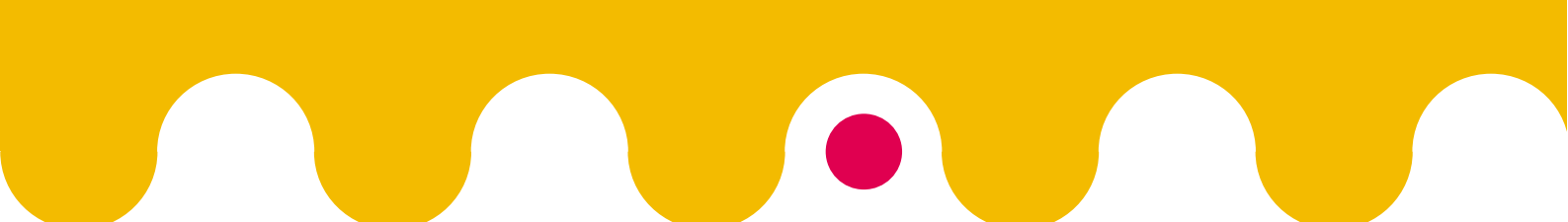
We consider it intolerable that more than 800 million people throughout the world, and particularly in developing countries, do not have enough food to meet their basic nutritional needs. This situation is unacceptable. Food supplies have increased substantially, but constraints on access to food and continuing inadequacy of household and national incomes to purchase food, instability of supply and demand, as well as natural and man-made disasters, prevent basic food needs from being fulfilled. The problems of hunger and food insecurity have global dimensions and are likely to persist, and even increase dramatically in some regions, unless urgent, determined and concerted action is taken, given the anticipated increase in the world's population and the stress on natural resources.

Discussion: *The above statement lists three major causes of food insecurity. What are these? (1. constraints on access to food and continuing inadequacy of household and national incomes to purchase food; 2. instability of supply and demand, natural; and, 3. human-made disasters. Discuss more specifically what is meant by each of these, the causes of and solutions to each. What can governments and individuals do to improve these situations?*

We reaffirm that a peaceful, stable and enabling political, social and economic environment is the essential foundation which will enable States to give adequate priority to food security and poverty eradication. Democracy, promotion and protection of all human rights and fundamental freedoms, including the right to development, and the full and equal participation of men and women are essential for achieving sustainable food security for all.

Discussion: *This section outlines changes related to social justice for all people: democracy, human rights protection and equal rights for men and women. Discuss how these issues affect food security in your region and how social and cultural changes can be initiated locally and across the globe.*

Poverty is a major cause of food insecurity and sustainable progress in poverty eradication is critical to improve access to food. Conflict, terrorism, corruption and environmental degradation also contribute significantly to food insecurity. Increased food production, including staple food, must be undertaken. This should happen within the framework of sustainable management of natural resources, elimination of unsustainable patterns of consumption and production, particularly in industrialized countries, and early stabilization of the world population. We acknowledge the fundamental contribution to food security by women, particularly in rural areas of developing countries, and the need to ensure equality between men and women. Revitalization of rural areas must also be a priority to enhance social stability and help redress the excessive rate of rural-urban migration confronting many countries.



Discussion: *This section targets major global issues such as poverty, war, terrorism, corruption and environmental degradation as critical in the fight against hunger. Solutions offered include increased food production, protection of natural resources and elimination of the wide gap between the richest and poorest nations and people. The need for equality between men and women is restated. The section ends with the crisis of rural-urban migration and suggests revitalization of rural areas as a priority. Discuss these broad critical issues with students. Ask them to think about how they would start to address the issues. As resources are always limited, what priority would they assign to each issue? What criteria would they use to assign a priority? The most urgent to address? The easiest to solve? What about the competition for resources between food relief for emergency situations and funds for development work on long-term problems? Which should get the highest priority and why?*

We emphasize the urgency of taking action now to fulfil our responsibility to achieve food security for present and future generations. Attaining food security is a complex task for which the primary responsibility rests with individual governments. They have to develop an enabling environment and have policies that ensure peace, as well as social, political and economic stability and equity and gender equality. We express our deep concern over the persistence of hunger which, on such a scale, constitutes a threat both to national societies and, through a variety of ways, to the stability of the international community itself. Within the global framework, governments should also cooperate actively with one another and with United Nations organizations, financial institutions, intergovernmental and non-governmental organizations, and public and private sectors, on programmes directed toward the achievement of food security for all.

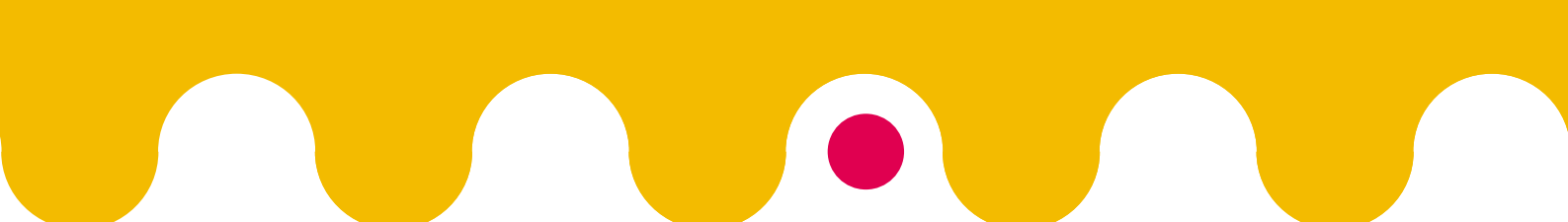
Food should not be used as an instrument for political and economic pressure. We reaffirm the importance of international cooperation and solidarity as well as the necessity of refraining from unilateral measures not in accordance with the international law and the Charter of the United Nations and that endanger food security.

