


Insight

International Chernobyl Centre Journal

Issue 15, 2006

- 
- CHORNOBYL NPP: HUMAN HEALTH A PRIORITY
 - TOWN OF DREAMS AND HOPES
 - THE CHORNOBYL EXCLUSION ZONE AS VIEWED BY OUR PHOTOGRAPHER

INSIGHT'S REGISTERED SUPPORTER



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▲ *President Uschenko (seated centre) discusses issues with ChNPP staff in Unit-3 control room*

PRESIDENT CALLS FOR NEW CONCEPT FOR CHORNOBYL

The fifth anniversary of the Chornobyl NPP final shutdown was on 15 December, 2005. On the eve of this date, Victor Uschenko, President of Ukraine, visited the plant.

The presidential tour to the Chornobyl Exclusion Zone began with a visit to the town of Chornobyl. Mr Uschenko laid flowers at the memorial to the firemen, the heroes who were the first to face and eliminate the effects of the severest nuclear accident on April 26, 1986.

Moving on to Chornobyl NPP (ChNPP), the delegation inspected the construction site of the new interim spent nuclear fuel storage facility, ISF-2. Design problems had caused activities there to be halted in 2003 while solutions to resolve the issues were sought. The completion of ISF-2 to accommodate fuel removed from Units 1 – 3 held the key to the start of decommissioning activities since the existing fuel store had insufficient capacity. However, due to the delay in completion of ISF-2, ChNPP experts were forced to seek alternative options which included utilising available space in the existing spent fuel store. In early December 2005, removal of nuclear fuel into the existing storage facility began. Preparation of documents required to obtain authorisation to create more space by storing the fuel in a more compact pattern has also started. During his visit to the Chornobyl NPP, the President was able to see for himself the process of spent nuclear fuel removal from Unit 3 reactor.

Following this, discussions were held covering the topics of Chornobyl land recovery, preservation of a

unique Polissya culture, construction of radwaste treatment facilities, Chornobyl NPP decommissioning and the Shelter transformation. Economic implications, both in the short and longer term, were also considered.

Speaking after the meeting, Mr Uschenko, said, "The Ukrainian authority faces many problems. First and foremost, the one regarding safe operation of the plant itself. On 15 December, 2000, we officially shutdown Chornobyl Unit 3. However, in the course of these years nuclear fuel was present in the power units and operational safety procedures, personnel activity and regulations for all processes were the same as if the facilities were still in operation. To date, the plant is not decommissioned. Now, we have a goal, which is to commence the process of fuel removal – and then start decommissioning."

Mr. Uschenko also stressed that when discussing the Chornobyl catastrophe, everyone should speak not only about the activities being performed at the ChNPP, but should also admit that the man-made accident was a humanitarian catastrophe that has destroyed the whole cultural cluster in Ukraine. As far as the Chornobyl Exclusion Zone is concerned, the authorities should develop a new concept to restructure the region.

TOWN OF DREAMS AND HOPES

Early Years of Slavutych History

We have all had to come to terms with the Chernobyl accident, and at this time of reflection, it is worth stating that man was, and still is the main factor in all events. But out of this disaster, came the experience and the determination to re-build, to re-trench, to think again. The human potential of the Chernobyl Nuclear Power Plant (ChNPP) is unparalleled and the personnel of the plant have played their part with maximum efficiency, ultimate professionalism and respect for their country.

After the accident, there was obviously the necessary, but emotional, need to re-build the team. I tried to convince people that carrying on with day to day life was possible and, indeed, necessary as well as working together with the ChNPP. Here, in Slavutych, we live in the most modern town of the 21st century: it is an ill wind that blows no good. Our countrymen have come from practically all regions of the former Soviet Union to help us. They had a dream and worked diligently and today we witness that dream becoming a reality.

This was the beginning of Slavutych. Beginning from nothing. Beginning from a state-of-the-art design impartially and remotely developed by many experts headed by Fedor Borovik, Chief Architect of the town and laureate of the State Award in the area of architecture. Today it is impossible to mention the names of all the people involved in creating this truly unique town. But also, it is impossible to mention all the problems that have arisen since its creation. They, of course, included the dissolution of the Soviet Union and the struggle to restructure a country four times the size of the United States and the terrible disaster in Armenia, in 1988, when

all possible resources were used to eliminate the awful consequences of the earthquake. There are others and we think of those who suffer and hope that their chance will come because we, the people of Slavutych, have used a chance presented by fortune to the maximum.

Slavutych Today

Today Slavutych is a multi-national friendly community represented by 49 nationalities. The average age of the town residents is 31 and Slavutych is enjoying its young community and modern infrastructure. We have created a comprehensive educational system which fully meets the educational needs of all residents. The system includes kindergartens for general education, schools, a lyceum, a childrens' home, a Palace of Children's and Youth's Art, a Centre for Professional Development, an Information Centre and Library and a Centre of Higher Education and Science. Slavutych is a new town generating new traditions. This is epitomised by regular lively cultural and sports events, a great number of interesting art groups, sports teams, as well as our own champions of Ukraine, Europe and the world. Over the last 12 years, the town continues to host 'Golden Autumn' – the International Festival of Children Arts, Television, and press. Slavutych people especially foster their youth. After all, a third of the town's population are children!

