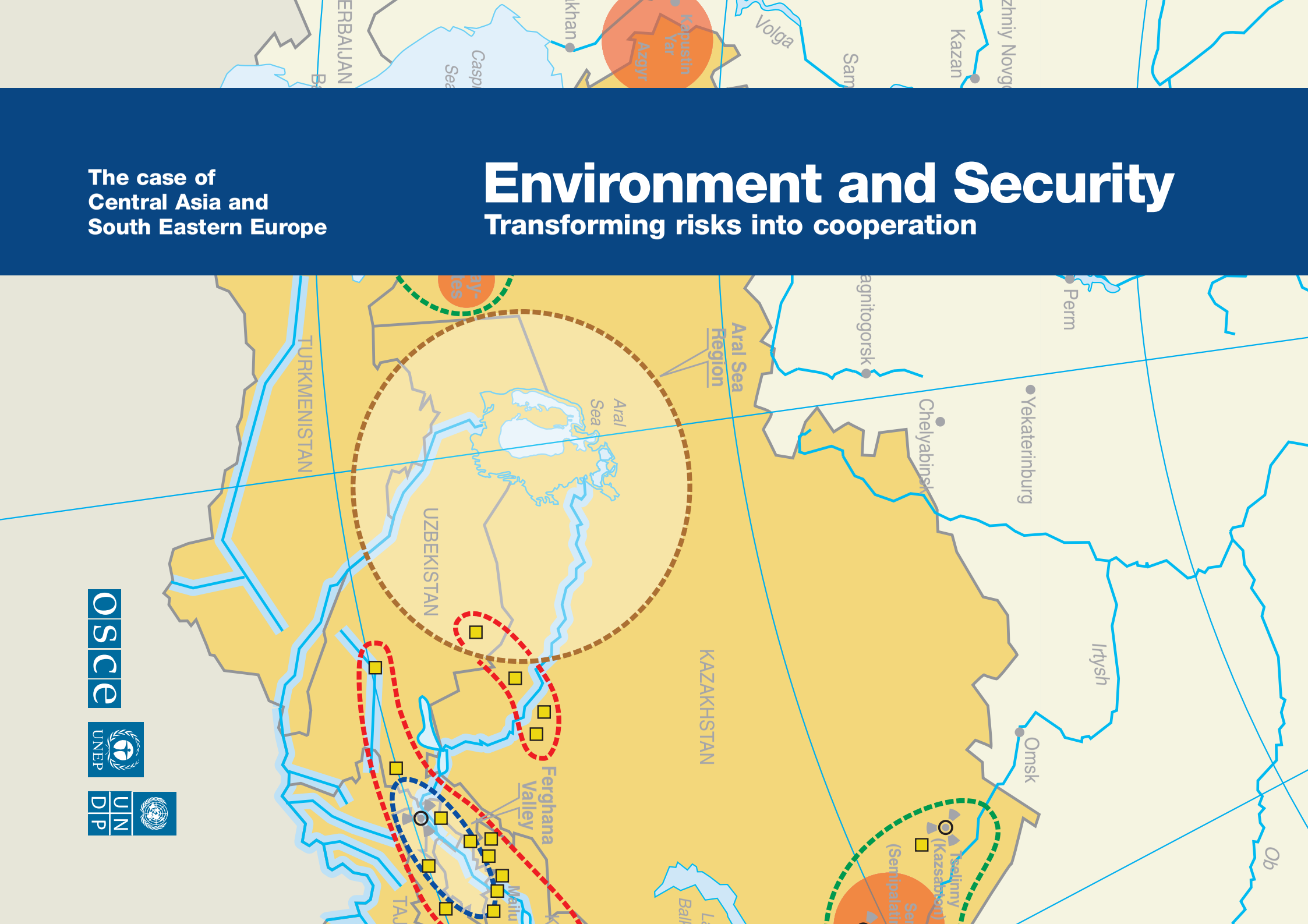
The case of
Central Asia and
South Eastern Europe

Environment and Security

Transforming risks into cooperation



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Environment and Security

Transforming risks into cooperation

The case of Central Asia and South Eastern Europe

"Sustainable development is an exceptional opportunity … to build markets … to bring people in from the margins …, to reduce tensions over resources, that could lead to violence; and to protect the ecosystems … on which all life depends."