We recognize the need to adopt policies conducive to investment in human resource development, research and infrastructure for achieving food security. We must encourage generation of employment and incomes, and promote equitable access to productive and financial resources. We agree that trade is a key element in achieving food security. We agree to pursue food trade and overall trade policies that will encourage our producers and consumers to utilize available resources in an economically sound and sustainable manner. We recognize the importance for food security of sustainable agriculture, fisheries, forestry and rural development in low as well as high potential areas. We acknowledge the fundamental role of farmers, fishers, foresters, indigenous people and their communities, and all other people involved in the food sector, and of their organizations, supported by effective research and extension, in attaining food security. Our sustainable development policies will promote full participation and empowerment of people, especially women, an equitable distribution of income, access to health care and education, and opportunities for youth. Particular attention should be given to those who cannot produce or procure enough food for an adequate diet, including those affected by war, civil strife, natural disaster or climate related ecological changes. We are conscious of the need for urgent action to combat pests, drought, and natural resource degradation including desertification, overfishing and erosion of biological diversity.

We are determined to make efforts to mobilize, and optimize the allocation and utilization of, technical and financial resources from all sources, including external debt relief for developing countries, to reinforce national actions to implement sustainable food security policies.

Convinced that the multifaceted character of food security necessitates concerted national action, and effective international efforts to supplement and reinforce national action, we make the following commitments:

- we will ensure an enabling political, social, and economic environment designed to create the best conditions for the



eradication of poverty and for durable peace, based on full and equal participation of women and men, which is most conducive to achieving sustainable food security for all;

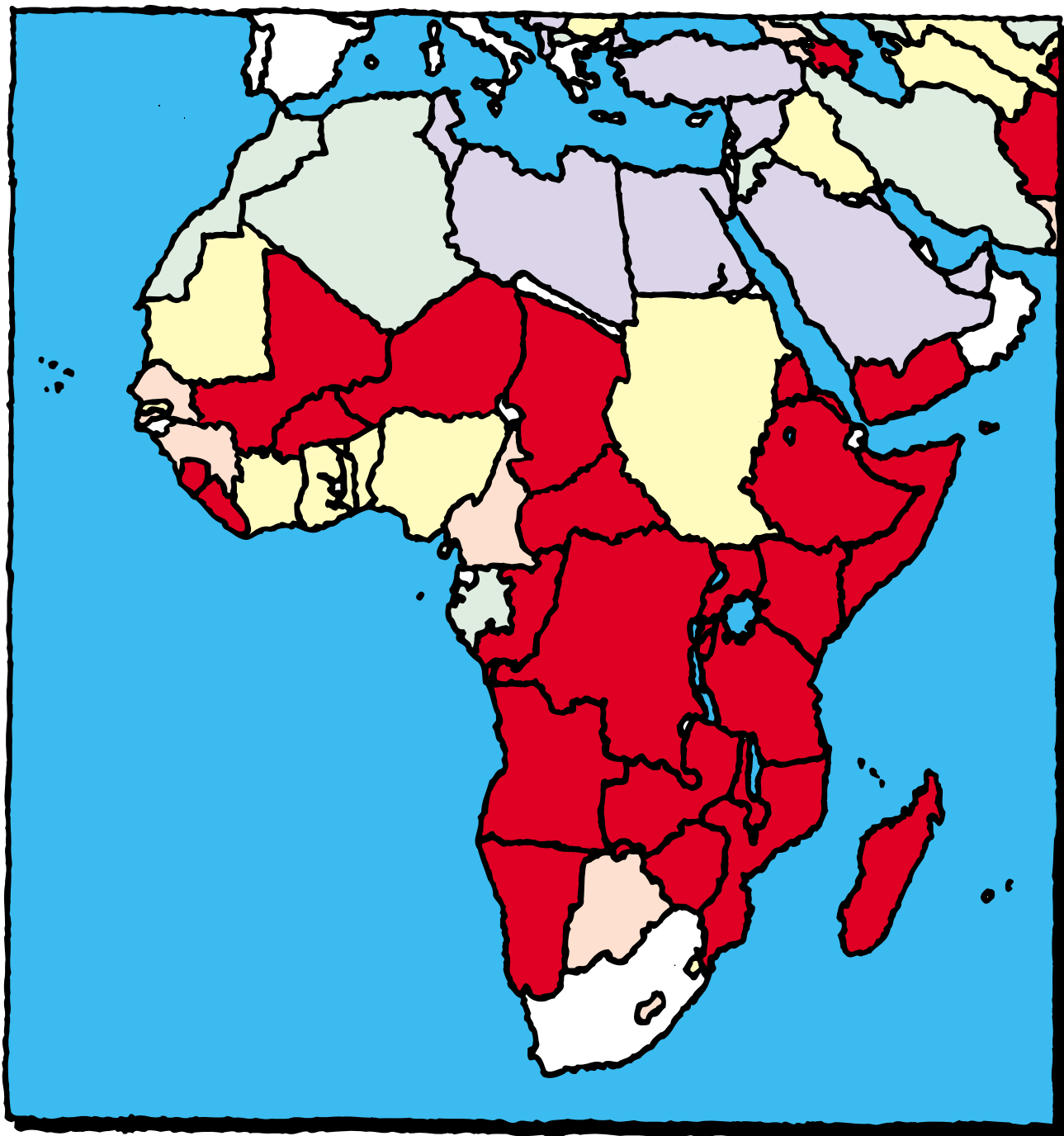
- we will implement policies aimed at eradicating poverty and inequality and improving physical and economic access by all, at all times, to sufficient, nutritionally adequate and safe food and its effective utilization;
- we will pursue participatory and sustainable food, agriculture, fisheries, forestry and rural development policies and practices in high and low potential areas, which are essential to adequate and reliable food supplies at the household, national, regional and global levels, and combat pests, drought and desertification, considering the multifunctional character of agriculture;
- we will strive to ensure that food, agricultural trade and overall trade policies are conducive to fostering food security for all through a fair and market-oriented world trade system;
- we will endeavour to prevent and be prepared for natural disasters and man-made emergencies and to meet transitory and emergency food requirements in ways that encourage recovery, rehabilitation, development and a capacity to satisfy future needs;
- we will promote optimal allocation and use of public and private investments to foster human resources, sustainable food, agriculture, fisheries and forestry systems, and rural development, in high and low potential areas;
- we will implement, monitor, and follow-up this Plan of Action at all levels in cooperation with the international community.

We pledge our actions and support to implement the World Food Summit Plan of Action.