I would like to pay special attention to the standard of social services in Slavutych. It would not be an overstatement to say that it meets the most up-to-date requirements. We have won the fourth national competition for the development of a comprehensive system for quality management in social services and we are currently examining the



▲ *Slavutych Mayor Volodymyr Udovychenko, Congressman of the Congress of Local and Regional Authorities of Europe; laureate of the State Award in science and engineering*

theoretical basics for developing an equal opportunities system. In this, we are researching existing programmes and taking advice from those countries and communities which are further down the road in this than we are.

However, I cannot say that we have no problems. First and foremost, are the difficulties of a mono-profile town. Slavutych was built exclusively for the Chernobyl NPP personnel. The main problem in the town is not only the social status of its residents but also the salary. It's a question of economics. We have put much professional and personal effort into the preparation of a programme for job creation. Experts from Ukrainian ministries and their departments together with representatives of various institutions subordinate to the National Academy of Sciences have been involved in the programme development. The main objective is simple: create 3,500 jobs prior to completion of all activities at the ChNPP, then Slavutych will not instantly turn into a town of beggars, but will remain a living organism and perform its main function. Unfortunately, the programme implementation faces a number of obstacles. For instance,

the problem of special economic zones (SEZ), that are typical for Ukraine and have proved to be an efficient tool for economic regeneration. Economic analysis may indicate a return to SEZ and a Slavutych SEZ may be an example. This is beyond our control. Despite everything, we will continue promoting small and medium business in the town, attracting investment and innovative projects to Slavutych. Today, the investment attraction factor in Slavutych amounts to 1,270 USD per individual and is the highest in Ukraine. The share of small and medium businesses contribution to the town's budget is 33%, and dependency from the ChNPP has decreased to 40%, as opposed to a previous 99%.

Another objective is to maintain the level of social infrastructure and, here, there are budget issues that need to be negotiated. Ukrainian law 'On General Basics of ChNPP further operation and decommissioning...' envisages a cessation of deductions from the town's budget during the scheduled period for completing major projects at the ChNPP site, i.e. up to 2010. A lot can happen in four years and Slavutych envisages having a stronger economy with many of its initiatives, on a commercial basis, coming into being. Equally, though, the national economy may well be stronger and the view on budget allocation may also change during this time.

Particularly urgent, however, is the problem of occupational health of the personnel working under difficult radiation and psychological conditions. It is obvious that working under such conditions has a definite impact. Just look at the medical records of those who used to work and are currently working within the Chornobyl Exclusion Zone, and you will understand what a difficult and humanitarian problem it is and how much money is required to address it. The sickness rate of the ChNPP employees is 17.8 % higher compared to other Ukrainian NPPs. It is of paramount importance to formulate a health protection system for these people at the very highest political and scientific level.

Chornobyl NPP

Chornobyl NPP has had many difficult and different problems to deal with over the past years and it has done so professionally. However, based on my long-term managerial experience, I believe that the establishment of a state authority in charge of Chornobyl issues is indispensable. This body should be within the personal responsibility of the vice-prime minister of Ukraine and should be created for a short term, up to 2010. The authority should include representatives of Ukrainian ministries and their departments, including the Nature Protection, Emergencies, Fuel and Energy, Finance, Economics, Labour, Health Ministries, as well as the National Academy of Sciences. This is the decision-making level needed to address the problems. Moreover, Chornobyl is an international project involving many international institutions and costs donated by many countries of the world and, therefore, Ukraine should surely hold a dual responsibility for the optimum use of the funds and on-going feedback to the international community on the progress achieved. The International Chornobyl Centre's (ICC) involvement should be expanded.

I would like to emphasize the extremely high level of the USA's interest in, and contribution to, addressing the problems of Chornobyl. We are grateful to the American experts, who are

managing the process and try to help Ukraine during almost the whole period.

Instead of a Conclusion

Now, the international community can significantly assist Slavutych in creating jobs. Perhaps, the best way is to attract investments to the town with the objective of creating high-tech enterprises; the World Bank and the European Bank for Reconstruction and Development (ERBD) could also establish a demonstration energy saving zone in Slavutych. We have done much to this end but, currently, the local self-government programmes are not supported at the appropriate level.

Today, on the eve of the 20th anniversary of the accident, we should analyse everything that has been done, make a critical review, examine missed opportunities and, if necessary, change the state management system so that the next stage in our development and risk minimisation can be more fruitful and successful. We can all learn from our experiences and use this knowledge to prevent future potential hazards. In spite of the dreadful aftermath and human tragedies which came out of the catastrophe, Chornobyl unites. It gives us a chance to reflect on the present and the future. And if Pripyat can be treated as a memorial to the defeat of mankind and all his ambitions then let us see the town of Slavutych as a symbol of national revival and hope.

▼ ***Slavutych under construction in 1987 – each state of the former Soviet Union built a separate section of the town in its own style***





◀ *Preparation for the Shelter western wall stabilisation works*

One of the priorities for 2006 of the programme to address nuclear legacies in the former Soviet Union is to complete contractual negotiations so that work can begin on a new safe confinement (NSC) to encompass the Shelter over Unit four of Ukraine's Chernobyl nuclear power plant.

