

# global Eye

Issue 8  
Spring  
1999

**World news** 2-3

**Eye on China** 4-7

**Focus on Agriculture** 8-11

**Working for change:**  
*Tools for Self Reliance* 12-13

Contributors to this issue include:  
Fiona Gibbs and David Wakefield.  
Edited by Vincent Bunce.

Thank you to Tools For Self  
Reliance and the Information  
Department at DFID for their  
assistance with this issue.

**Stop Press:**  
*Hurricane Mitch* 14

## Bangladesh Flood Crisis

Britain has given £21 million to the relief effort in Bangladesh following the recent floods. The money will go towards food relief and agricultural rehabilitation projects. The floods in Bangladesh were caused by exceptional monsoons, and over 20 million people have been badly affected. Many people have had to leave their homes and land during the floods, living in overcrowded shelters and camps. Food prices have also risen.

The Government of Bangladesh have described the floods as an 'economic disaster'. They recognise that the current rice crop will fall significantly below needs, and that the cost of damage to agriculture, roads and public buildings will be enormous. Bangladesh cannot meet the needs from its own resources and has asked for rapid international assistance. The immediate priority is for humanitarian relief; food, shelter, clean drinking water and health care. The main agricultural priority has been the distribution of rice seedlings, vegetable seeds and additional help to clear and plough fields.

The effect on the country's infrastructure has been extreme. Over 1,000 km of national roads have been damaged, 420 km of road embankments and 100 bridges have been damaged or destroyed. Railways have been submerged. River embankments, culverts and irrigation channels need rebuilding, and tube wells and sanitation facilities have been ruined.

## Sierra Leone

The Department for International Development (DFID) has pledged £6.5 million to the Government of Sierra Leone to help the country with its two-year disarmament plan. Following a violent civil war, President Kabbah's democratic government was returned to power in March 1998, and has undertaken a series of steps to educate and retrain thousands of former soldiers for their return to civilian life.

NB At the time of going to press, further conflict had broken out in Sierra Leone.

## War on Polio

The Prime Minister, Tony Blair, has announced a three year project to immunise sixteen million children in Kenya, Uganda and Tanzania against polio. Working alongside the World Health Organisation (WHO), the Prime Minister hopes to wipe out the disease in East Africa by the millennium. This project follows a similar campaign in Asia last year. (See 'World News' Global Eye issue 6, Summer 1998)

## Aid for Brazil

It has been announced that Britain is doubling its aid programme to Brazil. The £11 million package is intended to tackle environmental issues of national and global significance – particularly in the Brazilian rainforest. Stronger emphasis will also be placed on meeting the needs of poor people living in and around the rainforests. DFID will help the Government of Brazil by providing advice on public resource management, enabling them to reform and strengthen the provision of health services to the poor.

## Older People

An international study on the lives of older people throughout the developing world is being funded by the Department for International Development. The study, which is the first of its kind, is being carried out by Help Age International and focuses on the experiences of older people in small communities. The knowledge gained by the study will be used to shape future development policies. Older people will be asked about their lives, the contribution they make to their societies, the main health issues affecting them and what they need to improve their quality of life. The needs of these people are often overlooked when development issues are discussed. By the year 2000, it is expected that more than two thirds of the world's over-60s will be living in developing countries.

The **People's Republic of China** is the world's third largest country, covering an area of 9,596,960 square kilometres. Its massive population accounts for approximately a **fifth of the world's total**.

Physically and socially, China is a country of great contrasts. The west of the country is largely **unsettled and barren**. The mountains and plateaus of this cold region are unsuitable for most types of agriculture. The **lack of rainfall** in the continental interior has formed a large desert, which covers **one sixth** of China's total area. In contrast the east of the country is **rich and fertile**. The flood plains of China's large rivers, such as the **Yangtse** and the **Yellow River**, provide good farming land, and are densely populated. In the north, **wheat is the staple crop**, with maize, millet, soya beans and vegetables also grown. In the central area, **cotton** is grown as a cash crop, while in the **sub-tropical** south, **rice**, tea, tobacco and rubber are produced.

Since 1949, China has been ruled by the **communist party**.