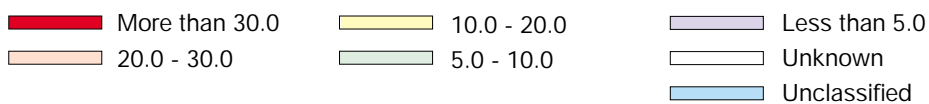
Rome, 13 November 1996



Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
Africa



Percentage of undernourished individuals



Source: ESN/WAICENT-KIMS, 2000



Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
South America



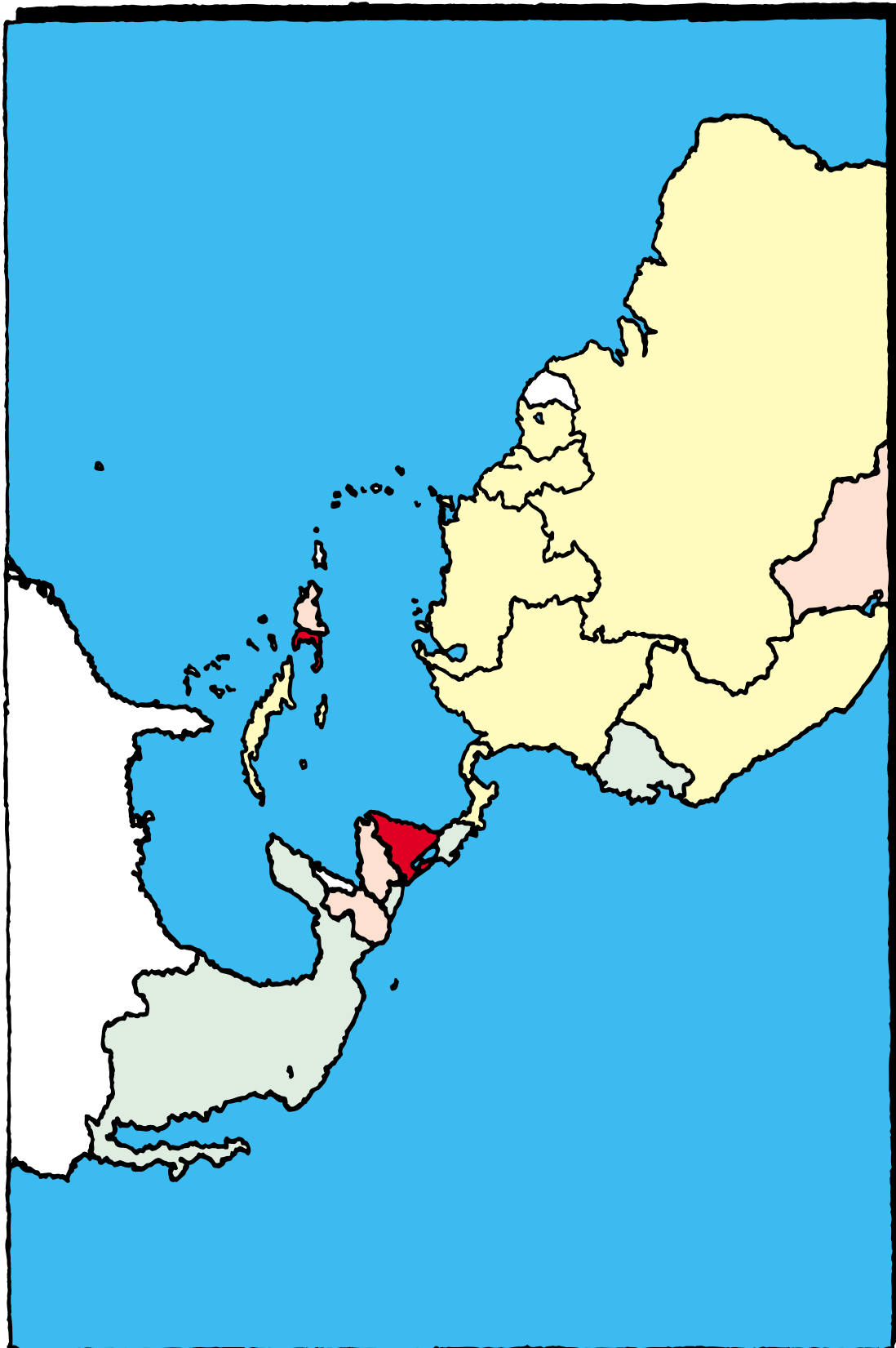
Percentage of undernourished individuals