G8 GLOBAL PARTNERSHIP

In a report on the UK projects that form part of the Global Partnership* programme of the G8 group of leading industrial countries, the UK's Department of Trade and Industry (DTI) said work at Chernobyl in 2006 would focus on detailed design of the NSC and its licensing.

The DTI said the NSC is a "massive" construction project requiring untried skills and processes. The final cost is likely to be in excess of 1 billion US dollars (USD) (840 million euros).

Milestones at Chernobyl in 2006 will include the completion of stabilisation work on the existing Shelter, an integrated monitoring system, and physical protection and access control.

A longer-term priority is to have the NSC completed by 2009, the DTI said. Major design phases of the project are already complete.

In May 2005, international donors meeting in London made new pledges worth approximately USD 200 million (168 million euros) towards the Chernobyl Shelter fund. In the DTI report, UK prime minister Tony Blair said securing this funding was one of the major achievements of the Global Partnership in 2005.

Since 2001, shortly after it first established a programme to help tackle the nuclear legacy in the former Soviet Union, the UK has contributed more than GBP 26 million towards the Chernobyl Shelter fund.



New change facility for the contractors involved into the Shelter transformation activities



SETS OUT ITS PRIORITIES

Other achievements in 2005 included the completion of two nuclear submarine dismantlement projects to time and cost, and the completion of major phases of a 15-million-pound (GBP) (26 million US dollars, 22 million euros) storage facility in the naval base city of Murmansk, north-west Russia, for spent nuclear fuel from submarines and ice-breakers. Construction of the facility began in November 2004.

Other priorities for 2006 include finalising a decommissioning plan for Kazakhstan's prototype 52-megawatt BN-350 fast breeder reactor, which was shut down in 1999.

***The G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction was launched in 2002. Under the initiative, G8 nations support projects, initially in Russia, to address non-proliferation, disarmament, counter-terrorism and nuclear safety issues. Priorities include the destruction of chemical weapons, the dismantlement of decommissioned nuclear submarines, the disposal of fissile materials and the employment of former weapons scientists.**

Global Partnership members are: Canada, Czech Republic, European Union, Finland, France, Germany, Italy, Ireland, Japan, the Netherlands, Norway, Poland, South Korea, Russia, Sweden, Switzerland, Ukraine, US, UK. The UK's G8 Global Partnership report 2005 is available on the DTI's website (www.dti.gov.uk).

Donors Remain Committed To Chernobyl Shelter Project

The international community is committed to the Chernobyl Shelter project and needs assurances that it is managed in the most efficient and effective way possible so that cost risks can be minimised, European Bank for Reconstruction and Development (EBRD) vice-president Fabrizio Saccomanni has said.

Mr Saccomanni's comments came after a meeting in Kiev on 13 January 2006 of the Ukraine/EBRD joint overseeing to the Chernobyl Shelter Fund (CSF). The meeting was held to discuss a range of issues including Ukraine's contribution to the CSF and provisions in Ukraine's state budget to support the project.

In a statement after the meeting, the EBRD said constructive approaches for all issues were agreed.

The joint committee, together with a working group for day-to-day co-operation between the EBRD and Ukrainian authorities, will serve as a platform to identify and resolve all issues with the potential to delay the project and cause cost increases, said the statement.

Mr Saccomanni said the international community had provided more than 650 million euros (EUR) (780 million US dollars) for the CSF to date and pledged another EUR 150 million in May 2005.

Ukraine's prime minister, Yuri Yekhanurov, was also at the meeting. He said that the forthcoming 20th anniversary of the Chernobyl accident in

April 2006 would provide an opportunity to demonstrate the progress which has been made thanks to the close co-operation of the donor countries, Ukraine and the EBRD.

Also on 13 January, an EBRD delegation met Ukraine president Viktor Yushchenko, who said Ukraine is fully committed to work with donors and the EBRD to complete the Shelter project in an effective way.

Among the delegation was Hans Blix, chairman of the CSF donor assembly, who told Mr Yushchenko donors were committed to support Ukraine in the mitigation of the consequences of the Chernobyl accident and that they relied on Ukraine and its president to provide leadership and an efficient management to complete the project successfully.

The EBRD said its Shelter Implementation Plan for Chernobyl has reached a crucial point, with the awarding of the contract for the New Safe Confinement (NSC) expected within the next few months. The NSC has been designed as a more secure and permanent structure to be built around an original Shelter, initially called the sarcophagus, that was built in 1986 to enclose the remnants of the destroyed reactor number four.

The cost of building the arch-shaped NSC is estimated at more than 1 billion US dollars. The EBRD says completion of the main construction projects is scheduled for 2008.



◀ *Work within the Shelter requires strict adherence to safety procedures. The worker is carrying out grinding operations*

Elimination of risks created by unstable engineering structures is a priority in the effort to transform the Shelter into an ecologically safe system (SIP). Results of the first stabilisation activities reveal that as important as solving engineering and technical problems, preservation of human health is crucial.

