

**UNITED NATIONS OFFICE FOR THE COORDINATION OF
HUMANITARIAN AFFAIRS (OCHA)**

CHERNOBYL

A CONTINUING CATASTROPHE



UNITED NATIONS

“Mobilize and coordinate the collective efforts of the international community, in particular those of the United Nations system, to meet in a coherent and timely manner the needs of those exposed to human suffering and material destruction in disasters and emergencies. This involves reducing vulnerability, promoting solutions to root causes and facilitating the smooth transition from relief to rehabilitation and development.”

(OCHA Mission Statement)

Cover Photo: Courtesy of Earthbase/Liaison Agency

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UNITED NATIONS
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NOTE

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FOREWORD

“Chernobyl” is a word we would all like to erase from our memory. It recalls an event—the explosion of a nuclear reactor—which happened in April 1986, opening a Pandora’s box of invisible enemies and nameless anxieties in people’s minds, but which most of us probably now think of as safely relegated to the past.

Yet there are two compelling reasons why this tragedy must not be forgotten.

First, if we forget Chernobyl we increase the risk of more such technological and environmental disasters in the future. Alas, errors of this kind cannot be remedied. But their recurrence can be prevented.

Secondly, more than seven million of our fellow human beings do not have the luxury of forgetting. They are still suffering, every day, as a result of what happened fourteen years ago. Indeed, the legacy of Chernobyl will be with us, and with our descendants, for generations to come.

This booklet illustrates the health, economic, environmental, psychological and social effects of the catastrophe, and the heroic but desperate efforts at rehabilitation made by local communities. It depicts a gloomy situation where the victims often feel unwanted, without the means to recover and sustain themselves.

In 1997 the United Nations launched a Chernobyl humanitarian programme. Unhappily, funding for this programme has fallen far short of what is needed. The original list of 60 projects has had to be shortened to only nine, selected as the absolute priorities for funding through the United Nations Appeal for International Cooperation on Chernobyl.

These nine projects could, if implemented, make a vital difference to the lives of many people. Indeed they may fairly be described as the minimum the international community should do, not only for the victims of Chernobyl themselves but also to ensure that future generations throughout the world can learn some lessons, and reap some benefits, from their ordeal. I appeal to Governments and to institutions—both intergovern-

mental and non-governmental—to give these projects their most serious and urgent consideration.

I also appeal to the international community as a whole to rethink its response to nuclear accidents, bearing in mind our humanitarian obligation to help those whose lives have been shattered or disrupted, as well as the prudential need to prevent future catastrophes. In the case of Chernobyl, the victims live in three countries: Belarus, Ukraine and the Russian Federation. The exact number of them may never be known. But three million children require physical treatment, and not until 2016, at the earliest, will we know the full number of those likely to develop serious medical conditions. The most vulnerable victims were, in fact, young children or babies unborn at the moment when the reactor exploded. Their adulthood—now fast approaching—is likely to be blighted by that moment, as their childhood has been. Many will die prematurely. Are we to let them live, and die, believing the world indifferent to their plight?

A handwritten signature in black ink, appearing to read 'K. Annan', with a stylized, cursive script.

Kofi A. Annan
Secretary-General of the United Nations

INTRODUCTION

Most people think of the nuclear accident at Chernobyl as an event that has been consigned to history, but the truth is that the accident continues to have a devastating impact on the populations of three countries. In fact, although more than thirteen years have passed since the event, the worst effects on the health of the people affected may well be yet to come. While the explosive stories of the meltdown and clouds of radiation have long since faded from the headlines, the real human, economic, social, health and environmental catastrophe has only just begun. The governments of the most affected countries spend a large proportion of their national budgets on alleviating human suffering caused by the accident, but in the current economic climate it is not nearly enough. Much work has been done to set relief projects in motion, but unfortunately in the tide of emergencies now facing the international community, Chernobyl has been largely forgotten and only a fraction of the required external resources has been mobilized. This booklet aims to turn the spotlight back on Chernobyl and remind people how much the victims of this tragic accident still need their help.



Construction of the reactor No. 4 sarcophagus

WHAT HAPPENED

Forty seconds after 0123 hours on 26 April 1986 during a safety experiment at the Chernobyl Nuclear Power Plant in the north of the Ukraine, an operator pressed a button. Owing to a design fault, the reactor went into meltdown and released a cloud of radiation that spread across the entire Northern Hemisphere. Over the next few weeks, the operator lay dying in hospital alongside his colleagues, his radiation-tanned skin turning darker each day until it was completely charred. Over and over again, he asked himself what had gone wrong. Whatever conclusion he reached, he could never have understood the full magnitude of the catastrophe, the consequences of which would continue to devastate the region for decades. An area of 155,000 km², home to 7.1 million people including more than 3 million children, was contaminated with hazardous levels of radiation. At least 100 times as much radiation was released by this accident as by the two atomic bombs dropped on Hiroshima and Nagasaki combined.

Reactor number 4 was completely destroyed by explosions that blew the roof off the reactor building. Three people were killed in the explosion itself. One body remained inside the reactor, too highly contaminated to be moved. Of the first emergency workers to arrive on the scene, 134 were diagnosed with acute radiation syndrome. Of these, 28 died within the first three months.

Over 600,000 emergency workers, or “liquidators”, participated in the rescue and relief operation, clearing up radioactive debris and building a shelter, or “sarcophagus”, over the destroyed reactor. They now live in Belarus, the Russian Federation and Ukraine, and must be constantly monitored for the effects of exposure to radiation.