Kofi Annan, Global Environment Outlook, UNEP 2002.

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Text written by Alexander Carius, Moira Feil and Jason Switzer

Preface

"Environmental stress can … be an important part of the web of causality associated with any conflict."

Brundlandt Report, World Commission on Environment and Development 1987: 291

Efforts to reduce the risks posed by scarcity, inequity and injustice can benefit both the planet's biosphere and the people who live within it. Co-operation towards sustainable and equitable management of natural resources should strengthen social cohesion, forge bridges across cultural and political boundaries, and reduce vulnerability to crises. Indeed, the achievement of security, where people can exercise their development choices in safety and freedom, is a vital precondition for sustainability.

To promote peace and stability through sustainable resource management and environmental co-operation is an objective that each of the agencies represented here pursues. This Initiative represents the first time we have brought our combined experience and strengths together in order to reflect on the many dimensions of this complex challenge.

Our institutions represent unique pools of knowledge and capability. The Organisation for Security and Co-operation in Europe (OSCE) plays a key role in bringing environmental concerns onto the political agenda of participating states. The United Nations Environment Programme (UNEP) is the leading source of knowledge on the current state of, and trends shaping, the global environment. The UNEP places the concept of human vulnerability to environmental change high on its programme of work towards sustainable development. The United Nations Development Programme (UNDP) promotes the incorporation of environmental components in all aspects of government policy, and in all sectors of society, in pursuit of the Millennium Development Goals.

People are increasingly vulnerable to environmental change. Some can cope, but many others remain at risk. To integrate the environment with the economic, social, and political aspects of security – to achieve security "with a human face" – we must protect and promote human rights and fundamental freedoms, stimulate economic and environmental co-operation, and deepen political dialogue. These are the stepping stones that must be crossed, if we are to achieve a more sustainable and equitable future.

Ben Slay	Director, UNDP RBEC Regional Support Centre, UNDP
Frits Schlingemann	Director and Regional Representative in Europe, UNEP ROE
Marcin Swiecicki	Co-ordinator of OSCE Economic and Environmental Activities, OSCE

Executive summary

"Economic liberty, social justice and environmental responsibility are indispensable for prosperity."

OSCE Charter for European Security, Istanbul, 1999.

This report focuses on the environmental stress affecting security in two case regions, Central Asia and South Eastern Europe. It provides maps with an overview on major environmental risks to human development and security. The maps are derived from information gathered at consultation workshops in Belgrade and Ashgabat, which were attended by local experts, government and non-government representatives.

The maps in this report reveal numerous environmental hot spots, where water and groundwater pollution, availability and distribution; legacies of conflict; industrial and agricultural pollution; toxic and radioactive waste; land degradation, salinisation and desertification; and depletion of natural resources negatively impact on economic development and public health. These effects become national security concerns when they are combined with high population density or urbanisation, socio-economic pressures, weak governance structures, and tensions between communities or transboundary disputes.

Environmental degradation and resource scarcity do not directly lead to conflict. They can, however, contribute to accelerating already existing political, social crises and instability. In order to address the socio-economic aspects of environmental problems, and particularly those of resource scarcity or resource pressure, migration and social tensions, integrated approaches that take political, economic, social and environmental dimensions into consideration are needed. The consultants stressed that basic policies and measures to address these links already exist, at global, regional and domestic levels, but implementation and sub-national governance are lacking.

Derived from local expertise and experience, the recommendations given in this report include reinforcing transboundary co-operation through local-level pilot projects; improving and harmonising environmental monitoring and legal provisions; increasing enforcement capacities on national and sub-national levels; activating civil society involvement in policy making and co-ordinating donor activities.

This report follows the first public presentation of the Environment and Security Initiative (launched in 2002 by UNEP, UNDP and OSCE) at the fifth Ministerial Conference "Environment for Europe" in Kiev and connects with the 11th OSCE Economic Forum in Prague in May 2003. Its aim is to facilitate a collaborative process between key public officials and development partners and to address the interconnections between environmental and security issues.

Introduction

Why link environment and security?

Consensus is emerging around the globe, that environmental degradation, inequitable access to critical resources upon which people depend in order to meet basic needs, and competition to extract and control valuable commodities, are each potentially important contributors to conflict, that reduce the capacities of states to respond to crises. These factors can in many instances trigger or fuel violence, and increase vulnerability to natural disasters. However, environmental co-operation can be a powerful tool for preventing conflict, building mutual confidence, and promoting good neighbourly relations, including patterns of co-operation and collaboration that can later extend to other areas.

