

# CHERNOBYL disaster

Why are the consequences still observed? and  
Why is the international assistance still critical?



# QUICKLY and BRIEFLY

*A middle-income country, Belarus allocates around \$1 million daily to help overcome the consequences of the Chernobyl disaster. Over the last two decades, with assistance of the international community, Belarus has managed to settle the most pressing issues of emergency help to those who suffered from the accident. However, there are still a number of factors complicating a comprehensive conversion of the affected regions to a normal life and encouraging the continuation of international cooperation in overcoming the disaster's heritage.*

- **Damage** caused by the Chernobyl disaster is estimated at some \$235 billion. However, the overall amount of money that Belarus and the international community invested into the recovery amounts to just 8 per cent of the total damage.
- **Safe environment** in the affected regions requires much time to take hold. The eco-system there will turn healthy after the soil gets rid of radio nuclides. They have different periods of half-decay. Besides, to produce safe food in the affected territories, agricultural lands and industrial manufactures should start operating again. That requires time, too.
- **Recovery and sustainable growth** of the affected regions - a key aim for now and the near future – needs large investments. This is a long-term process. It bears on not just successful economy but peoples' socialization and psychological stability.
- **Children's recuperation abroad** now fully depends on the willingness of the hosting countries to sign a relevant agreement with Belarus. The major purpose of that agreement is to ensure that the Belarusian children are safe and their rights are fully observed while going abroad for recuperation.
- **Knowledge and experience**, gained over several years of scientific activities in overcoming the consequences of the Chernobyl catastrophe, are of great value as they may help the international community to define actions needed to address emergency situations in different parts of the world.

## International assistance needed for:

- Encouraging sustainable growth
- Investments
- Promoting businesses
- Creating new jobs
- Awareness-raising
- Improving legislation
- Encouraging more scientific research

## Interesting

that the United Nations proclaimed the period of 2006 to 2016 a Decade of Recovery and Sustainable Development of the affected regions.

There is an Action Plan for Chernobyl recovery to guide the UN activities in this area under the coordination of the United Nations Development Programme.

*'Our goal is to do what we can to ensure that by the end of the third decade after the Chernobyl incident, life in the affected regions returns to normal, communities take control of their fates, and the area at last overcomes the stigma associated with the disaster'.*

Kemal Dervis, UNDP Administrator

**Read more** on the following pages about the consequences of the Chernobyl accident and the international cooperation in overcoming them.

*Located in Ukraine, the Chernobyl atomic station exploded on 26 April 1986. This accident was the world-largest man-made disaster ever.*

*The Chernobyl accident had a strong cross-border effect on the eco-system as the devastation of the radioactive fallout hit the far remote areas in Eastern Europe and former Soviet Union.*

*International assistance in overcoming the Chernobyl heritage is critical for successful recovery and sustainable development of the affected regions.*

*Extensive knowledge and experience gained over the last two decades of scientific research may help address emergencies in other parts of the world.*

## Damage

As a result of the Chernobyl disaster, almost a fourth part of Belarus was contaminated (some 23 per cent of the territory). For comparison, radioactive fallout in Russia amounted to 1.5 per cent and in Ukraine to 7 per cent of the country's territory.

There is no single version on what exactly triggered the explosion. However, wrongdoing by the stations' staff and failure to follow safety regulations together with the reactor's defects are most often tipped as the key cause.

Chernobyl tragedy dramatically affected people's life, economy, science and culture of Belarus as it both suffered from the radioactive devastation and lost historic and cultural values of the Belarusian Palesse, a distinctive natural area in the South of the country.

**Economic damage** of the Chernobyl accident is estimated at \$235 billion for 30 years on after the explosion, making up 32 national budgets as of 1985.

Chernobyl disaster vastly damaged the agricultural sector of the Belarusian economy, which is worth over \$700 million annually. Due to radioactive fallout, Belarus lost one fifth of all agricultural lands.

It also led to contamination of around a quarter of the Belarusian forests, 132 deposits of mineral resources and nearly 350 industrial enterprises.