THE GENERAL SITUATION IN THE MOST AFFECTED COUNTRIES

Belarus

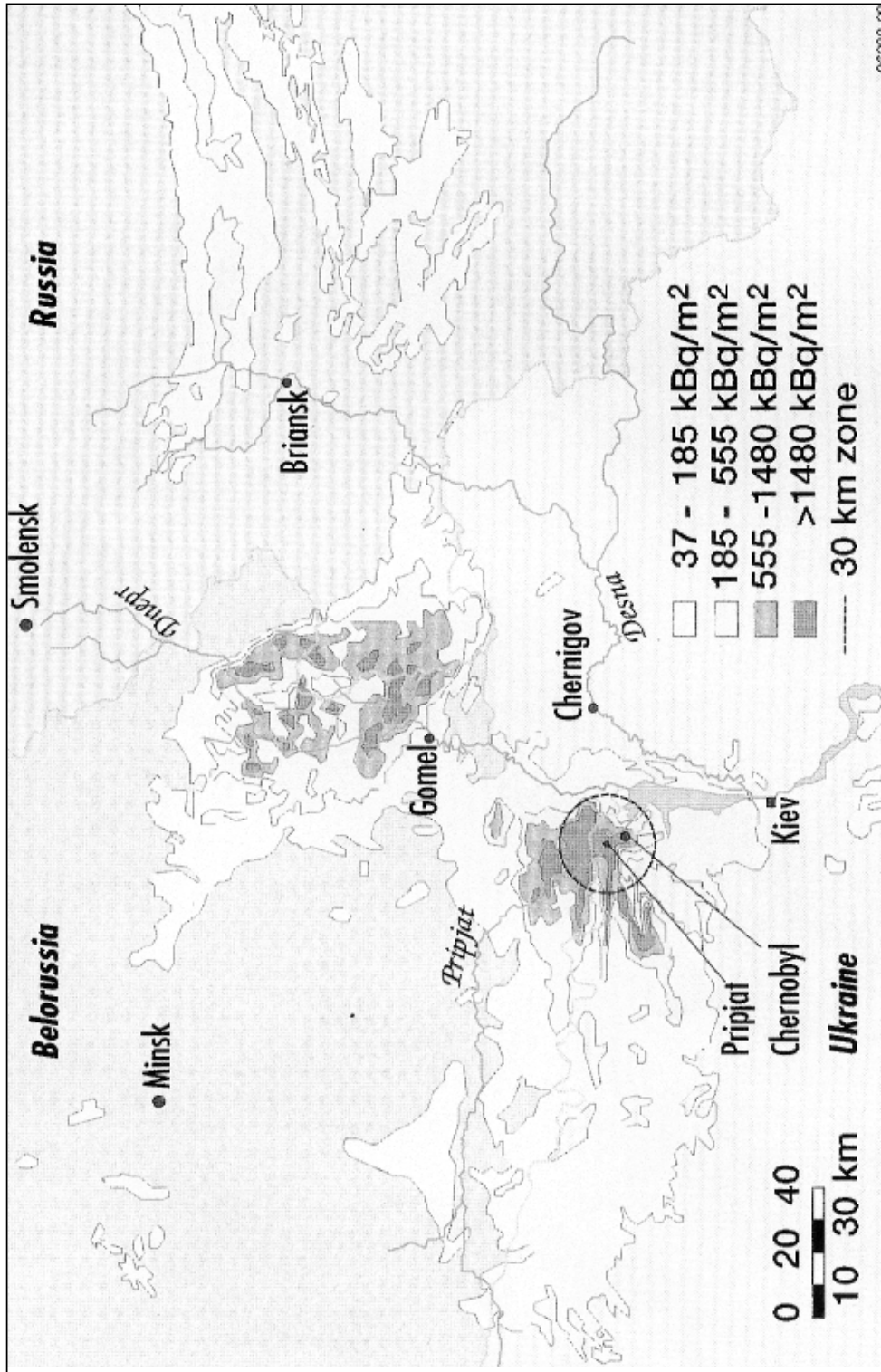
Approximately 70 per cent of the radioactive fallout descended on Belarus, making it the worst contaminated of all the affected countries. Twenty per cent of its forests are still contaminated and cultivation of 6,000 km² of agricultural land has been ruled out by law. Nine per cent of all government expenditure is channelled into mitigation of the direct consequences of the Chernobyl disaster and 109,000 people have been resettled.

Ukraine

In Ukraine, nearly 3.5 million people, including 1.5 million children, were directly affected by the accident. Half a million children still live in contaminated areas today. Nearly 73,000 Ukrainians are now permanent invalids as a result of Chernobyl and 91,200 people had to be resettled from the 30 km exclusion zone encircling the site of the accident. More than 50,000 km² of Ukraine have been contaminated. As a result of the economic crisis, the Ukrainian Government manages to make available only a part of the money originally planned for Chernobyl relief.

Russian Federation

In the Russian Federation, an area of 57,000 km² was contaminated, home to 2.7 million people. A total of 200,000 Russians participated in the emergency clean-up operation, of whom 46,000 are now invalids as a result. About 1.8 million people, including 300,000 children, continue to live on contaminated land, while 50,000 have been resettled from the most dangerous areas. Apart from the “liquidators”, 570,000 people are registered as affected. Similar to Ukraine, the Government is only able to provide a portion of the required relief funds.