People	China	UK
Population (million)	<b>1,220.2</b>	<b>58.1</b>
Life Expectancy (years)	<b>69.2</b>	<b>76.8</b>
Infant Mortality (per 1,000 births)	<b>38</b>	<b>6</b>
Literacy (%)	<b>82</b>	<b>99</b>
Urban Population (% of total)	<b>30</b>	<b>89</b>
<b>Economic and Social</b>		
GNP (US \$ per capita)	<b>620</b>	<b>18,700</b>
TVs (per 1000 people)	<b>247</b>	<b>612</b>
Radios (per 1000 people)	<b>185</b>	<b>1,433</b>
<b>Employment (%)</b>		
Agriculture	<b>72</b>	<b>2</b>
Industry	<b>15</b>	<b>29</b>
Services	<b>13</b>	<b>69</b>

Source: UN Human Development Report, 1998.

## China is:

- the world's most highly populated country, with over one billion inhabitants
- the world's principal producer of tungsten, which is used in light bulbs
- covered by only one time zone



## Development Assistance

China is changing rapidly, as a market-based economy takes hold and the traditionally rural population becomes an increasingly urban and industrialised society. The Chinese Government is committed to eliminating poverty and tackling the problems caused by such rapid expansion, but the size of the country and the population, mean that despite huge efforts, there is still much work to be done. Since 1979 when reforms began, 200 million people have been lifted out of poverty (based on the World Bank's US \$1 per day measure) but over 270 million are still below this level.

Attempts are being made to encourage sustainable development which will directly affect the quality of life for the country's poor, with most efforts being focused on education and health provision, administrative reforms and the improvement of the environment.

Most foreign aid to China is provided by Japan, the largest donor, Germany, France, Canada, Australia, Italy and the UK. The World Bank provides US \$ 2.5–3 million annually to support a number of projects, especially those related to economic reforms, transport, energy and social improvements, and The Asian Development Bank, also makes a large financial commitment. On a smaller scale, a number of NGOs, such as Save the Children (SCF) and Health Unlimited, are involved in a range of social and community-based activities.

## Agricultural Changes

The economic boom in China has been driven by industry, not agriculture. In 1993, farm production fell drastically and the urban demand for food rose, resulting in spiralling inflation of food prices. The government saw the need for action, and in 1995 a five year development plan was initiated, to increase farm yields and stop rural to urban migration. Money was provided to modernise farm equipment and techniques, install irrigation schemes, control floods, and improve rural infrastructure.

The government also realised that foreign investment, marketing experience and technology would help rural farmers to greatly increase their output. For example, McDonalds aim to grow vegetables in China to supply their restaurants, and other corporate entrepreneurs have been quick to see the potential. The Ankang Group from Mongolia is establishing a large farm on reclaimed wasteland to provide food for their chain of 'Mongolian style' fast-food outlets, and farms producing meats, such as chicken, pork, ostrich and even crocodile are growing fast to meet the increased demand for meat from a nation with changing dietary habits.

Attempts have been made to protect small farmers: wherever possible, existing plots are maintained, and not combined into large agri-businesses. In return for essentials, like seeds or tractors, companies are guaranteed a share of the harvest.

# Environmental Problems

The standard of living for many people in China has improved greatly over the last twenty years, especially in urban areas. This can be seen in the growth in ownership of consumer goods, such as TV sets, air conditioners and motor vehicles. For example, in 1984 only 3% of households in Beijing had fridges, by 1990, this had risen to 60%. Initially these changes were welcomed, but little attention was paid to the harmful affects on the environment. Inefficient energy consumption, high levels of air pollution and poor controls on industrial waste have all combined to undermine China's growth.

It is estimated that more than 14 million tons of coal dust, 16 million tons of sulphur dioxide, 36 billion tons of contaminated water and 700 million tons of industrial waste are produced in China every year. The government has attempted to combat this, by drawing up an action plan for sustainable development, including the abolition of ozone-depleting substances, the introduction of environmentally friendly technologies and the use of alternative energy sources. China currently uses 1.1 billion tons of coal each year, and although it cannot all be replaced with 'green energies', attempts are being made to exploit geothermal, solar, hydro-power and wind energy. Despite these efforts, without enforceable laws and wider public education it will take many years to have a noticeable effect.