Source: ESN/WAICENT-KIMS, 2000



Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
Central America



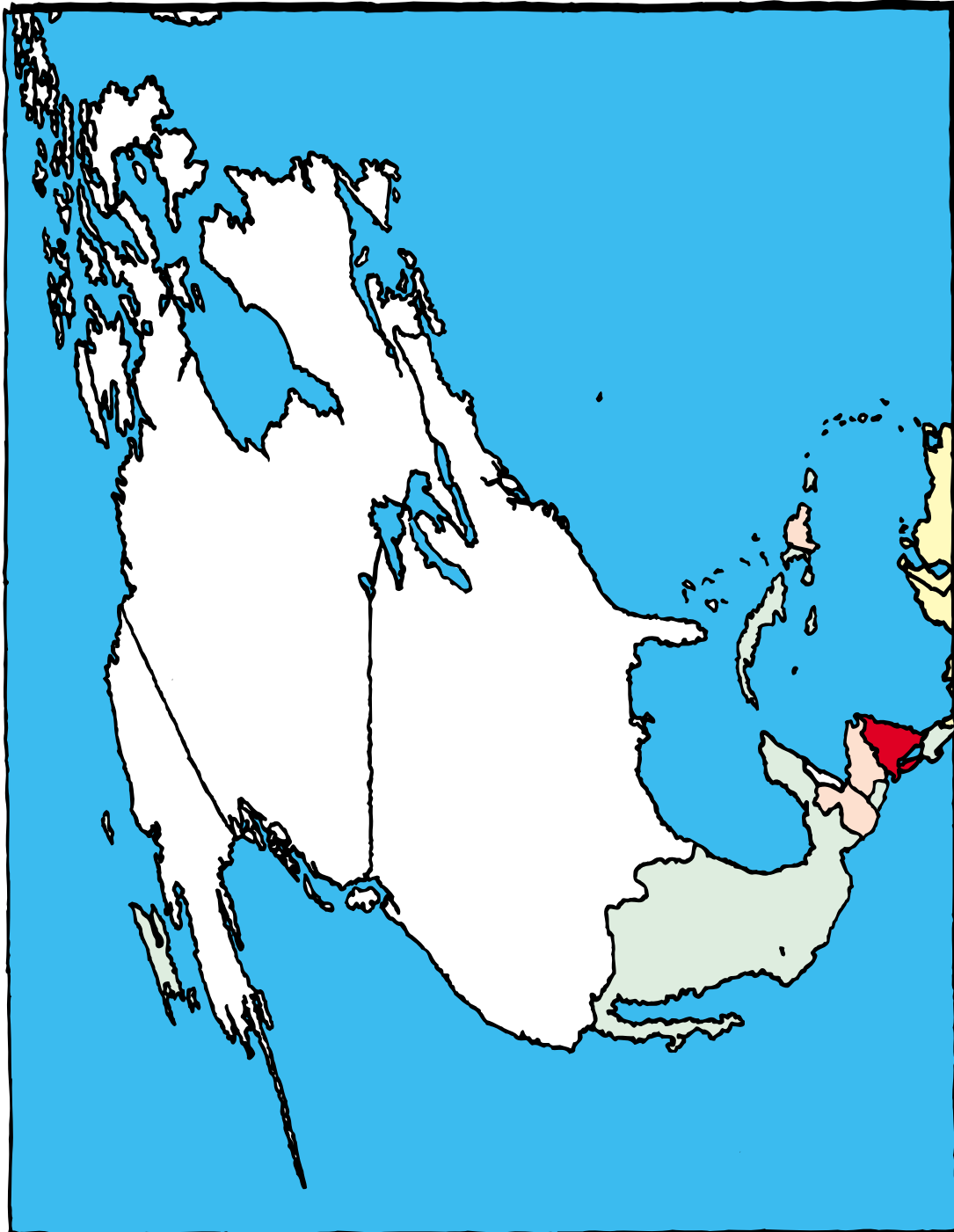
Percentage of undernourished individuals



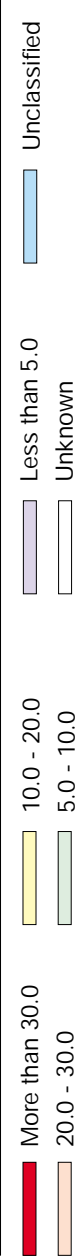
Source: ESN/WAICENT-KIMS, 2000



Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
North America



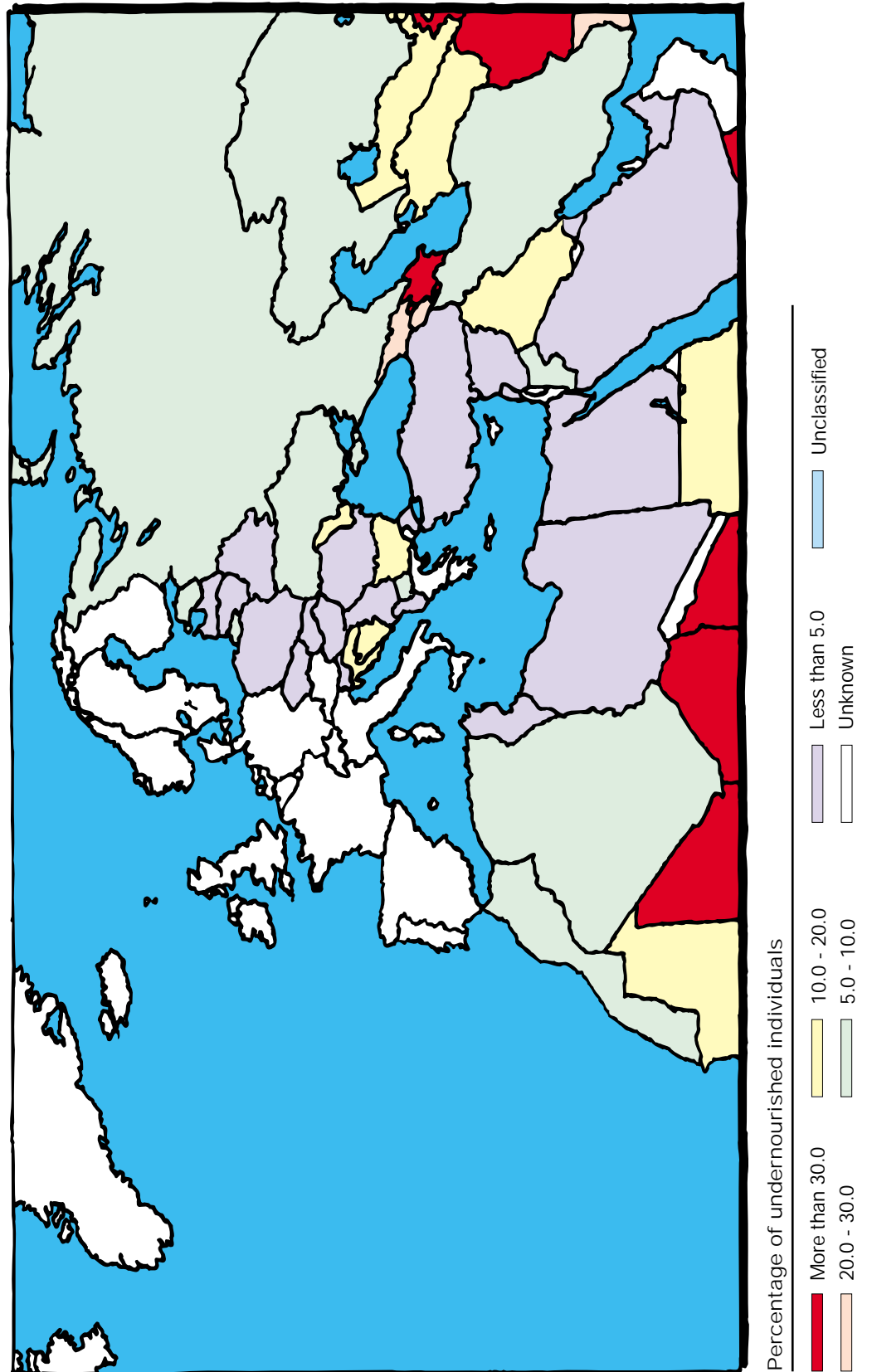
Percentage of undernourished individuals