Caesium 137 contamination in Belarus, the Russian Federation, Ukraine in kilobecquerel per m² – Courtesy: DARA

Evacuation and Resettlement

So far, between the three countries, 250,000 people have been evacuated from the most contaminated areas. Millions of people still live in areas with high levels of contamination. Resettlement on this scale is a massive operation that continues to be a tremendous economic burden. Whole new towns have had to be built, ready for immediate occupation. This upheaval has placed an enormous strain on people's lives. Building a new town is not as simple as putting up a few tower blocks; whole communities must be reconstructed complete with all the necessary services, institutions, jobs, hospitals and so on. Functioning communities are organic and complex, so it is not surprising that when a new community is created from scratch, it does not always run smoothly. The local economies of the new settlements have to be subsidized by the national governments and there are high levels of unemployment.

In Ukraine, a new town called Slavutich had to be built for the people evacuated from Pripyat, a town with a population of 55,000 that had been home to the workers at the Chernobyl Nuclear Power Plant. Today 6,000 residents of Slavutich still work at the plant and it is not clear how the town will cope when the power station is finally closed down.

Health Effects

It is 14 years since the accident, and yet the worst may still come. So far the biggest visible threat to health has been thyroid cancer. During the accident, there were large emissions of radioactive iodine, which affects the thyroid gland and can lead to thyroid cancer as well as other thyroid disorders. Radioactive iodine has a short half-life and so decays quickly, ceasing to contaminate the region. However, it takes some time for thyroid cancer to develop, and the people most vulnerable are those who were young children or babies unborn at the time of the accident.

The number of people with thyroid cancer began to increase about five years after the accident. This number continues to rise. In some areas the incidence is over a hundred times higher than before the accident. Scientists originally predicted that the incidence would not peak until 2006, and it was expected that the figure would eventually reach 6,600,

but recently the number of cases has exceeded expectations. Over 11,000 cases of thyroid cancer have already been reported.

The World Health Organization's International Thyroid Project has found evidence suggesting that even relatively low levels of radiation expo-

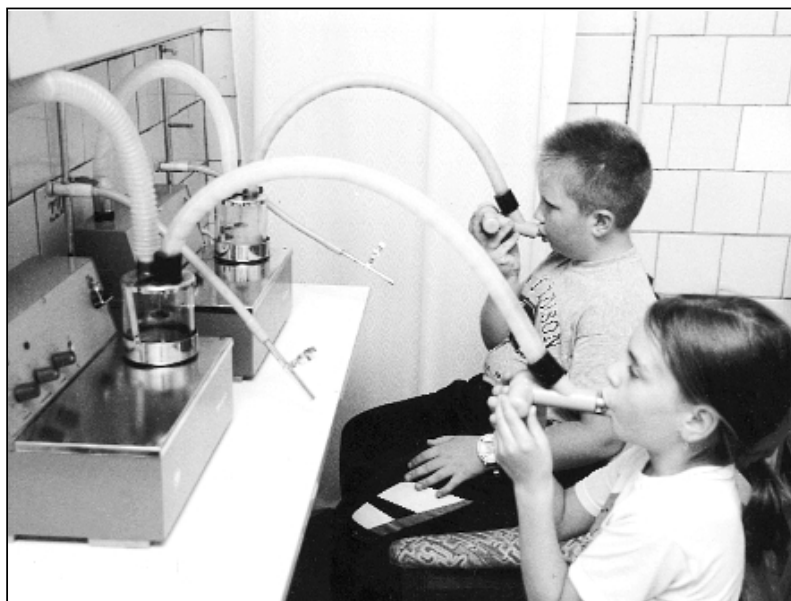
sure may result in underactive thyroid syndrome, also known as hypothyroidism. Hypothyroidism can have the following effects: in new-borns, severe mental and growth retardation; in children it can cause dwarfism; and in adults it can cause lethargy, cold intolerance, weight gain, swelling of hands and feet, increased menstrual flow, infertility and depressed heart function.

Evidence is also coming to light suggesting that lung, heart and kidney problems can also be traced to radiation released from Chernobyl.

The health impact of the disaster is not restricted to the direct effects of radiation exposure. The contamination of agricultural land has practically nullified agricultural production, and this has had a severe nutritional impact on the population. According to EMERCOM (the Ministry of Emergencies), 80 per cent of the population of Belarus have health problems ranging from vitamin deficiencies to thyroid cancers.

Long-term Health Effects

Very little is known about the long-term health effects of exposure to radiation because it is a relatively new phenomenon, and the full consequences may not be apparent for a very long time.



Children from the affected region in sanatorium Mayak near Kiev

Statistics show that, so far, thyroid cancer is the primary form of cancer which can be directly linked with Chernobyl, but most other cancers would not start to show up for at least 10 years after the accident, and might well take 15–20 years to materialize. When other types of cancer do materialize, it will be difficult to prove that they were caused by radiation exposure, because medical science is not yet able to differentiate between cancers resulting from exposure to radiation and cancers resulting from other causes.