# Women in China

Traditionally women in China have had fewer rights and less education than men. However, the introduction of a market economy, has altered things. In rural areas, women now account for over 50% of the country's agricultural output, taking responsibility for farms and livestock, whilst in the cities, women now work in all areas of industry and finance. The average contribution made by women to the household income has risen from 25 to 40 % in the last two decades, providing women with a greater influence over family decisions.

Education for girls has been targeted by the Chinese government, with 97% of 7-11 year olds now attending school. It is hoped that by the year 2000 illiteracy will be eradicated in the young female population, and more girls will be staying on for secondary and higher education.

However, it is not all good news, as women tend to be less fairly treated by employers than men, and usually work for a lower wage. Despite legislation introduced in 1992, equal land rights do not exist for women in many rural areas, and prostitution is flourishing in urban areas as women search for work.

## Women now account for % of the country's workforce

43% of industrial  
19% of transport & communications  
54% of public health  
42% of education  
37% of scientific & technological  
40% of financial

**Most people** in developing countries are involved with **agriculture**. In many African and Asian countries over 60% of the workforce is employed in agriculture, in contrast to just 2% in the UK.

## Global Food Supplies

According to the United Nations the current global food supply represents 2,740 calories per person, compared with 2,360 calories 30 years ago. The world's food supply is also expected to grow faster than population until at least 2010. Global production therefore provides enough food for everyone on Earth to get an adequate diet. Despite this many people still go hungry.

## The Big Three

Seventy per cent of the world's cultivated land is devoted to cereal production, mainly wheat, rice, and corn (maize).

These grains are easy to store and transport, and contain a mixture of carbohydrates, proteins and vitamins. Most human nutrition comes from eating grains or from eating animals fed on grains.

### % Workforce employed in agriculture in selected developing countries

Bangladesh	65
Bolivia	47
China	72
Egypt	40
Guatemala	52
India	64
Kenya	80
Namibia	49
Phillipines	46
Thailand	64

### 1993 Harvest figures (millions of tons)

#### Rice

520 (mostly for human consumption)

#### Wheat

560 (20% used to feed livestock)

#### Corn

529 (65% used to feed livestock)

Source: UN Human Development Report, 1998

**carbohydrates** - include sugar and starch, they provide the body with energy and fibre

**proteins** - such as meat, cheese and fish, are essential for the growth and repair of body tissues

**vitamins** - each vitamin has a specific function e.g. vitamin C helps in healing wounds, vitamin B12 is needed for the formation of blood cells



# Food distribution and production

Whilst there is enough food in the world it is not distributed evenly. Developed countries can afford to import some of their food supply. In contrast to this developing countries face a number of obstacles as they attempt to feed their population.

Throughout the developing world, farms are generally much smaller than in the UK. Often they cover just a few hectares, with fields scattered some way from one another. This means farmers waste a lot of time and energy moving between their fields. It also makes it difficult to control pests and diseases, or to develop an irrigation system.

Many farmers don't own the land they work on. As a result they have no real incentive to improve the land, as they are not certain they will be allowed to farm the land in the future. Land ownership is a particular problem for women. Inheritance laws often prohibit women's ownership of land, so the right to use land is often dependent on the husband. Yet in many developing countries it is women who are responsible for growing the family's food.

Poor transport facilities, and lack of access to finance also restrict the ability of developing world farmers to increase output. Despite this, **yields** have improved in many developing countries, (as food supplies have kept pace with the increase in global population).