HUMAN HEALTH A PRIORITY FOR CHORNOBYL MANAGEMENT

Work at the Shelter: Hazards and Risks

Personnel work under a series of risks which include year-round high humidity and uncomfortable temperature conditions, absence of forced air exchange systems and insufficient and exclusively artificial lightning. The necessity to use individual protection also causes physical and psychological problems for the personnel but the main risk is exposure to radiation. The finely dispersed radioactive dust, containing transuranium elements (plutonium-238, plutonium-239, plutonium-240, plutonium-241, americium-241, strontium-90, caesium-137), is a specific kind of hazard to be found under the Shelter. These radionuclides give off an extremely high radiobiological toxicity which can cause intense biological damage to human organs and tissues when they decay.

Health Preservation Programme

A medical and biophysical support programme has been developed to preserve the health of personnel involved in the Shelter

transformation activities. This programme is based on the long-term experience in minimising medical consequences of the Chernobyl accident, from results of Shelter personnel examinations and treatment and on the requirements of Ukrainian regulations. Elimination or minimisation of hazardous effects, early diagnoses of defects in the health of personnel, timely prophylaxis or withdrawal of an employee from hazardous zones are the key elements of the programme.

The medical and biophysical support programme is implemented by the BIOMED Consortium comprising special medical institutions which have practical experience in extending medical aid and ensuring medical control over people working under the conditions of ionising radiation and the risk of radionuclide inhalation intake. The institutions include the Scientific Centre of Radiation Medicine (SCRM) of the Medical Sciences Academy of Ukraine, Scientific and Research Institute of Radiation Protection (SRIRP) of Ukraine, International Association of Ecological Medicine (IAEM) and Slavutych Medical Facility 5 (SMF).

Before beginning work, all applicants undergo health tests which include a biophysical examination as well as a medical examination. The objective is to evaluate the level of any transuranium elements and Cs-137 that may already be present in organisms of individuals applying for a job within the SIP framework. To date, these tests have revealed no hazardous radioactivity in the human organisms. However, what these results did show is that there would be a labour resources problem! Preliminary calculations demonstrated that approximately 5,000 people would be needed for stabilisation activities alone. However, only 54% of more than 2,000 contractors' employees who have been sent for medical examinations were passed fit to work under the conditions existing in the Shelter. The remaining 46% failed to meet the stringent health requirements laid down for SIP activities.

What has been done?

To date, two of eight planned stabilisation activities have been completed at the Shelter. The Mammoth Beam that supports

structures on the South of the Shelter has been reinforced and stabilized and the potential for de-aerator stack collapse has been eliminated by reinforcing the previously installed support column props. The medical control and biophysical monitoring of the health of the personnel involved in the works is continuously monitored.

In May 2005, State Specialised Enterprises (SSE), ChNPP management suspended the works inside the Shelter. The biophysical monitoring had found increased levels of transuranium elements in personnel biosamples. As a precaution, 154 individuals were sent for additional extended examinations. The results revealed that neither internal nor external exposure of the personnel exceeded the established limits. Internal exposure doses ranged from 0.1 to 1.1 mSv (the permissible limit for the ChNPP employees and

contractors amounts to 3 mSv). Consequently, all the individuals were allowed to return to work and activities recommenced in June 2005.

Human Health as a Priority

This possible absorption of transuranium elements into human organs and tissues meant that Chernobyl NPP experts had to take a second look at radiation monitoring and safety standards. Extra respiratory apparatus providing higher levels of protection were purchased and special attention was given to increasing the contractors' safety culture, with additional training in radiation safety regulations.

The SIP is only a segment of the tasks required to transform the Shelter into an ecologically safe state. Stabilisation of the sarcophagus structure, establishing control over it, construction of the



New Safe Confinement, and dismantling of the old Shelter require joint efforts from the world's scientific community, state-of-the-art techniques and physical resources. Every possible effort is made at Chernobyl NPP today to preserve the health of its personnel and, ultimately, the future of its community.

Using individual protective clothing and masks is one of the major conditions ensuring safe operations at the Shelter



Exclusion Zone

1986

1987



Hundreds of military and civil vehicles used on the post-accident clean up are now stored at the Rossokha dump within the Exclusion Zone

1988

1989

1990

1991

1992

1993

1994



Life continues. Although around 116,000 people were moved out of the area, some self-settlers have returned to the Exclusion Zone and are carrying on with normal life

1995

e

1996

*Once Pripyat was a town of children and roses – a town of great hope.
Now it is being reclaimed by nature*

1997



1998

1999

2000

2001

2002

*'Here the host lives' – such inscriptions can be seen
on the houses of those who have returned to Chornobyl*

2003



2004

2005

20 years later

CAN RADIOACTIVITY FLY?



▲ *Birds of the Exclusion Zone. Warbler*

Visitors to the Chernobyl Exclusion Zone have to undergo a strict procedure for seeing all of its sites including Chernobyl NPP, Pripyat, Chernobyl town, Rossokha, (a dump for vehicles used to eliminate the consequences of the accident), or villages in the Chernobyl region. Radiological safety rules must be adhered to in order to prevent a spread of radioactive contamination to 'clean' localities via clothes, shoes or transport. If contamination limits are exceeded, decontamination procedures will have to be performed.