The Initiative

The Environment and Security Initiative was launched in 2002 by the UNEP, UNDP and OSCE, with the common aim of facilitating a collaborative process between key public officials and development partners. The Initiative seeks to:

- raise awareness as to the connections between environment and security and assess environmental risks and their impacts on security;
- engage with governmental and non-governmental stakeholder groups, to identify both risks posed by environmental change, and opportunities for trans-boundary co-operation to promote sustainable development, peace and stability;
- use the mapping of risks as well as needs and opportunities for environmental co-operation as part of an integrated assessment and consultative dialogue to improve sustainable resource management, crisis prevention and peace promotion;
- create networks among stakeholder groups at national level to promote environmental co-operation and foster sustainable development as a tool for confidence-building and regional stability;
- facilitate a platform for co-operation with other important institutions, such as the United Nations Economic Commission for Europe (UNECE), NATO's Science for Peace Program, and the OECD – Development Assistant Committee.

A valuable partnership

This Initiative presents a valuable approach in seeking to tackle the interconnections between environment and security because:

- it is an open forum aimed at generating co-operation and ensuring co-ordination between international institutions drawing on their respective strengths and experience;
- it is rooted in consultations with stakeholders in the regions, both from government and civil society, based on their analyses, thus creating credibility and local ownership of the Initiative;
- it seeks to overcome disciplinary borders and integrate environmental, economic, social, political and institutional aspects of security;
- it combines analytical, geographic and communication skills to address policy-makers at various levels; and
- it aims at creating and implementing practical approaches to the connections between environment and security in vulnerable regions.

About this report

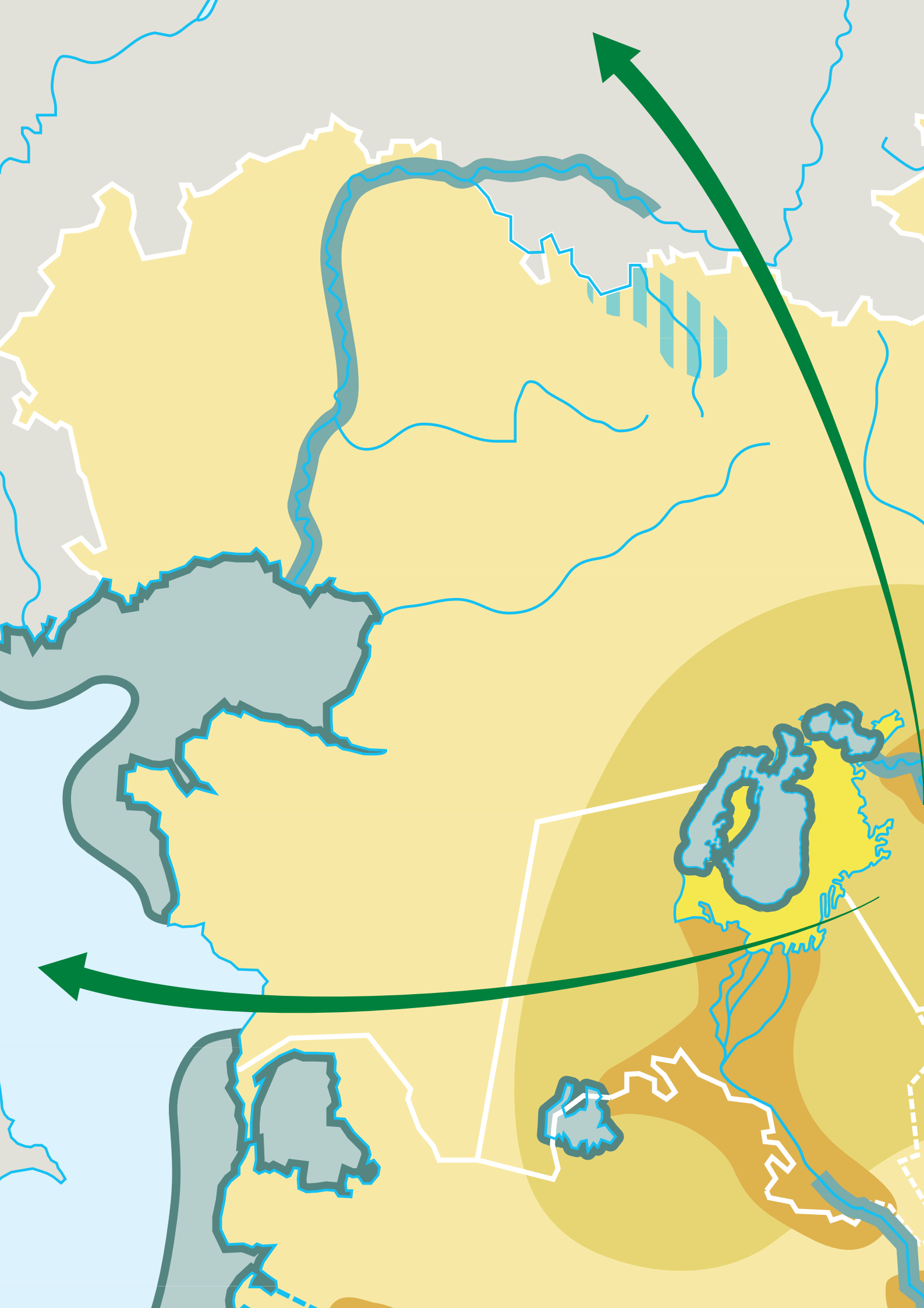
This report contains the preliminary account of the Initiative's findings in two case study regions, Central Asia and South Eastern Europe. These regions were selected for pilot studies due to the complex web of environmental and socio-economic conditions that together may pose a risk to stability and to the lives and livelihoods of the populations.