Recent studies have shown that some people, who were children at the time of the disaster, have developed rogue antibodies which fail to recognize the body's own tissue and attack it as though it were a foreign infection. In this case, the antibodies are said to be attacking the thyroid, and this may lead to hypothyroidism. Young people from two villages were tested. One of these villages was heavily contaminated, while the other escaped with negligible contamination. No significant difference in thyroid function was found, but the young people from the contaminated

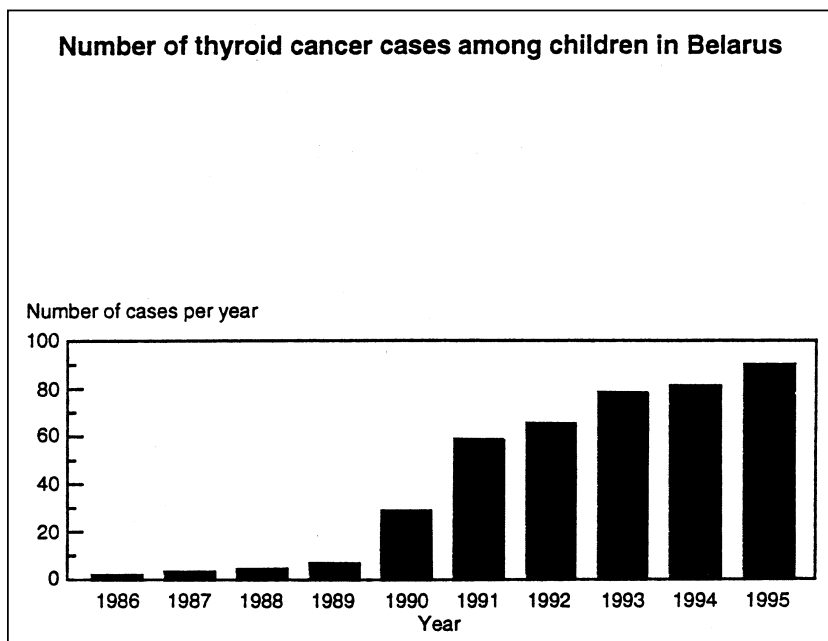


*Medical screening of the thyroid gland, Vasilyanka, Ukraine
Courtesy: IFRC*

village were five times more likely to have developed anti-thyroid gland antibodies than their counterparts.

There is some controversy about the findings of the various research projects addressing the environmental and health effects of Chernobyl, but

the one thing that emerges crystal clear is the importance of continuing medical research. There are several reasons why this research is vital for the people living in the affected areas. Firstly, better understanding of the health effects of radiation exposure is essential for accurate diagnosis, and appropriate treatment. Secondly, and perhaps equally important, the better the understanding of the health effects, the easier it is to provide convincing reassurance to the residents of the affected area, whose health has suffered enormously from the psychological effects of living with contamination. Another good case for extensive medical research is the sad fact that it will very likely prove vital for the victims of future nuclear accidents. Aside from this, terrible though it may sound, it is also a unique opportunity for medical research, which may bear all sorts of unexpected fruit.



Number of thyroid cancer cases among children in Belarus

Psychological and Social Effects

Radioactive contamination is an invisible aura. The meadows around Chernobyl are teeming with wildlife. Wild boar, bison, wolves, foxes and all kinds of rare birds roam through the wild flowers. Old women pick berries and mushrooms in the forest and sell them by the

roadside. The rivers team with fish that have been allowed to grow unhooked to over ten feet long. At first glance it could be the Garden of Eden, for radiation is not only invisible, it cloaks itself in nature. Around Chernobyl, nature is protected from man by contamination. But you can feel that something is horribly wrong. Radiation has an evil aura, which is partly physical and partly perceived, but both are equally real. The physical aspect is the irradiated particles which release energy in the process of decay, which can damage living tissue. The perceived aspect is the feeling of being surrounded by an invisible danger that we know can harm us but that we do not understand. This feeling is shared by more than seven million people and is as harmful as the physical effects of radiation exposure.

One of the most important factors pertaining to the psychosocial effects of the accident on the affected population is the quality of public information. The Soviet Union has left these people with a deep mistrust of the authorities. In Chernobyl itself, information about the seriousness of the accident was withheld for weeks, while children played outdoors exposing themselves to radiation. In the town of Pripyat, just a mile or so from the reactor, 36 hours passed before residents were told that there was any sort of danger. A teacher took her class of small children out onto the bridge to watch the distant firemen as they struggled to control the chaos at the leaking reactor. Those children have all developed thyroid carcinomas.

Not surprisingly, people in the region have very little faith in public information, particularly information about their own safety. People do not trust radiation safety labels on food products; they do not trust any home produce; they do not trust the authorities. Even people in very mildly contaminated areas who are not at risk from radiation-related health problems, believe that they are in danger, and live in fear. Every illness and abnormality is blamed on Chernobyl, and people are often afraid to have children. Women who have moved away from the Chernobyl region often try to keep their former home a secret for fear that men will not wish to marry them. Limited knowledge of the long-term effects of exposure to radiation, along with a general distrust of public information and the inevitable rumours of hideous ailments and genetic mutants, have



Session of psychological rehabilitation

induced psychological trauma and prolonged panic in the hearts and minds of millions of people.

Economic Effects

Apart from the obvious enormous cost of emergency relief and relocation, the accident has also taken a massive toll on the region's ability to create wealth. Once the breadbasket of the Soviet Union, the affected areas, particularly in Ukraine, include what was once the most fertile land in the USSR. When Hitler invaded this area, he described it as "the finest soil in the world". The region which once provided food for people throughout the Soviet Union, is now reduced to importing everything. No one claims that if it were not for Chernobyl the area would be an economic miracle, but it is undeniable that the disaster has had a devastating impact on the economy. Today, even safe food products grown in the area are virtually impossible to sell because nobody trusts that they are safe. The affected region also includes an immense area of forest, which is now

contaminated. Timber was once a sort of hard currency in this region, but it, too, is now impossible to sell. These difficulties leave the various governments with massive and ever-increasing trade deficits, and consequently fewer and fewer funds for the huge clean-up and resettlement projects.