## Gene Revolution

During the 1960's the use of chemical fertilisers and insecticides, and new varieties of plant led to huge increases in crop yields. Between 1967 and 1992 the world rice harvest doubled. In Indonesia the crop actually tripled, from 15 to 48 millions tons. This success was achieved by breeding rice plants which:

- had stronger stalks to bear the increased number of grains
- were smaller in height reducing the risk of damage
- had a reduced growing period of 110 days (rather than 160)
- had resistance to a range of diseases and insects

Recent advances in biotechnology and genetic engineering offer the possibility of even more dramatic advances. However such scientific techniques require an intensive approach to agriculture, with single crops grown in huge fields. Will this help farmers in developing countries, most of whom operate on a small scale or even subsistence level? If they switch to genetically engineered seeds they will have to abandon traditional farming practices. These types of seeds often require more scarce water, as well as being more expensive. Some companies producing genetically engineered seeds charge a 'technical fee' over and above the price of the seed. In response, farmers in India are up their own seed bank to preserve existing varieties rather than relying on biotechnology corporations.

### Glossary

**biotechnology** – modern, high-tech methods of food production

**genetic engineering** – transfer of genes from a plant or animal directly into the cells of another

**seed bank** – seeds kept in cold storage for future use

**yield** – amount of a crop produced

## Case Study 1: Sustainable farming in Thailand

Chiang Thaidee lives in Surin, a dry, infertile area of north east Thailand. This region is flat and treeless, and even if there is enough rain it is only possible to grow one rice crop a year. During the dry season the ground is baked hard like a desert.

### Chiang's farm income

Activity	Income (baht per year*)
Fruit	100,000
Fish	75,000
Chickens	48,000
Pigs	27,000
Fruit tree seedlings	7,500
Mushrooms	3,000

Exchange rate (October 1998):

\*£1=65 Thai baht

In 1971 Chiang bought one hectare of land with money he had saved from a series of jobs – labourer, merchant and electrician. He started work on his land by digging a large pond. He decided not to hire a tractor, because he didn't want to get into debt, instead he dug the pond by hand over several years. At first the pond would not hold water through the dry season, but by lining it with animal manure and lime, it gradually became sealed.

This barren plot of land has gradually become an oasis of water, trees and animals. There are now 12 ponds covering almost half the land. Mango, lemon, coconut, banana, papaya, guava and other fruit trees grow around the ponds. Herbs and shrubs have been planted underneath the trees. Besides providing food the fruit is a valuable source of income. Chiang also grows and sells seedlings to other farmers as a way of earning more money.

The ponds are full of fish, which provide high protein food throughout the year. Chiang has set up breeding ponds, and sells fish from these to other farmers. Chickens and ducks freely roam around the farm. They help by eating termites and other pests, provide fertiliser for the trees and plants, and food for the fish. Chiang buys young chickens which are fattened for a month before being sold at a profit. He also raises pigs, and harvests around 300kg of mushrooms a year.

Apart from selling his produce, Chiang has a small kitchen garden. Here the family grow vegetables for their own use. This saves money and they also know that the vegetables they eat have not been sprayed with insecticides.

Chiang's hard work has built a sustainable farm, one which sets an example to other farmers in the region. Using farming methods which do not harm the environment, he has provided his family with an adequate diet and income, providing them with greater security than might otherwise have been the case.

## Case Study 2: Integrated Pest Management (IPM)

This is an approach to pest control which encourages natural solutions to agricultural, human and livestock health problems. Natural predators not chemicals are used to control weeds and pests. IPM is especially effective for farmers who don't know how to use, or simply cannot afford, chemical pesticides and insecticides.

In the early 1970's the cassava mealybug and cassava green mite invaded Africa. By 1987 they had spread to 31 countries, causing considerable damage to cassava crops. Subsistence farmers, dependent on cassava, were most at risk because they could not afford the chemical pesticide "s needed to fight the mealybug.

In order to combat the pest researchers turned to South America, home of the mealybug. They found 14 natural enemies which could be used to control the mealybug. A small parasitic wasp (*Epidinacarsis lopezi*) was found to be the most effective. The wasps were mass reared and distributed to nearly 30 African countries. The wasp continues to control the cassava mealybug, although most farmers are unaware of its presence. Estimates suggest that it has saved African farmers hundreds of millions of dollars in reduced crop losses.

## IPM success stories

- In Brazil the use of pesticides in soyabean production has been reduced by more than 80% during the past seven years.
- Pesticide use in cotton production in Jiangsu Province in China has decreased by 90%. Pest control costs have been cut by 85% whilst yields have still increased.
- IPM has cut insecticide use in Orissa, India by 30-50%.