The report is a condensation of available data combined with input gathered through regional consultations in Belgrade, Serbia and Montenegro (December 2002) and Ashgabat, Turkmenistan (January 2003). These regional consultations drew upon the contributions of representatives of foreign and environmental ministries as well as the civil society and experts from the regions' countries. Participants identified the predominant environment and security concerns and sketched out relevant locations on draft maps.

This exercise was part of a three-fold method based upon:

- A survey of relevant literature;
- Consultations with the regional and country offices of the leading agencies; and
- An interactive mapping exercise with stakeholders from all the regions' countries, in two-day consultative workshops.

The sections that follow present the results of the consultations and data-gathering exercises, elaborate on the implications for social stability and co-operation in the region, analyse and draw conclusions, and lay out a plan for further activities within the frame of the Initiative.




Central Asia
Environment and Security

Environmental risks in Central Asia

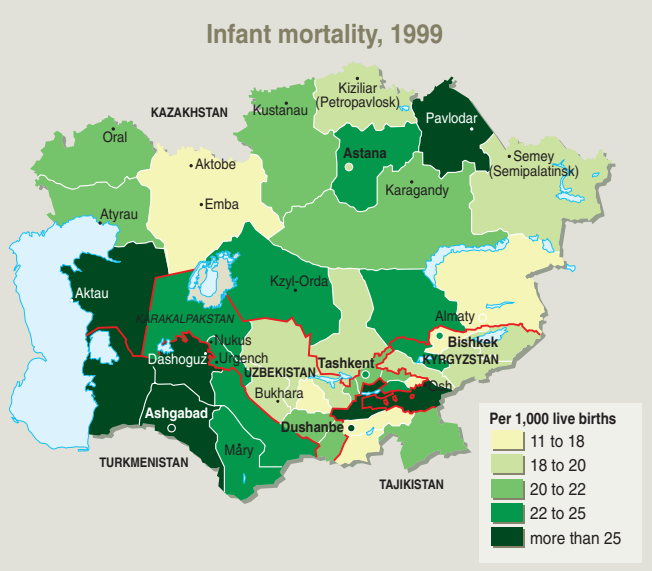
Central Asia encompasses the southern provinces of the former Soviet Union, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The region is rich in natural resources, most of them still hidden in the ground. These resources have been industrially exploited and processed for decades, which has led to considerable environmental pollution through improper mining and industrial waste disposal. Uranium has left Central Asia with poorly maintained radioactive waste storage sites. The risk for human health deriving from these sites is increased by the high vulnerability to seismic activity of the south-eastern area of Central Asia, especially Kyrgyzstan and Tajikistan, where most of the water supply for the region originates. Kazakhstan's already high level of natural radiation (UNECE 2000), is increased by the remnants of the Soviet nuclear test sites of Azgyr, Lira, Aral, Say-Utes and Semipalatinsk-Kurchatov. The legacy of chemical and biological research centres of the former Soviet Union adds to the environmental threat. Industrial pollution presents an additional security threat throughout the region. Besides the negative impact on health, the transboundary pollution deriving from industrial production can increase the risk of tensions between states.