Although everything possible is done to monitor and minimise the spread of radioactive contamination, control of its air and water paths is practically impossible. Scientists recently studied birds as a means of carrying radioactivity out of the Exclusion Zone. This 'transportation' method had been neglected in recent years and it was time to examine it more closely. Calculations of Ukrainian ornithologists, show that up to 25–30 million birds may fly across the Exclusion Zone during migration and their total mass may amount to five to seven thousand tonnes per year!

Experts from the International Radioecology Laboratory (IRL) and their foreign partners initiated the studies which are fully in line with the key objectives of the Laboratory's activities, namely: scientific and technical collaboration to mitigate and eliminate consequences of radiation accidents, in particular stabilisation of radioactive conditions and ecological rehabilitation of the environment polluted as a result of the Chernobyl catastrophe.

Although it is difficult to forecast the exact risk level, animals, and migrating birds in particular, are a potential source of penetration by radionuclides within the human food chain. The only assessment of radionuclide stock and its intake by birds was in 1988. It was time to look again! In 2003, with the financial support of the U.S. Civilian Research & Development Foundation, IRL experts collaborated with their colleagues from the University of South Carolina (USC) to perform wider-scale research within the Exclusion

Zone. This was to take two years to complete. In total, 44 species represented by almost 450 birds were analysed. Radionuclide content was measured in live birds, which were ringed and then released. This meant that changes in the birds' level of contamination during a certain period could be accurately traced. A mobile spectrometry laboratory developed by IRL will give scientists the opportunity in the future to carry out long-term work directly at the sites where the birds are caught.

The results demonstrated that radioactive contamination is mostly taken up by birds in the very centre of the Chernobyl zone, where accumulation of strontium-90 and caesium-137 may exceed 200 – 300 Becquerels (Bq) per gram. But the situation is not as simple as it seems. The birds that feed directly from soil such as the Thrush, consume small elements of the soil in their organism together with food. Hence, their level of internal contamination is notably higher.



▲ *Scientists of the radioecology laboratory are studying the birds of the Exclusion Zone*

Birds that catch airborne insects, are observed to be 'cleaner' than their 'terrestrial' counterparts. The most vivid difference is seen between resident and migrating birds, the latter are also less contaminated due to reduced contact. Baby and young birds receive more radioactivity. Usually, they possess a higher content of strontium-90 than their parents because the skeleton of a young growing organism absorbs, like calcium, more

strontium. Also, during the breeding season, concentrations of strontium in female birds' organisms is higher if compared to males. This is caused by active calcium exchange during the period when the eggs are forming.

In mid summer, radionuclide stock in the total biomass of small nesting birds amounts to: 74.8 Mega Becquerels (MBq) of strontium and 55 MBq of caesium. Numbering up to 5.1 million, this group is the largest, characterised by the biggest stock, weighing up to 134 tonnes. Just compare: approximately the same figures can be used for one square metre of soil from the most severely contaminated area at the centre of the Exclusion Zone. Calculations performed by the IRL experts have demonstrated that this group of birds has the capability of transporting as much as 80% of the total radionuclide stock out of the Exclusion Zone. Nevertheless, during seasonal migrations, both native and migratory birds carry only a maximum of 0.18 Giga Becquerels (GBq) of strontium-90 and 1.01 GBq of caesium-137. This is, respectively, 83 and 54 times lower if one compares it to the early post-accident years. Scientists say that the main reason for such a decrease is not only due to a physical decay of radionuclides, but also their bounding in the zone's ecosystems and a subsequent reduction of biological availability. Hence, the level of radioactivity transported out by the birds is low — only a small percentage of the radioactivity that is carried away by water. However, hunting and fowling within the surrounding area (and especially within the Exclusion Zone) could result in an increased intake of radioactivity. The on-going research performed by the IRL should produce still more interesting results and possibly unexpected conclusions. We wait to see!

▼ *Birds of the Exclusion Zone. A Redstart – gently netted but soon to be free*



COMMUNITY DEVELOPMENT CENTRE LAUNCHES NEW SOCIAL INITIATIVES

Research has shown that our readers are always interested in the social life in Slavutych and the activities of public organisations operating in the town. In this issue, we focus on the Community Development Centre's (CDC) new projects which the UK Department of Trade and Industry (DTI) is currently supporting. This interesting, and important concept, was proposed by the CDC.

Social Enterprise

Generally, social enterprises operate simultaneously in two sectors involving business and non-commercial social services. The social component is determined by a clear aim to use its profit for the social needs of different groups, including the very vulnerable. Employment in such an enterprise may become a way out for those who find it difficult to find a job due to their homelessness, criminal record, etc.

This is a new form of entrepreneurship which is currently in its infancy in the Ukraine. In order to study the reality of managing the social enterprises' activities, leaders of the CDC received training in the UK. They used the opportunity to study areas of expertise and potential of such enterprises, the involvement of volunteers and the potential within the community for their operations. Pioneers within the CDC are aware of the difficulties they face. Experts of the Eurasia Foundation – a non-

profit grant-making organisation funding programmes that build democratic and free market institutions in the twelve New Independent States (NIS) of the former Soviet Union – believe that social enterprises, contributing to an increase in employment and offering other opportunities for socially vulnerable population groups, are the most difficult to establish but, equally, have the most impact.