Source: ESN/WAICENT-KIMS, 2000

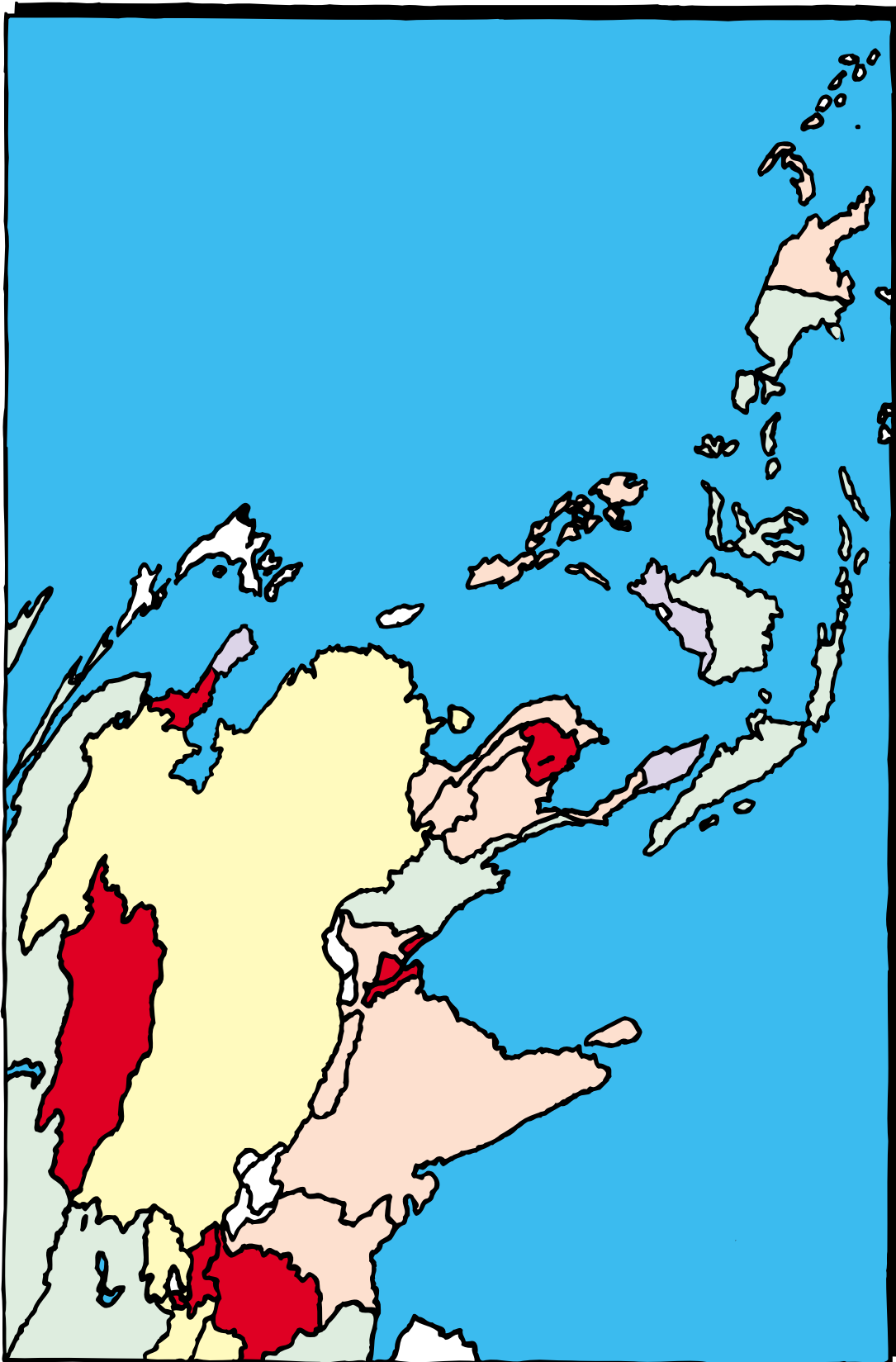


Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
Europe

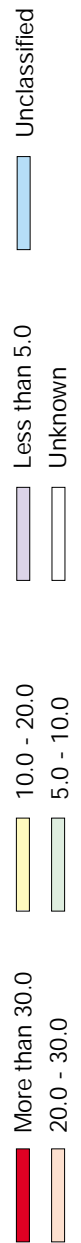




Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
Asia



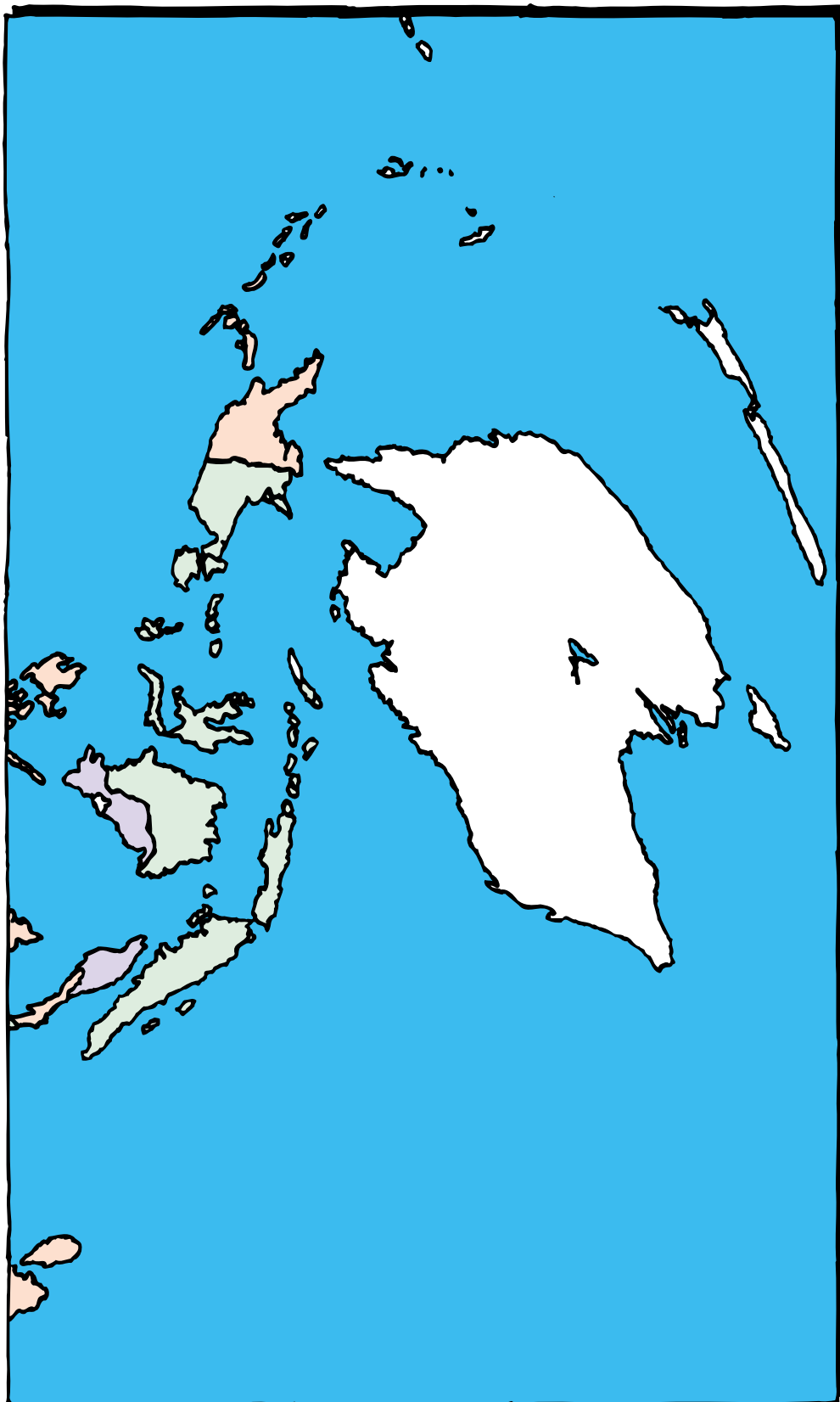
Percentage of undernourished individuals



Source: ESN/WAICENT-KIMS, 2000



Picture: Map of World Hunger
Proportion of undernourished people (1996-98)
Oceania



Percentage of undernourished individuals

- More than 30.0
- 20.0 - 30.0
- 10.0 - 20.0
- 5.0 - 10.0
- Less than 5.0
- Unclassified
- Unknown

Source: ESN/WAICENT-KIMS, 2000



Table: Food System Chart

Processes and Considerations:		
<i>Steps</i>	<i>Local Food System</i>	<i>Commercial Food Sector</i>
Getting ready to grow the food	Seeds Tools Land Other?	Seeds Fertilizer Pesticides Farm equipment Land Other?
Growing the food	Labour Weather conditions Safety Other?	Labour Weather conditions Safety Other?
Moving food from the field	Baskets Boxes Carts Trucks Other?	Trucks Roads Warehouses Other?
Processing, selling or storing the food	Jars Storage space Marketplace Economic stability Political stability Other?	Warehouses Factories Marketplace Economic stability Political stability Other?
Preparing and eating the food		Cooking place Knowledge of food and nutrition Sharing the food Other?



Country Case Study: Asia

A period of rapid economic growth has resulted in major gains in food security across most of Asia and the Pacific. Cambodia, where the proportion of undernourished dropped from 62 to 33 percent between 1980 and 1996, led the way. Many other countries in the region also showed strong reductions, including China, India, Indonesia, Myanmar, Nepal, Pakistan and Viet Nam. Undernourishment increased in only two countries – Mongolia and the Democratic People's Republic of Korea. In the latter, it rose from 16 to 48 percent. The financial crisis may have blunted progress in some countries, but the overall trend remains positive.

Cambodia – reaping the dividends of peace

More land is being farmed, more food is being produced and far fewer people are going hungry in Cambodia, as the country rebounds from decades of conflict. Between 1980 and 1996, farmers almost doubled the area on which they were growing crops. Yields of rice, Cambodia's main staple food, shot up by 64 percent. Pork, beef and poultry production expanded rapidly. Because of the gains in food production, Cambodians are eating substantially better, even though the population has continued to grow rapidly and food imports have declined.