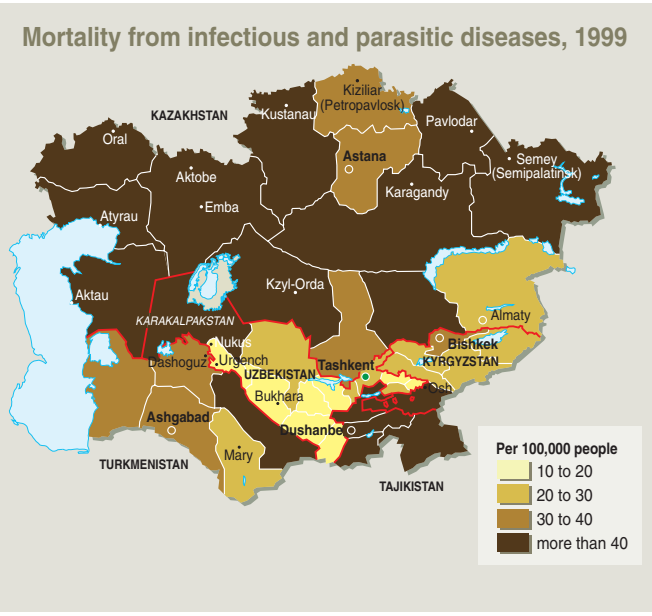
As the region supplied cotton crops to the Soviet Union, large scale irrigation systems were built across Central Asia, contributing to the degradation of the Aral Sea and Caspian Sea, the reduction of the Amu Daria and Syr Daria as well as degradation and salinisation of land.

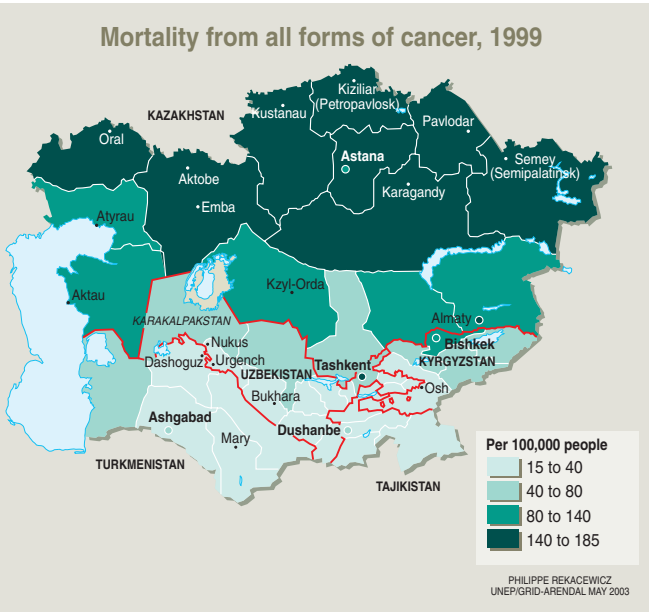
The scale of the disaster provoked by the desiccation of the Aral Sea is not yet fully understood. It has already led to the severe reduction of biodiversity in the region, negative impacts on human health, and, through the provocation of mass migration, increased population pressure elsewhere in the region. With the collapse of the Soviet water allocation system and the emergence of national interests, the continued use of intensive and often inefficient irrigation practices raised tensions between states. So far, no functioning regional regulation framework for the exchange of water and fuel has been agreed upon, which has repeatedly led to tensions between Uzbekistan and Kyrgyzstan. Water management decisions often affect the whole region and cause concern amongst neighbouring states, when they are taken unilaterally. The combined effects of agriculture, industry and mining have exposed Central Asia's water ways to serious contamination. Inefficient irrigation using polluted water may further degrade the land and reduce food quality. The concentration of pollution in downstream countries adds to existing tensions with upstream riparians over the management of water supplies.