Relevant legislation needs to be studied; experience of social enterprises existing in other regions has to be examined; market research to formulate potential business ideas for Slavutych needs to be carried out in order to implement such a project in Slavutych. A presentation of the project should be made to the municipality and people of Slavutych for comment; enterprises already operating within Slavutych should be consulted and their comments taken on board. By doing this, it ensures a holistic approach towards establishing a

social enterprise under the conditions currently existing in Slavutych. Victor Odinitsa, Head of the Community Development Centre, said, "We expect to conclude with not less than three business plans. The best of these will be selected and put into practice to become a reality for Slavutych." The project started in December 2005, and the first social enterprise is expected to open in Slavutych early in summer 2006.

On the Way Towards Gender Equality

Unfortunately, the problem of equality between men and women still exists even in today's rapidly developing world. Women still do not fully use their civil rights or personal and professional potential to realise their goals. Their impact into the managerial decision-making process is limited. Statistics reveal that, compared to men, women often suffer from various forms of discrimination and violence, regardless of their educational level, intellect, organisational, creative or other abilities.

Such a situation is typical for many countries, including the developed ones. As far as Slavutych women are concerned, the majority of them are highly educated and willing to take up an active role in life. The CDC's new project which was implemented in 2005 with the support of the US Embassy in Ukraine, was targeted at just such women.

The initiative included a variety of activities: round table meetings involving representatives of municipal authorities; legal and psychological aid to women who had suffered from violence, creation of a library to cover gender problems and studying the basics of local self-government.

▼ During a tour of Slavutych delegates of the women's conference visit 'Kroonk' Kindergarten



A competition for social micro-projects was of special interest to women's organisations. The event resulted in the development of a series of programmes aimed at preventing domestic violence, expanding women's rights and informing women on social and legal protection aspects.

The first practical women's conference, which took place on 13–14 October, 2005, in Slavutych was an evaluation of the project. Some 70 active women, from various regions of Ukraine, discussed the problem of a woman's role in the social and economic development of mono-profile towns. The problem of gender equality is the most acute in such towns, where large industrial enterprises, being a main source of employment, are usually oriented towards men.

The resolution adopted by the conference delegates encompassed the necessity to combine efforts of decision-makers, local government authorities and public entities with the common objective being to address the problem of women's employment in mono-profile towns and to expand opportunities for their business activity, ensuring equal rights for men and women in the workplace.

Community and Authority

In 2005, the CDC initiated a new form of interaction between the Slavutych authorities and its people, targeted at addressing social problems in the town. Such activity is employed in those social sectors where the problems are the most serious and involvement of public organisations seems to be the most efficient way of dealing with them. The provisions on social order in Slavutych, and the programme for its implementation in 2005–2006, have been approved by the municipal authorities which allocated funds from the local budget to implement the programme in 2006. CDC experts have been actively involved in the development of these documents, in partnership with the DTI.

The first pilot initiatives of the social order venture were projects for prevention of alcoholism, drug addiction, smoking, and AIDS



▲ *Slavutych Mayor, Volodymyr Udovychenko and CDC Head, Victor Odinitsa, listen intently as Ukrainian Feminist Leader, Valentyna Dovzhenko, opens a plenary session*

among youth as well as for Slavutych recreation zone improvement. These issues have been covered in previous editions of 'INSIGHT'. The costs for their implementation have been allocated from the local budget and from the funds of the CDC.

▼ *Slavutych youth votes for a healthy life. The event is organised by the Community Development Centre*

The Slavutych CDC is always open for communication.

Wherever you are in the world, we welcome your feedback at:

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THREE TOWNS WITH A COMMON FUTURE



The fate of large industrial enterprises and their satellite towns are closely interconnected. They invariably face similar challenges. Closure of a major enterprise plunges such towns into a whole series of problems and much effort has to be put in to overcome these. Slavutyich in Ukraine, Kozloduy in Bulgaria and Visaginas in Lithuania have all had to face this situation and, therefore, are well placed to share their experiences with others and prevent them 're-inventing the wheel'.

On 5–7 October, 2005, the second conference, 'Decommissioning: Social and Economic Changes', was held in Kozloduy with the support of the UK Department of Trade and Industry (DTI). The first conference took place in Lithuania in 2004. The concluding one is to be held in April 2007 in Slavutyich. All the forums are targeted at helping mono-profile towns to overcome the economic and social consequences of losing a major enterprise. The DTI's social initiatives programmes implemented in the three countries have the same objective.

Delegates from Russia, Bulgaria, UK, Slovakia, Lithuania, Ukraine, and EU participated in the second conference. The discussions covered various aspects of decommissioning NPP power units, developing local human potential and implementing government-supported social programmes.

It was difficult for Bulgaria to decide to close its power units. However, the same situation applied in Ukraine when the

government decided on the ahead-of-schedule closure of Chornobyl NPP (ChNPP). Kozloduy NPP (KNPP) is not only local, but also a national source of income. The KNPP director and the Kozloduy mayor spoke about the high safety level of the power units and the difficulties to be faced by the town when Bulgaria eventually closes the remaining operational units at the plant.