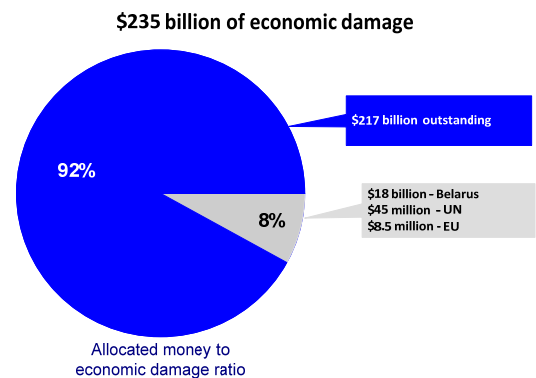
**Human damage** of the accident was 2 million people who suffered from its consequences, with over 1.3 million people, including almost half a million of children and adolescents, still living in the contaminated areas.

Medical effects of the disaster saw a dramatic growth of cancer, with thyroid cancer getting the bulk of all cancer cases. Among children, thyroid cancer incidence went 40 times up since the explosion, with 2.5 to 7 times up among adults.

Local population also went through complex social and physiologic effects as due to residence change and deterioration of healthy conditions many inhabitants were set to unwillingly change their life style and adapt to new realities.

## Emergency measures

Long-term and comprehensive recovery of the affected areas in light of severe environmental and economic damage requires a string of time- and money-consuming efforts.



Rehabilitation of affected areas is still ongoing. Since 1986, Belarus has spent some \$18 billion on this purpose. Annually, public spending of Belarus on rehabilitation totals around 5 per cent of the GDP.

Belarus, with international support, has managed to create favourable conditions needed for a long-term recovery of the affected territories. These are:

- **Well-developed legislation** regulating all aspects of the recovery work in Belarus.
- **Larger access to health care** for around 1.6 million people to date.
- **Completed resettlement** of people from the most contaminated areas: nearly 137.7 thousand people left their homes there.
- **Social protection system** embracing all categories of the population.
- **Radiation control and monitoring system** of the environment nationwide together with safety measures in agriculture and wood industry that help produce safe food.
- **Training and retraining programmes** encouraging larger employment, and

awareness-raising campaign on radiation security.

### International cooperation

Chernobyl tragedy gave impetus to unique international cooperation that sees participation of not just governments and international organizations but scientists, physicians and ordinary people – all those seeking to help people suffering from the accident.

International cooperation in overcoming the disaster's consequences is crucial as the experience of joint work may be used in other countries facing devastation of natural or man-made disasters, wars, conflicts, emergency situations and other crises.

Chernobyl disaster caused a dramatic increase of thyroid cancer. Thyroid is vulnerable for radioactive iodine, and therefore most exposed to thyroid cancer were children and adolescents.

2003 saw the creation of the Chernobyl Forum to accumulate existing and promote further knowledge on all aspects of the Chernobyl heritage. Two years into operation, the Chernobyl Forum consisted of the International Atomic Energy Agency (IAEA), World Health Organization (WHO), United Nations Development Programme (UNDP) and other organizations.

Within the Chernobyl Forum, there were a number of working groups with nearly 100 experts from Belarus, Russia, Ukraine and international organizations.

The Forum's findings on medical, environmental, social and economic aspects of the Chernobyl heritage are central to both the Government's and international organizations' approach towards addressing the consequences of the tragedy.

Much work on accumulation of experience and elaboration of recommendations on the ways of overcoming the consequences of the Chernobyl disaster is performed within the United Nations family, in particular the UN Scientific Committee on the Effects of Atomic Radiation and the UN Inter-Agency Task Force on Chernobyl.

Belarus invests many efforts to keep up the world's attention to the need of continued work on mitigating the Chernobyl tragedy. To mobilize international resources and efforts in this regard, the United Nations General Assembly regularly

and unanimously adopts resolutions initiated by Belarus containing relevant recommendations for the UN Member States and UN specialized agencies.

On the initiative of Belarus, the UN General Assembly proclaimed a Decade of Recovery and Sustainable Development of the affected territories to 2016. A UN Action Plan is now in place to coordinate UN activities in overcoming the Chernobyl's consequences.

### Radiation-and-Ecology Reserve

In 1988, the Government set up a Radiation-and-Ecology Reserve on 2.1 thousand square kilometres of contaminated areas in the South-East of Belarus.

It was created to help prevent the transfer of radio nuclides to surrounding areas, prevent fires in forests, encourage scientific research and radiation monitoring.