"Many glacial and obstruction lakes ... – [such as] Sarez – could result in ... disasters on the regional scale."

State of the Environment Report. Tajikistan 2002. http://www.grida.no/enrin/htmls/tadjik/soe2001/eng/







Maps based on statistical data presented by WHO Information Centre on Health for Central Asian Republics (CAR) in CAREINFONET 2000, *Health of population and health care in Central Asian Republics.*

WHO Information Centre on Health for Central Asian Republics
Toktogul Street 62 720021, Bishkek, Kyrgyzstan
Tel: + 996 312 298791, 293508 - Fax: + 996 312 680830, 680940

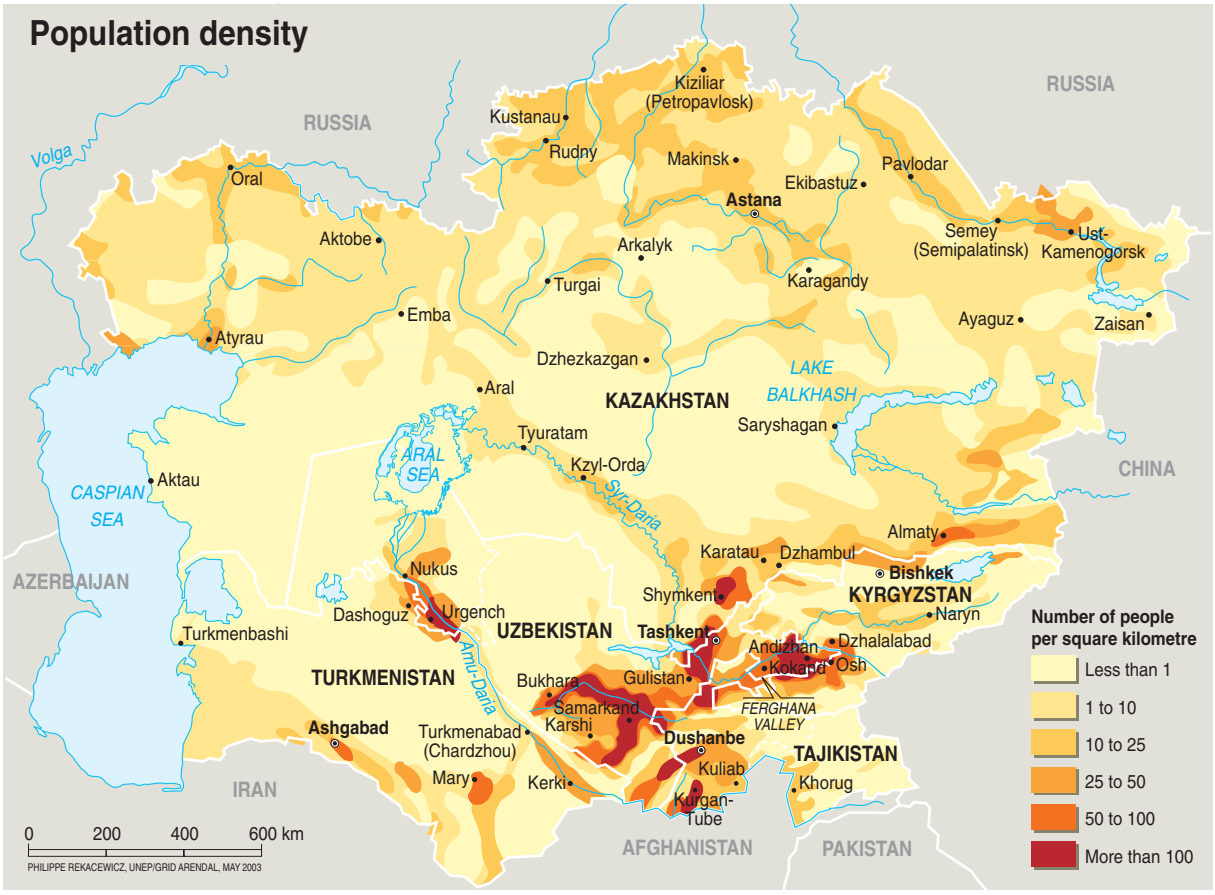
Population density, ethnicity and socio-economic context

The socio-economic burden of environmental degradation disproportionately affects the weaker social strata and locations. Despite general economic recovery since the mid 1990's in the Central Asian region, a substantial number of people live in poverty and are lacking sufficient natural resources.