The delegation from Slavutyich actively participated in the conference. As usual, the experience gained in Slavutyich was of great interest. The Chornobyl Centre was represented by director, Yevhen Garin and director of economy, Elena Ladyzheva. They shared the experience of creating new job opportunities in the Centre including those for the ChNPP personnel; describing ways to achieve financial sustainability for the institution that initially was entirely dependent on international technical assistance.

Victor Odinitsa, head of Slavutyich Community Development Centre, chaired the second session of the conference. The experience in introducing a social order procedure in Slavutyich, operation of a credit union and NGOs involvement in the vital activity of the town was presented at the session. It is noteworthy that approximately 100 NGOs are currently registered in Slavutyich, and more than 20 of these are actively operating. In Kozloduy only three public organisations exist and only one of them is implementing projects within the framework of the DTI programmes.

The main goal of this NGO is to integrate national minorities into social programmes, provide them with literacy skills and help them to make the most of their leisure time.

Lithuanian experts presented results of a comprehensive social and economic monitoring programme performed in Visaginas. The research helped to trace and analyse all changes taking place in the economic and social life of the town following the nuclear power plant closure: alterations in the demographic situation, economic structure and economic activity of the public as well as the psychological state of individuals.

The opening ceremony of the Kozloduy City Business Centre coincided with the conference. This was the first step towards small business support in the town. On that day, the three business development agencies from Slavutyich, Visaginas, and Kozloduy signed a Memorandum on Collaboration to enable these towns to jointly address common problems and develop partnership relations that would continue even after the DTI's programmes finish.

Kozloduy has six soviet-design power units. Four reactors are of the VVER-440 type and the remainder are VVER-1000s. In autumn 1999, the European Union and Bulgaria signed a Memorandum in Sophia. The Memorandum included an agreement to shutdown units 1,2,3 and 4 of the Kozloduy NPP. Units 1&2 were shutdown in late December 2002. Four units are still in operation.

This is the continuing story of Slavutych NGOs. In the previous issue, we presented a feature about the Slavutych Women's Centre. Here, we give you the young people of Slavutych, who are not indifferent to their native town and, therefore, to their future. More than 80 young men and women of Slavutych are actively involved in the NGO named Ukrainian Social and Democratic Youth (USDY), under the motto: 'With People And For People!'

The words 'Freedom', 'Democracy', 'Social Protection' are really meaningful for them. USDY members have found personal fulfillment since they began to be involved in projects which were helping others and, therefore, rewarding to the individual. For some time, the youth of Slavutych has played an important role in the Slavutych municipal system and is actively participating in addressing numerous social issues. The young people from USDY are also the Slavutych Youth Council members. During their meetings they learn to take important managerial decisions, shouldering responsibility for solving Slavutych problems. Judge from the facts...



▲ Slavutych children are actively participating in the 'Block Issue' Action

WHERE THERE IS YOUTH, THERE'S A WAY...

USDY members

- have been responsible for organising events for young people in Slavutych. Many events were organised within the framework of educational, cultural, and social programmes
- assisted Slavutych students in visiting a multi-level practical and theoretical training which specialises in modern web design delivered on the basis of the state-of-the-art Digital Community Centre which was set up through the support of World ORT, one of the world's largest NGOs working in the area of education
- helped Slavutych pupils to receive training in hairdressing
- presented the works of their countryman L. Moguchev, an artist from Chernigiv, to Slavutych people
- have developed a project for the prevention of alcoholism, drug addiction and AIDS among young people which won the Slavutych public initiatives competition
- created a series of sports actions for Slavutych people.

It was this very NGO that took the initiative to help improve the town of Slavutych. The young people on their own helped to equip a play ground for the Slavutych children's home, cleared up a park in a Slavutych Block, developed a recreation area around their native town and held 'Block Issue' Action in the yards of some of the town's multi-storied houses.

Two years have passed since its inception and the youth association has gradually become an indispensable participant of many events in Slavutych

such as: conferences and workshops, charitable actions, concerts, competitions and festivals. The young people closely collaborate not only with local authorities but also with other Slavutych NGOs. They say: 'We want, and will live in, the best town in Ukraine!'. From the looks of their actions, and results, they are certainly doing their best to achieve their goal.

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Dmitriy Velichkovskiy, Head of the Association

▼ The work is in full swing. Young people are developing a playground for the children's home



A moratorium on special economic zones (SEZ) may have been declared in the Ukraine, which renders their future uncertain, but business activity in Slavutych is still progressing! It was in full swing in the period when the SEZ were actively working with, as is usual, more national than foreign investors placing their capital into the development of enterprises in Slavutych. Naturally, they are interested in preserving some of the privileges which went with the SEZ status.

The Business Development Agency (BDA), established with UK Department of Trade and Industry (DTI) support, has become a reliable source of information and assistance to those investors or organisations who are like-minded in their desire to build a high-standard of business and commercial enterprises in what is, a town of nuclear people. It's no secret that the international support, which is offered for Slavutych social and economic development, has been of great benefit to the BDA. This 'start up' assistance promoted the BDA's interface with businessmen, strengthened its organisational and professional potential and helped to turn it into one of the strongest agencies in the national consulting market.