Due to resettlement of people and lack of economic activities in the Reserve area, it turned ideal for wild life recovery there.

Now there are 38 rare and endangered types of plant, 60 of 93 species of mammals, birds, amphibians and reptiles that listed as extremely rare in Belarus.

The Reserve also managed to nurture a Belarusian bison, with 40 of them living now in the area.

### International assistance

International aid to Belarus is key to effectively mitigate the consequences of Chernobyl and rehabilitate affected areas.

The UN system gives Belarus a major part of the international help. Since the radioactive explosion, the UN system has spent over \$50 million to help reduce the effects of Chernobyl.

Apart from that, around \$50 million come to Belarus annually as assistance from charity organizations and individuals.

However, these resources are not enough to complete the rehabilitation and ensure sustainable development of the affected territories. All foreign aid coupled with Belarus' own inputs (about \$18 billion) make up just 8 per cent of the total damage.

### Children's recuperation

Belarus has opportunities to provide rehabilitation services for children domestically. Rehabilitation locally is increasing year by year.

In Belarus, there are 14 centres of children's recuperation that work throughout the year, with more than 120,000 kids rehabilitated there annually.

Despite oncologic nature, thyroid cancer is easy to treat. And if detected early, a patient's life in 99 per cent of cases is safe.

Yet Belarus supports the several-years practice of children's recuperation abroad. Most often, the Belarusian children visit for recuperation Italy, Germany, Ireland, Spain, US and Canada.

Undoubtedly, recuperation abroad positively influences children's health and their psychological conditions. However, rehabilitation in foreign countries has an important component, which is to ensure that, while abroad, they are safe, and their rights are fully observed.

Therefore, visits for rehabilitation are now authorized only to countries that have a special intergovernmental agreement with Belarus. It sets out guarantees and rights of the Belarusian children and the list of measures that the governmental agencies of a hosting country need to take to protect the Belarusian kids in emergency situations.

For now, Belarus has such agreements with Italy, Ireland and Germany. Negotiations are ongoing to sign the agreement with another 20 countries, including the US and Canada.

### Priorities of cooperation

A major goal of Belarus at this and later stages is to recover and rehabilitate the affected areas in a sustainable fashion. Belarus believes the priorities of international involvement should, in a way, fit the bill:

- **Development of industrial and agricultural production.** Creation of woodworking companies, output and processing capacities for the agricultural produce.
- **Inward investment and SMEs.** Creation of new jobs (various workshops, crafts stores, etc.). Development of infrastructure: shops, sports facilities, etc.
- **Creation of green zones.** Environment-friendly and clean zones, pools, respite areas, children playgrounds.
- **Use of environment-friendly fuel.** More alternative sources of energy and technologies due to be employed and

commissioned to obtain such alternative types of energy as biogas, biodiesel and bioethanol.

- **Encouraging scientific research in** Polesky Radiation-and-Ecology Reserve which is a unique test area for researches in radiobiology and radioecology.
- **Raising awareness** of what radiation is and how to face up to it and live safely. Mitigating the psychological vulnerability in the population.
- **Promoting healthy way of life in children and young people.** Creation of health promotion schools for doing physical culture and sports. Publishing instructional literature for children and young people how to make their lives safer in the affected areas.
- **Reinstating the cultural heritage** in the affected areas, safeguarding natural and cultural memorials, rare and endangered species of flora and fauna. Development of eco- and agrotourism.
- **Enhancing health care.** Prevention of diseases, targeted medical assistance, re-equipment of medical centres with modern early diagnosis and therapy facilities for thyroid cancer and other diseases, early diagnosis of oncological and non-oncological diseases.

### Facts and Figures, 2008

The Belarus authorities have commissioned:

- 130 residential apartments
- 31.7 km. of water pipelines
- 2 deironing stations
- 5 health care facilities
- 4 educational facilities.

709 residential buildings were gasified, 21.1 km gas pipelines laid.

The spa and respite therapy was provided for 138.3 thousand people, including 128.7 thousand children.

The spa and respite outreach for children was over 65 per cent which is more than during the past ten years.

Belarus spent over 85 billion Belarusian rubles on free meals for school children in the affected areas.

352 households and 18 industrial buildings were buried in the rehabilitated communities, 297 households and 76 industrial buildings in the resettlement areas.

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