Environmental Effects

A total area of 155,000 km² is still contaminated with the dangerous radioactive isotopes caesium 137 and strontium 90, which have long radioactive half-lives and will continue to threaten the environment throughout most of the next century. The affected area consists of vast forests and prime agricultural land. In Ukraine alone, more than a million hectares of forest are contaminated. The forests and farmland together constituted the livelihood of the people. They are now effectively barren. As well as cultivated crops, wild food sources are also contaminated—



*Sign near Mogilev, Belarus: berries and mushrooms need screening for radionuclides –
Courtesy: IFRC*

berries, mushrooms, fish and game are all a threat to life. As radionuclides slowly penetrate the soil they filter down into the water-table and poison the rivers and lakes. The threat of radioactive pollution looms over the Dnieper River in Ukraine, which is the water supply for several million people.

PERSISTING DANGERS OF FURTHER RADIOACTIVE CONTAMINATION

Even in areas where clean-up operations have been successful, or where people have been satisfactorily resettled, this is not the end of the story, as there are still a number of ways in which recontamination might occur.

Flooding

If the plain on which the Chernobyl Nuclear Power Plant stands were to flood, radionuclides settled in the topsoil could be washed into the Pripyat River and Dnieper reservoirs, the main water supply for millions of people.

Contaminated Waste Dumps

Wherever clean-up operations have been mounted, there are burial sites for contaminated waste. These are not always as deep or as safe as they should be, and need to be very carefully monitored. There is a real danger that radioactive particles could be washed down into the groundwater and thus contaminate rivers and water supplies.

Contaminated Forests and Forest Fires

Dangerous levels of radioactive contamination have been measured in huge areas of forest land. One major cause for concern is the risk of forest fires, which would send clouds of smoke carrying radioactive



We wish for a future free of concern

material into the atmosphere, leaving us once again at the mercy of the winds.

Similar Accidents

There is real concern for the safety of other nuclear power plants in the former Soviet Union. No reactor has been built to the Chernobyl design (RBMK) outside the Soviet Union; it had certain design features that would have prevented it from receiving a licence in the West. There are 14 RBMK currently operating in the former Soviet Union, including Chernobyl Reactor Number 3, which shares a wall with the “sarcophagus”. Ukraine is noted as a severely energy-starved economy, and Chernobyl supplies a significant proportion of this country’s electricity.

WHY WE MUST HELP

The Chernobyl nuclear disaster has caused suffering and hardship on an enormous scale. But when people look at the facts for the first time

(the number of people who have died, the absence of any compelling evidence of genetic deformities), their initial reaction is often to think that after all it is not as bad as they originally thought. All too rarely have the media drawn sufficient attention to the scale and complexity of the consequences of this one industrial accident. An ugly stain has spread over a big chunk of the world. The psychological and social impact on the population and the toll that it has taken on the various economies is immeasurable. This area might have stood a good chance of emerging from the ashes of the Soviet Union as a progressive and optimistic society, but Chernobyl has destroyed that chance. The inhabitants of this area are still struggling to rebuild their lives.

The best reason for helping these people is that they are so easy to help. They are the first ones to help themselves. Their education level is one of the highest in the world, there are many well qualified people, and the infrastructure is intact. The relief projects detailed below have all been meticulously worked out by the United Nations Inter-Agency Task Force on Chernobyl and the benefits are instantly visible and measurable. In every project at every stage of the process, all the money would remain under the direct control of the international organizations.

The international community has already done a great deal to help in this region, and it is crucial that support should continue so as not to waste any of the previous good work. With support, this part of the world would stand a good chance of getting back on track towards health and prosperity. The Chernobyl Trust Fund, established by the United Nations and administered by OCHA, is not a bottomless pit, it is an investment that will pay off.

Economic Rehabilitation

If, on 25 April 1986, one could have foreseen the break-up of the Soviet Union, the region that would have looked the most promising in terms of its economic future would have been Belarus, Ukraine and Western Russia. Now these countries must import everything they eat. There are two ways in which aid can be of direct assistance. The first is to lessen the financial burden of the governments concerned by providing

the funds, organizational and structural assistance and expertise needed for carrying out urgent health and safety measures. The second is to help them restructure their economies so as to minimize the economic impact of the disaster. One way in which relief organizations are tackling this problem is by exploring alternative uses for contaminated agricultural land, for instance by producing industrial crops such as bio-fuels. These do not rely so much on consumer confidence, and can be produced on contaminated land without themselves being contaminated. All of the other proposed relief projects will boost the morale of the affected population, and improved morale leads to improved growth.

Psychosocial Rehabilitation Centres

Psychosocial problems are much more difficult to treat than physical health problems. However, there are now ten United Nations community-based rehabilitation centres in operation which do help. The rehabilitation centres provide basic information about minimizing the health risks associated with radiation. This is very important because people are often ignorant of how to take the most simple and effective precautions. People in the area have a great deal more confidence in information coming from international organizations than information provided by their own governments. The centres are clearly labelled with the United Nations insignia, and they are proving very effective in establishing confidence in public information. Other services provided by the centres include sports facilities, medical health care and kindergartens. The centres now play a central role in the community, and help to fill the gap left by the closure of all the former Soviet institutions. However, the local governments have not been able to continue supporting the centres, and many staff have not been paid for months.

The Liquidators

Altogether more than 600,000 people participated in the clean-up operation. They received individual doses of radiation across the whole



Socio-psychological rehabilitation centre for children in Borodyanka

spectrum. A hundred and thirty-four were diagnosed with acute radiation syndrome; 28 died slow painful deaths within three months of the accident; thousands have suffered from long-term health problems.