While the GDP (PPP) per capita varies substantially between the countries (UNICEF 2002), an even larger inequality is found between the core and more peripheral, remote areas in these countries, where marginalisation and large scale environmental pollution is often combined with heavy economic burdens.

"[The] sensitivity of the Central Asian ecosystems to human impact and unreasonable use of limited water resources ... create serious obstacles for ... future development"

Central Asian Consultative Meeting on Environment, Water and Security. Almaty, Kazakhstan, Regional Environment Centre for Central Asia. January 30-31, 2003.



Socio-economic marginalisation and environmental pressures can lead to violent confrontations at the sub-state level if they are combined with high population density and a lack of social safety nets and institutional mechanisms to mitigate or prevent conflicts, as in the case of the Ferghana Valley. This zone is one of the most densely populated areas where communities are exposed to a high level of environmental pressure: 20% of Central Asia's population lives in the Ferghana Valley, which comprises of only 5% of the territory of Central Asia (UNDP 2003). Over-population, due to high growth and fertility rates and combined with inter-ethnic tensions, resulted in disputes over limited land and water resources.

"A lack of water, along with a lack of other natural resources, leads to increased poverty, the intensification of social discrepancies, the growth of inter-ethnic tensions and, ultimately, the emergence of armed conflicts."

Statement by H.E. Ishenbay Abdyrazakov, Secretary of State of the Kyrgyz Republic at the 19th Special Session of the UN General Assembly New York, 22 June 1997

Central Asia is a multi-ethnic region. The border demarcations are sometimes unclear. The Ferghana Valley stretches over three Central Asian countries, Kyrgyzstan, Tajikistan and Uzbekistan, with linguistically and ethnically distinct populations. The unclear borders crossing the Valley led to a disruption of the social and economic structures, further exacerbated by population influx and density. Scarce natural resources and their intensive use as a source for basic human survival and livelihoods, high levels of pollution (mainly water pollution), soil degradation and overpopulation have led to major threats to human development and security. Several communities have experienced ethnic clashes triggering open violence since the late 1980s (UN FVDP 2000)

Addressing environmental risks and regional co-operation

Environmental risks become security concerns when environmental migration is generated, access to resources for basic needs (water, soil, air and energy) is no longer secure, widespread negative impacts on public health are evident and agricultural productivity, energy security and economic development are undermined. The consultation meeting on Central Asia identified specific areas of concern, including the Pamir mountains in Tajikistan, Karakalpakstan, Amu Daria and Syr Daria, the Ferghana Valley, Semipalatinsk, Aktau and surroundings, the Caspian and Aral Seas and surrounding regions, Karakum Canal, Irtysh (Kazakhstan, Russia), the ecological migration in Kokshetau, the water reservoir in the Vilef and Sogdiyskaya (Tajikistan), the dumping site for radioactive waste in Mailu Suu, and the marshlands forming due to the melting of glaciers in the mountains between Uzbekistan and Kazakhstan.

At national level, relevant priorities in tackling security related environmental problems have already been identified within the respective countries' national environmental strategies. They include the protection and sustainable use of water resources and development of modern technologies for water treatment (Tajikistan), hazardous waste treatment and storage and development of water management facilities (Kyrgyzstan), international co-operation on environmental protection and soil degradation – including Aral Sea protection and reduction of biodiversity loss (Uzbekistan), water quantity, pollution control and the reduction of land/soil degradation (including the Aral Sea) (Turkmenistan), governmental control over environmental protection and the greening of national policies (Kazakhstan).