▲ "Our business-consultants are open for collaboration and sharing experiences", – says Larisa Nikitenko, Director of Business Development Agency

SLAVUTYCH BDA TAKES ON THE UKRAINE

Break-through for Slavutych

Last autumn, the BDA began its third project with the support of the DTI. The investigation of the potential for increasing economic activity by applying business support services in the Slavutych Small and Medium Sized Enterprises sector is currently performed within the framework of the DTI Social Consequences Programme of the Closure of Nuclear Power Plants in Central and Eastern Europe. The project's core aim is to help small businesses expand and, subsequently, increase their economic involvement in the town.

Four Slavutych enterprises, working in various areas of expertise, have been selected to participate in the initiative:

- The first project objective is to expand the industrial activity of a

company specialising in the artistic decoration of glass and ceramic kitchen ware.

- Within the framework of the initiative, the domestic waste management process needs to be re-examined and restructured. Notwithstanding the fact that during the 18 years since it was founded, Slavutych is probably the cleanest town in Ukraine, there are still some problems in the area of domestic waste utilisation and processing.

- The third initiative also seeks to support the expansion of public utilities provided by a small private company. In addition to cleaning Slavutych houses and adjacent territories, the company plans to develop construction services and, particularly, renovation of flats, repairs of windows, etc.

- Also, the Project will involve a trading company which has previously been actively co-

operating with the BDA in the area of its trading activity development.

BDA Director, Larisa Nikitenko, said, "These enterprises have not been chosen at random. A detailed social and economic analysis of various Slavutych business sectors has been carried out. Recently, these sectors have demonstrated a steady development pattern. This means that the enterprises working in these sectors have real development potential. From September to December 2005, we implemented the first phase of the project. This included not only a tender to select the enterprises, but also preparation of programmes for their development. From January 2006, we consulted the enterprises.

"We supply our clients with overall support beginning with finding the premises needed for the expansion of their activities and ending with a financial analysis of their business. We thoroughly investigate all

potential opportunities in order to select the correct strategy for each company's further activity. We put in every effort so that the companies can achieve a new status as soon as possible. However, this does not mean we neglect other businessmen. We continue the provision of free consulting services to them. Currently, within the framework of the project, we endeavour to attract investment into Slavutych which is necessary to upgrade domestic waste treatment techniques and introduce systems for sorting and processing. One company has shown interest in undertaking this new venture, which will include purchasing the relevant equipment. We have some funds to implement the initiative, but still have to search for another share which means researching all available investment or credit possibilities."

Slavutych BDA Is an All-Ukrainian Consultant

Slavutych BDA is among the best and the most prosperous in Ukraine. Each year it offers two to three new services to businessmen.

During the eight years of its existence, the BDA has helped the development and implementation of 17 national and international projects targeted at social and economic development of the region. Services of its business incubator have been used by 86 enterprises! Currently, 38 new businesses are receiving support from the BDA. To date, 326 new jobs have been created within this framework. The invaluable experience gained through international co-operation and a high standard of consulting services provided by Slavutych BDA is much in demand, not only among local entrepreneurs; the lack of highly professional consultants is a common and urgent problem for businesses across the nation. Unfortunately, other Ukrainian cities and towns cannot get such donations: Slavutych benefits by virtue of its special status as a town facing the social and economic impact of the closure of Chornobyl NPP.

However, the consultants in Slavutych are always open for business communication and eager to share their experience. They are

often invited to the neighbouring Chernigiv Region to deliver training, develop business plans and other documents. Experts of the project for economic development of towns implemented by the U.S. Agency for International Development (USAID) have selected the Slavutych BDA to be a regional training centre for eight regions in Ukraine. Irina Karasiova, the BDA expert, is working as an all-Ukrainian consultant in the project aimed at the preparation of a strategic development plan for the town of Nizhyn. Recently, Larisa Nikitenko presented achievements of the Slavutych business incubator to her colleagues from Sevastopol. Companies from Kyiv are also interested in the high-quality services provided by BDA experts. Other regions in the country also use BDA services. Today, Slavutych is developing a concept to establish an all-Ukrainian training centre for business consultants. It is hoped that the initiative will be implemented in the nearest future, as are all BDA's undertakings!

One of two modern Kronpak factories that manufactures crown-type bottle caps



2006
September **27-29**

International Scientific Workshop "Radioecology of the Chornobyl Zone, September

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"Radioecology of Chornobyl Zone"

International Scientific Workshop

Международный научный семинар "Радиоэкология Чернобыльской зоны" 27-29 сентября 2006 г., Славутич

Organizers: Chornobyl Center for Nuclear Safety, Radioactive Waste and Radioecology under support of International Union of Radioecologists and Administration of the Chornobyl Exclusion Zone and Zone of Absolute Resettlement.

Subject Areas:

- Radioecological and radiobiological aspects of the Chornobyl Zone;
- Radioecological problems regarding RAW treatment in the Chornobyl Zone and in Ukraine in general;
- Auto-rehabilitation processes in ecosystems of the Chornobyl Zone: research results and tasks;
- Analytical support of radioecological research. Methods, models, software, equipment.

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