Robots were used to remove bits of reactor fuel that had been blown onto the roofs of both the turbine and Reactor Number 3. But the robots could not cope with the enormous levels of radiation and broke down. Soviet authorities decided that the best policy was to get young conscripts to remove the debris by hand. The conscripts were not fully aware of the dangers involved and received massive doses of radiation. Survivors among them jokingly refer to themselves as “bio-robots”. The liquidators who are not yet invalids live their lives as though they were carrying a biological ticking bomb. They pay dearly for their heroic efforts, and certainly deserve international support.

Support for Chernobyl Victims Will Save People from Future Disasters

The recent accident at the Tokaimura reprocessing plant in Japan has shown us that serious nuclear accidents can also happen in highly developed countries. There is an enormous amount to be learned from Chernobyl about preventing future nuclear accidents, and coping with them effectively when they happen. As Tokaimura has shown us, the sad fact is that others will need this knowledge at some stage in the future. It is vital to the world, and not only the afflicted populations of Belarus, Russia and Ukraine, that we give the Chernobyl humanitarian programme our strongest support.

Development and Humanitarian Relief

One of the problems faced when trying to raise money from the donor community for the people affected by Chernobyl, is that this disaster does not fit neatly into any of the usual categories for interna-



UN-OCHA mission assisting Chernobyl Community Centre in Ukraine

tional aid, and so falls between the aid budgets allocated for development and those allocated for humanitarian relief. The Chernobyl cause qualifies for, and is in desperate need of, both humanitarian relief and money for development projects. Many of the proposed relief projects work on two levels, providing humanitarian aid and initiating development, which is why they are such an effective and easy way to help the sufferers. Aid for Chernobyl should be viewed as both humanitarian relief and a contribution towards development rather than neither.

COORDINATION OF THE INTERNATIONAL EFFORT

Since the people affected by the Chernobyl disaster live in three different countries, and the consequences of the disaster are so varied that they fall within the remits of a great many different governmental and non-governmental organizations, the distribution and implementation of aid involves a large network of different agencies. For this reason, the United Nations Under-Secretary-General for Humanitarian Affairs and the Head of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) is acting as United Nations Coordinator of International Cooperation, and his Geneva office serves as a channel for donor contributions. A dedicated “Chernobyl Trust Fund” has been created for the express purpose of receiving and administering these funds. This mandate was assigned to OCHA by a series of General Assembly resolutions concerning the International Cooperation on Chernobyl, adopted between 1990 and 1999. OCHA has set up Chernobyl Core Groups in Moscow, Minsk and Kiev to coordinate aid distribution, social and psychological rehabilitation community centres and training schemes.

OCHA also convenes and coordinates work of the Inter-Agency Task Force on Chernobyl and the Quadripartite Coordination Committee at Ministerial Level for International Cooperation on Chernobyl, and provides secretarial support to both mechanisms.

<i>Members of the Inter-Agency Task Force on Chernobyl</i>	
<i>United Nations Programmes and Agencies</i>	
ECE	Economic Commission for Europe
FAO	Food and Agriculture Organization of the United Nations
HABITAT	United Nations Centre for Human Settlements
IAEA	International Atomic Energy Agency
ILO	International Labour Organization
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Programme
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
WB/IBRD	World Bank
WHO	World Health Organization
WMO	World Meteorological Organization
<i>International Organizations and Institutions</i>	
EBRD	European Bank for Reconstruction and Development
EC	European Commission
IFRC	International Federation of the Red Cross and Red Crescent Societies
OECD	Organization for Economic Co-operation and Development

RELIEF PROJECTS CURRENTLY UNDER WAY

The following projects are currently implemented by the members of the Inter-Agency Task Force on Chernobyl, a group which promotes synergy between the various aid organizations and which is coordinated by OCHA.

<i>ACTIVITIES OF THE UNITED NATIONS ORGANIZATIONS</i>
<p>World Health Organization (WHO)</p> <p>Three WHO projects are currently in operation:</p> <ul style="list-style-type: none">➤ The International Thyroid Project➤ The Accident Recovery Workers Project (Liquidators Project)➤ The Dose Reconstruction Project <p>The WHO also has plans for two future projects involving research and treatment of radiation-related illnesses in children. No funding has yet been made available for this essential work.</p>
<p>International Atomic Energy Agency (IAEA)</p> <p>IAEA is currently operating a number of Chernobyl-related projects in the field of NPP safety, waste disposal, radiation, measurement and environmental impact of radio-nuclides.</p>
<p>United Nations Food and Agriculture Organization (FAO)</p> <p>FAO provides technical support to some of the IAEA projects listed above.</p>
<p>United Nations Educational, Scientific and Cultural Organization (UNESCO)</p> <p>UNESCO has set up ten Centres for Psychosocial Rehabilitation.</p>
<p>United Nations Children's Fund (UNICEF)</p> <p>UNICEF is running a project to provide people in the Chernobyl affected areas with iodized salt so as to make them more resistant to radiation-related illnesses.</p>
<p>United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)</p> <p>UNSCEAR is preparing a report on doses and effects of radiation in the Chernobyl region</p>
<p>United Nations Development Programme (UNDP)</p> <p>UNDP is currently supporting a research programme studying the radioactive contamination of surface and groundwater systems conducted by the Russian Hydro-meteorological Service. The project is essential for ensuring a safe water supply. The UNDP offices in the three affected countries are cooperating with OCHA in helping to monitor ongoing projects supported by the Chernobyl Trust Fund.</p>

International Labour Organization (ILO)

ILO is involved in overcoming the difficulties presented by resettlement; in particular with job creation for the people in the town of Slavutich, where evacuees from Pripjat and other contaminated areas have been resettled.