Despite this recent progress, however, Cambodia remains a very poor country, and many of its people still suffer from food insecurity. Even after a 21 percent jump since 1980, Cambodians' average food intake in 1996 is scarcely enough to meet the minimum daily requirement. More than one-third of all households fall below the poverty line. The country's poverty is reflected in the lack of diversity in people's diets. Almost 80 percent of the average daily calorie intake comes from rice.

Decades of war and civil strife left traditional irrigation systems in ruins. Many fields had been abandoned to landmines. The peace settlement in 1979 opened the door for recovery; an economic reform programme introduced in 1992 brought inflation under control. Farmers responded by increasing the area cultivated, expanding rice production and diversifying into crops and animal products for export.

Programmes to remove landmines and rehabilitate irrigation systems are continuing. A programme has also been put in place to reduce poverty by creating jobs for vulnerable groups.

DPR Korea – a bitter harvest

The Democratic People's Republic of Korea has been hit hard during the 1990s by floods, drought and the collapse of its special trading relationships with China and the former Soviet Union. The impact has been devastating both to food production and to the nutritional status of the population. Total cereal production plummeted to less than half its 1980 level, while the proportion of undernourished people soared to almost half the population.

Rapid economic deterioration left the country without either the cash or the creditworthiness to finance needed food imports. Massive food aid was provided, but logistical problems made it difficult to reach all of the people in need. The crisis strained the national public distribution system to breaking point. The system sells fixed rations of rice and maize to city residents and to people who work on state-run farms and enterprises in the countryside. As crops failed and imports dwindled, reserve stocks held by the system proved far from sufficient to fill the gap. Rations were cut drastically and many people reduced consumption significantly.