**Have you ever** tried to bang in a nail and not had a hammer? Or not known how to use a saw? It is usually at that point we realise that having the right tools and good training makes all the difference.

Every year **Tools For Self Reliance (TFSR)** supports at least **700 African groups** in some of the poorest countries, by providing them with **tools** they have requested. These requests are collected and assessed by African organisations working with TFSR who have local knowledge to ensure that the tools will be **really useful to local communities**, and local links which ensure that the tools get to the people who really need them.

TFSR works with local organisations in Ghana, Mozambique, Sierra Leone, Tanzania, Uganda and Zimbabwe. By focussing their efforts on these countries where they have developed links, TFSR hope to make best use of their resources. This might be to start up a training course so that young people can become blacksmiths, tailors, carpenters or builders.

Here in the UK, 70 volunteer groups collect and refurbish hand tools. These go to make up carpentry kits, or whatever else has been asked for, from anvils and vices to hammers and sewing machines. Volunteers of all ages and backgrounds get involved. Many help because it gives them the chance to make a practical contribution and to find out about the people who receive the tools. Visits from African craftworkers give the UK groups the chance to make a personal link. This is also done with case studies and leaflets which help to set out the development issues.

Since 1979 when TFSR started, well over half a million tools have been refurbished and sent overseas, assisting many thousands of people. In addition to this, recycling and re-using these well made tools helps to prevent waste in this country.

**Aid must reach the people  
.... the easiest way to reach  
them is with tools.**

**Tractors rust away but not  
the hammer in the hand of  
the person who uses it**

*Julius Nyerere, former President of Tanzania and TFSR Patron.*

In March 1997 a conference brought together key African organisations who work with TFSR to share experiences, build stronger links and create a strategy for the new millennium. One outcome was the creation of the Network for African Craftworkers in the six core TFSR countries, so that communication and support could increase.

This year, TFSR celebrates its twentieth birthday. All kinds of events, from parties to fund-raising and promotions will happen. The famous saying: *"Give someone a fish and feed them for a day. Give them a fishing rod and feed them for life"* can be taken further. If TFSR give people the tools and training to make their own fishing rods they can become truly self reliant, which is their long term aim.

**Tools For Self Reliance  
aims to give practical  
help to practical people.**

# Hurricane Mitch: *devastation in Central America*

## What happened?

Central America is struggling with the aftermath of the area's worst natural disaster this century. Hurricane Mitch hit in October 1998 and devastated huge areas of Nicaragua, Honduras, Guatemala and El Salvador. Over 10,000 people are feared dead and millions have been left homeless.

The hurricane brought high winds and torrential rain for several days, causing extensive flooding and landslides. Bridges, roads and buildings were all destroyed, and in some cases entire villages were demolished. In Honduras alone, almost 70% of the year's crops have been ruined and over 560,000 people are living in makeshift shelters. Estimates suggest that it will take the country 20 years to recover.

## Emergency needs

### Threat of disease

Damage to the water supply system, means there is a shortage of safe drinking water. Outbreaks of diseases including cholera, pneumonia, diarrhoea, and conjunctivitis are feared. Stagnant and contaminated water also increase the spread of diseases like malaria and dengue fever. Water purification tablets and portable water pumps are needed whilst long term repairs are made.

### Food and medicine shortages

Food supplies are low and crops have been destroyed. Staple foods such as rice, maize and tinned fish are being brought in from other countries to feed the people. Most medicine reserves were used in the immediate response to the emergency and replacements are urgently needed.

### Infrastructure repairs

Destruction of roads and bridges has made access to affected areas difficult and is restricting the distribution of food, medicines and other supplies. Helicopters and boats are being used to reach cut-off areas. Repair work on roads and bridges is essential.

### Homelessness

Materials are needed to build temporary shelters for the millions of homeless people, before more permanent homes can be rebuilt.

### Loss of income

The deaths of so many people have left countless families to contend with a loss of income. Wide-spread destruction of factories, also means that many survivors have lost their jobs and wages. In rural areas, seeds and tools will be needed to replace lost crops and prepare for the next harvest.