Office for the Coordination of Humanitarian Affairs (OCHA)

In addition to its fund-raising and coordinating tasks, OCHA is assisting in implementing the following projects through its Chernobyl Programme and the United Nations Chernobyl Fund:

- Health Monitoring for Liquidators;
- Centres for Psychosocial Rehabilitation;
- Economic Rehabilitation in Gomel Region;
- Chernobyl Protection Dike Feasibility Study.

*ACTIVITIES OF OTHER INTERNATIONAL ORGANIZATIONS
AND INSTITUTIONS*

The European Union (EU)

The EU has an extensive nuclear emergency preparedness programme.

The European Bank for Reconstruction and Development (EBRD)

The bank has been organizing the refurbishment of the “sarcophagus”.

The International Federation of the Red Cross and Red Crescent Societies (IFRC)

The IFRC continues its long-standing commitment to the disaster victims by administering its Chernobyl Humanitarian Assistance and Rehabilitation Programme.

HOW MUCH MONEY IS NEEDED AND HOW MUCH HAS SO FAR BEEN RAISED

In 1997, the Inter-Agency Programme of International Assistance to the Chernobyl Disaster defined 60 projects requiring a total of US\$ 90 million. Of this sum, the total amount pledged by the donor community was a meagre US\$ 1.5 million. As a result of this poor response, the United Nations Coordinator of International Cooperation on Chernobyl decided to make a shortlist of the projects that were most urgent, and to launch a new appeal to fund these priority projects. In October 1998, he carried out an assessment mission to Ukraine, Belarus and the Russian

Federation, and three projects from each country were given priority status. These nine projects require a total of US\$ 9.51 million. These priority projects compose the “United Nations Appeal for International Cooperation on Chernobyl”, which was submitted to the United Nations permanent missions of donor countries in 1999.

Funding for these nine projects is desperately urgent.

The Priority Projects

Belarus

Modernization of the Bragin Hospital, Gomel Region

[Project code: Health/BEL 03/97 – Executing Agency: WHO]

This hospital serves around 20,000 people in one of the worst affected areas. It is in dire need of refurbishment, and is currently unable to comply with sanitary norms. It is also unable to fulfil its tasks because it does not have the necessary equipment. It is particularly in need of X-ray equipment, mobile ultrasound equipment, equipment for anaesthesia, determination of electrolytes in blood and reanimation, a coagulometer and a haematological analyser.

The national authorities will bear the enormous staff and refurbishment costs, but further international assistance amounting to US\$ 2 million is urgently required. The project would take three years and would be executed in cooperation with WHO.

A Network of Rehabilitation Centres for Children in Belarus

[Project code: Socio-Psych/BEL 08/97, Annex I – Executing Agency: UNDP]

Many children in Belarus suffering from thyroid cancer or other radiation-related illnesses do not receive any sort of social support. This project aims to make their lives worth living by providing them with a network of rehabilitation centres with educational and sports equipment, and medical psychosocial rehabilitation facilities.

So far three rehabilitation centres are already in operation and another two are under construction, but because of the lack of financial resources, the necessary equipment for running the centres has not been supplied.

The national authorities have pledged US\$ 216,140 for construction work and US\$ 1.5 million per year to meet operational running costs. A further external contribution of US\$ 600,000 is urgently required to cover the costs of equipment and personnel training.

Decontamination and Radio-Ecological Rehabilitation of Specific Areas in the Gomel Region

[Project code: Env/BEL 09/97, Annex I – Executing Agency: UNDP]

More than 70 per cent of the Gomel region was contaminated. It is an absolute priority that kindergartens, schools, hospitals and other essential sites be decontaminated so as to reduce doses of external exposure. In spite of the fact that this work has been going on for six years, there is still much to be done.

Special small-sized equipment and protective clothing are urgently needed, as well as training for personnel. The national authorities will supply the personnel and funds for maintenance of the equipment, but US\$ 400,000 is desperately needed from external sources for equipment and training.

Russian Federation

Production Lines for Dairy Products

[Project code: Economy/RUS 08/97 – Executing Agency: UNDP]

This project will supply the population of the Bryansk region with essential vitamins to increase their immunity to the effects of radiation exposure. Four production lines are planned for milk, baby food, milk products and marmalade, all with vitamin additives to increase immunity to radiation exposure. The products will be supplied to children's establishments, schools and hospitals. This will significantly lower the incidence of radiation-related illnesses.

The national authorities will provide staff and renovate the buildings. A further amount of US\$ 150,000 is needed for each production line, bringing the total required to US\$ 600,000. The production lines could be up and running in less than a year, if the aid community responded generously.

Ultrasound Screening of 500, 000 Children

[Project code: Health/RUS 04/97 (part) – Executing Agency: WHO]

Early diagnosis of thyroid cancer is imperative for effective treatment. This project would screen 500,000 children in the contaminated regions of Bryansk, Kaluga, Tula and Oryol. It would save a great many lives as well as putting the minds of a hundred thousand children and their families at rest. The original project was intended to screen adults as well, but children are the priority. The project is also vital to determining the influence of lower levels of radiation on populations. In the affected area of the Russian Federation the incidence of children who have become ill with thyroid cancer exceeds the normal average by a factor of several thousand. Up until recently, screening for thyroid cancer has been based on an obsolete method (palpation of the thyroid gland) which precludes early diagnosis.