The country's collapse came on the heels of a period of rapid economic growth. With limited arable land and a short growing season, gains in food production had been achieved through high-input agriculture. When the country was suddenly cut off from access to spare parts, fertilizers, pesticides and pumped water, yields started to fall sharply. Then, starting in 1995, two years of heavy storms and flooding, followed by a severe drought, devastated large tracts of agricultural land.

The country is now trying to revive agricultural production by introducing improved seed varieties and double-cropping methods, rehabilitating irrigation systems and improving soil fertility.



Country Case Study: Latin America and the Caribbean

Both the levels and the trends of undernourishment vary considerably in Latin America and the Caribbean. In most South American countries, levels are already low or rapidly declining. In Central America, on the other hand, levels are increasing in several countries, although Honduras registered the strongest gains in the region by bringing its prevalence of undernourishment down from 31 percent to 21 percent. In the Caribbean, Cuba's setback, with the share of undernourished rising from 3 to 19 percent, was in many ways typical of several of its island neighbours, which have experienced increases in undernourishment since 1980.

Honduras - economic growth helps to reduce hunger

Steady economic growth, coupled with an effective aid programme for its poorest citizens, has helped Honduras reduce by almost one-third the proportion of its population suffering from undernourishment. Increases in food production, imports and use of stocks all contributed to putting more food on Honduran tables. Maize production nearly doubled between 1980 and 1996. Much of the increase was consumed not by people but as feed for the booming cattle industry. Maize consumption by people actually declined slightly. Vegetable oils and sugar accounted for most of the increase in food intake, with consumption of meat and beans also increasing somewhat.

Since Honduras adopted a far-reaching structural adjustment programme in 1988, the country's economy has been growing at an annual rate of 2.7 percent. The increased prosperity has helped bring safe water to 87 percent of the population and raise the literacy rate to 70 percent. Direct aid to the poor is provided through the Honduran Social Investment Fund, which has reached many of the most deprived. A ration programme supplies coupons to help schoolchildren, mothers and elderly people buy food and other necessities.

Despite its recent gains, Honduras faces difficult challenges. Economic growth has not eliminated wide disparities in wealth and income. Poverty and food insecurity remain relatively widespread. About half of the Honduran population is rural. And in the countryside, nearly 40 percent lives in extreme poverty, with many people working as agricultural labourers on large estates. Commercial agriculture offers good possibilities for growth, but the challenge of achieving a more equitable distribution of the benefits remains.

Cuba - loss of trading partner erodes food security

Cuba has seen its economy shrink and levels of undernourishment rise since losing its most important trading partner with the break-up of the former Soviet Union. With much of its agriculture geared to producing commodities for export (primarily sugar and tobacco), Cuba had succeeded in reducing undernourishment to very low levels while relying on trade for more than half of its food.

With the end of Cuba's special trading relationship with the former Soviet Union, daily food intake dropped by more than 500 calories per person, mainly because of a steep decline in food imports. Yields for major food crops also dropped because of a lack of imported fertilizer, but Cuba managed to produce nearly comparable quantities by growing food on more land.

The economic decline has increased the number of people relying on subsidies while reducing productivity and food intake for many workers and their families. Continued restrictions on trade with the United States add to the country's economic difficulties.

Despite its recent problems, Cuba remains relatively prosperous and well fed compared with other countries in the Caribbean and Central America. More than half the country's roads are paved and 95 percent of the population have access to safe water.

Since 1993, the Cuban Government has given priority to increasing food production and restructuring industry. Signs have begun to emerge that the new economic model is taking hold and labour markets are recovering. But the transition process is far from complete.



Country Case Study: Near East and North Africa

Most countries in the Near East and North Africa have already achieved greatly reduced levels of undernourishment. Indeed, the region accounts for ten of the 14 developing countries where undernourishment affects less than 5 percent of the population. Morocco's decline, from 10 to 5 percent undernourished, represented the best progress among this group of good performers. Significant increases occurred only in Afghanistan, where the proportion of people who are undernourished shot up from 33 percent in 1980 to 62 percent in 1996, and in Iraq, where the share rose from 4 to 15 percent over the same period.

Morocco - thriving economy boosts food security

With substantial mineral wealth and an established position as a centre for trade and commerce, Morocco has enjoyed steady economic growth that has reduced undernourishment to very low levels. Between 1980 and 1996, daily food intake increased from 2 723 to 3 186 calories, reaching levels comparable with those of some industrialized countries. The gains came almost equally from increases in food production and in trade. Production of cereals and potatoes more than doubled, spurred by substantial increases in both crop yields and the area under cultivation. Much of the increased production was used for feed, while imports grew to meet rising demand for food. With the economy growing at almost 4 percent per year, Morocco has become increasingly urban. Improvements in transportation, sanitation and education have been particularly marked in the cities. However, almost half the population remains in rural areas, where poverty and vulnerability persist, particularly among traditional small-scale farmers and herders. Barely half the population has access to safe water and 56 percent remain illiterate. Environmental problems also loom. Water for agriculture and grazing lands is scarce, and 61 percent of the land is severely degraded. To eradicate remaining pockets of hunger, action will need to be taken to introduce more sustainable agricultural practices and to generate jobs and income in urban areas.

Afghanistan - war leaves little ground for crops

Food production and food security have both fallen victim to decades of warfare in Afghanistan. Production of cereals fell slightly while returning refugees helped swell the population by 25 percent between 1980 and 1996. As a result, average daily food intake fell from 2 186 to 1 710 calories, significantly below minimum requirements. Two-thirds of the country's provinces are now food-deficit areas; but the war-torn economy cannot generate imports to fill the gap. Afghanistan's problems are unusual in a region where levels of undernourishment are generally low. But they are typical of many war-torn countries facing complex humanitarian emergencies. More than 40 percent of the country's arable land is riddled with landmines and cannot be farmed. Thousands of people who used to make their living from farming have migrated to towns and cities, joining the ranks of a new, impoverished urban underclass. Only 15 percent of the population has access to safe water and some 70 percent are illiterate. Intermittent fighting and restrictions on movement continue to disrupt efforts to rebuild the country. One in every 50 Afghans has been a landmine casualty. Every day, mine blasts kill or maim another ten people, a third of whom are women and children. Many who have been disabled by war injuries or mines are no longer able to work. Their dependent status puts additional pressures on other family members who must feed and care for them. Large volumes of food aid remain far from sufficient to satisfy the minimum needs of such a large number of undernourished. Until peace is restored, there can be little hope of any lasting solutions.



Country Case Study: Africa

With Ghana leading the way, eight countries in West Africa reduced hunger significantly between 1980 and 1996. Indeed, the five countries worldwide that scored the greatest gains were all from this subregion. The picture was very different in Central, East and Southern Africa, however. There, the proportions and numbers of undernourished people generally increased. Burundi suffered the largest increase, with the proportion of undernourished people rising from 38 percent to 63 percent between 1980 and 1996. But 13 other countries in Central, East and Southern Africa also showed large increases.

Ghana – economic growth fuels rapid gains

Buoyed by a strong economy and dramatic increases in the yields of staple food crops, Ghana reduced undernourishment more rapidly than any other country in the world between 1980 and 1996. Average food intake soared from 1 790 calories per day to more than 2 600 calories. The gains came entirely from increased food production, with imports remaining virtually unchanged. The introduction of improved varieties of cassava helped boost yields of this main staple by almost 40 percent. Yields of yams, maize and rice also improved dramatically, and the vigorous economy encouraged farmers to increase the area under crops by more than 25 percent.

Overall, the economy grew at an annual rate of 2.3 percent. The increased prosperity brought marked improvements in sanitation, health and education. The proportion of the population with access to safe water increased from 35 to 65 percent. Illiteracy was reduced substantially, from 57 to 36 percent.

Ghana's period of rapid growth was sparked by reforms to invigorate the economy after a long period of decline. A special Programme to Mitigate the Social Costs of Adjustment and other social programmes helped protect vulnerable groups from possible negative effects of the reforms.

Despite Ghana's remarkable progress, almost one-third of the population remains poor, and 10 percent lives in pockets of extreme poverty in rural areas. These high levels of poverty mean that food insecurity and vulnerability persist. Continued economic growth and increased opportunities for off-farm employment will be crucial to maintain the rate of progress.

Burundi – population growth and conflict

Undernourishment has increased sharply and food production has fallen as Burundi struggles to cope with rapid population growth, severe land degradation and simmering civil conflict. Average daily food intake tumbled between 1980 and 1996 from 2 020 to 1 669 calories, far below minimum requirements. Production of cassava, sweet potatoes and beans, the mainstays of the Burundian diet, also declined.

With an annual growth rate of 2.7 percent, Burundi's population has been expanding far faster than its economy, resulting in a negative growth rate per person. Burundi's weak economy and geographic isolation have left the country overwhelmingly rural (with more than 90 percent of the people living in the countryside) and almost completely dependent on domestic food production.

The rapid pace of population growth has strained the country's limited land resources to the breaking point. More than 80 percent of Burundi's fragile, mountainous land is severely degraded. Both the area being cultivated and crop yields have been falling.

Burundi's production problems have been compounded by poorly developed transport and marketing facilities. In addition, civil conflict has disrupted production and further restricted trade opportunities.

Burundi's physical isolation constitutes a major barrier to trade and has obstructed growth of non-agricultural sectors. But the spiral of population growth, environmental degradation and falling agricultural productivity dictates that solutions to Burundi's food security problems must be found outside agriculture.



Statement: Feeding Minds, Fighting Hunger

A World Free From Hunger

Our vision is a world without hunger and malnutrition – a world in which each and every person can be assured of having the food they need to be well-nourished and healthy. Our vision is a world that provides for and protects the welfare and human dignity of all of its people. A world in which all children can grow, learn and flourish, developing into healthy, active, caring members of society.

While many achievements have been made in alleviating hunger and malnutrition worldwide, we still fall very far short of having a world in which all people can be free from hunger. We see education and information on issues related to world hunger, food security and nutrition as key factors in making this global vision a reality. Thus, we focus our efforts on the young and their teachers. If every year, on World Food Day (16 October), children all over the world are introduced simultaneously to common teaching materials about hunger and malnutrition and what needs to be done, would they be more likely to grow up understanding the interdependences of our world? If they are taught lessons from different parts of the world, from different cultures and circumstances, would they be more ready to work together to solve the problems of hunger and food insecurity? Are there ways in which a generation of young people can be nurtured to develop responsible global citizenship?

We believe that the answers to all these questions are “YES”. As educators, you are in a special position to instill in young people a sense of caring and commitment to join in the fight against hunger. The imagination, ideals and energy of young people represent a vital resource for the continuing development of their communities and nations. You, their teachers, can help make a difference through informing, sharing knowledge, encouraging participation, and showing the young that they have an important role to play in achieving a world free from hunger.

We encourage you to join with teachers and students all over the world to participate in Feeding Minds, Fighting Hunger.



Statement: About World Food Day

World Food Day is celebrated every year on 16 October to commemorate the founding of the Food and Agriculture Organization of the United Nations (FAO) in 1945. World Food Day aims to heighten public awareness of the plight of the world's hungry and malnourished and to encourage people worldwide to take action against hunger. More than 150 countries observe this event every year. In the United States, 450 national, private voluntary organizations sponsor World Food Day, and local groups are active in almost every community. First observed in 1981, each year World Food Day highlights a particular theme on which to focus activities. The theme for 2000 was "A Millennium Free From Hunger". Themes from the previous years are "Youth Against Hunger" (1999) and "Women Feed the World" (1998).

A related initiative is the TeleFood Campaign, in which television and radio broadcasts, concerts, celebrity appeals, sporting and other events pass on the message that it is time to do something about the problem of world hunger. The objective of TeleFood is to raise awareness and mobilize resources for microprojects on food security. Donations to TeleFood support hundreds of small projects in developing countries that help poor farmers grow more food or generate income to buy enough food to feed their families. Materials for recent World Food Day/TeleFood themes are available on the FAO Web site.