The national authorities are providing over US\$ 5 million from the national budget. A further US\$ 1.2 million is needed for ultrasound equipment, transport and training.

Support and Further Development of Social and Psychological Rehabilitation Centres for the Chernobyl Affected Population and for Liquidators

[New proposal – Executing Agency: UNDP]

This scheme will support and further develop the system of community centres for social and psychological rehabilitation for people affected by the Chernobyl disaster. It was established between 1994 and 1996 under the umbrella of the UNESCO Chernobyl Programme and was partly sponsored by EMERCOM of Russia. In addition to the four centres already up and running in Russia, a new national centre will be created in Moscow to provide social and legal help to liquidators and people from the affected regions, and to act as a training base for the staff of the four existing centres.

Approximately US\$ 200,000 will be provided from the Russian national budget, while an extra US\$ 200,000 is required to support the existing centres and a further US\$ 500,000 to set up the new Moscow centre; the total extra requirement is therefore US\$ 700,000.

Ukraine

International Programme on the Health Effects of the Chernobyl Accident - Second Phase

[Project code: Health/UKR 01/97 – Executing Agency: WHO]

Improvement in the coordination and implementation of health care for liquidators and radiation-affected populations in the Ukraine is a matter of great urgency. This project's primary purpose would be to strengthen and better coordinate efforts for providing diagnosis, treatment and rehabilitation for liquidators registered in Ukraine. Secondly, the project would create a foundation for systematic research.

The project would combine clinical laboratory examinations of the various physical alterations found in liquidators who were exposed to differing levels of radiation with the results of other relevant medical studies, in order to establish a comprehensive database.

The laboratory research would develop new means of diagnosis, while the database would be an invaluable tool for assessing the health consequences of radiation exposure.

The project would be executed by WHO. The national authorities would meet staff and management costs, as well as the cost of publishing results. The project would take 5 years and need US\$ 500,000 per annum in funds, amounting to a total of US\$ 2.5 million.

Development of Forest Rehabilitation Technologies

[New proposal – Executing Agency: UNDP]

Once a vital export sector of the Ukrainian economy, the forestry industry has been devastated by radioactive contamination. As a result of the Chernobyl accident, 3.5 million hectares of Ukrainian forest are contaminated with radionuclides. This project will help to stabilize the ecology of the forests and develop radiation-safe techniques for forestry in these areas. It will include valuable studies into the migration patterns of caesium 137 and strontium 90 radionuclides. It will reduce the exposure levels of people working in the forestry industry and help to minimize the risk of forest fires that could again throw clouds of radioactive smoke into the atmosphere.

The Ukrainian national authorities will contribute US\$ 800,000 as well as providing Ukrainian scientists, forest fire prevention teams and maintenance of the equipment. A further international contribution of US\$ 1.3 million is required for training, technology and research, development of the pilot project, and publication of results.

Research into the Health Consequences for the Children of People Exposed to Radiation

[Project code: Health/UKR 02/97 – Executing Agency: WHO]

This is a vital project because it aims to study the impact of radiation exposure on future generations—one of the most frightening and least understood consequences of the Chernobyl nuclear disaster. The project will analyse the physical and neuropsychical development of the children of liquidators, including those who developed acute radiation syndromes. From this data it will be possible to evaluate the risks of abnormalities in the children of parents exposed to different amounts of radiation, and to develop a system of rehabilitative measures to minimize these risks.

The project will take three years and will be executed in cooperation with WHO. Results of the work begun by the European Union will be taken into account. The estimated cost of paying for training, fieldwork and equipment is US\$ 210,000. The national authorities will provide premises, equipment where available, and staff.

FINANCIAL SUMMARY OF HIGH-PRIORITY NEEDS	
<i>COUNTRY</i>	<i>Amount in US\$</i>
BELARUS	3 000 000
RUSSIAN FEDERATION	2 500 000
UKRAINE	4 010 000
TOTAL	9 510 000

Note: The project codes are those referred to in the “Inter-Agency Programme of International Assistance to Areas Affected by the Chernobyl Disaster”.

Concluding Remarks

The radiological conditions in the area immediately surrounding the plant have largely improved, thanks to the international commitment to improved safety at Chernobyl, which allowed for the construction and now reinforcement of the sarcophagus. However, the human consequences of the accident continue to be relentlessly harsh. The EBRD expects to complete the refurbishment of the Chernobyl plant site by 2007. A sum of US\$ 400 million has already been pledged for this operation. A contribution from donor countries of just 3 per cent of this amount would have a substantial impact on the alleviation of human suffering that has resulted from the accident.

Donor States, multilateral institutions, private foundations and NGOs are urged once again to support the highly prioritized projects listed above. The United Nations Coordinator of International Cooperation on Chernobyl is also considering the extent to which additional innovative measures can be taken for optimizing the effectiveness of the international response to and prevention of nuclear accidents worldwide. All contributions to the United Nations Chernobyl Trust Fund will be acknowledged in writing and donors will be provided with the financial and narrative reports concerning use of these funds. These projects represent the absolute minimum effort required to reduce the human suffering that these people endure.

The contributions to the United Nations Chernobyl Trust Fund can be made to the following bank account:

Bank's name:	UBS SA
Address:	Case Postale 2770 CH-1211 Geneva 2, Switzerland
Account's name:	UN General Fund
Account number:	CO-590160.0
Reference:	OCHA/Chernobyl

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