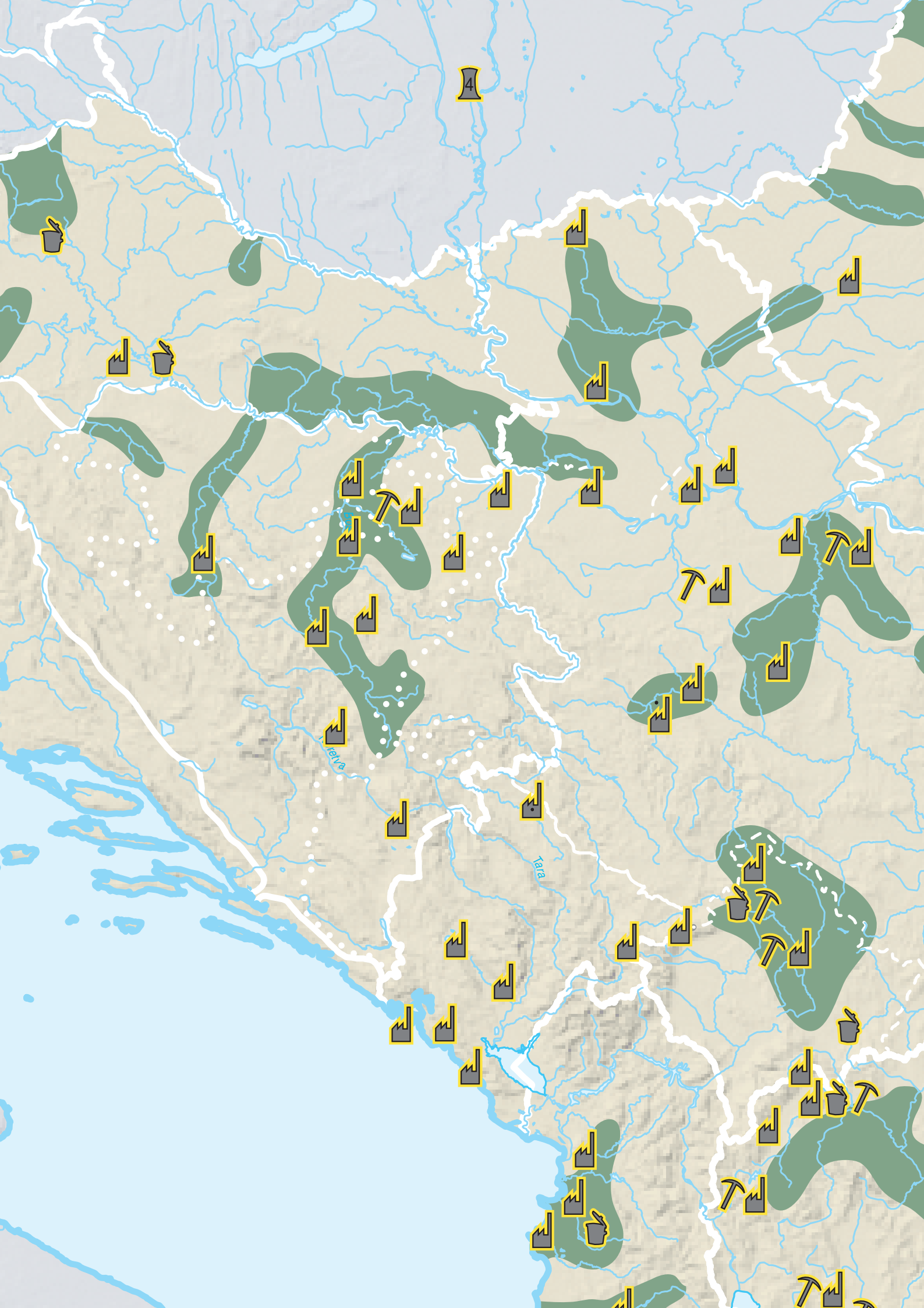
Due to the transboundary dimension of environmental pollution, co-operation is necessary at regional level in order to reduce environmental pressure and the security risks deriving from it. Transboundary co-operation on water allocation has been subject of various regional and bilateral negotiation processes and projects in recent years, often resulting in formal agreements, joint commissions and the development of policies and measures for joint water management. However, the consultation meeting on Central Asia revealed a gap between the policy processes and their implementation. Participants stressed the need for:

- improving the co-ordination and co-operation between governments and between donors;
- strengthening the political will, both internally (to take action) and internationally (to co-operate);
- increasing funding as well as technological and administrative capacities;
- improving the implementation and enforcement of laws and compliance mechanisms;
- starting further monitoring and information management systems;
- implementing transnational policy learning on best practices; and
- integrating policies across sectors (industrial development, foreign policy, agriculture, environment).

Environmental decline or resource scarcity do not directly lead to violent conflict; they are one strand within a complex web of causality in which a series of socio-economic problems, such as population pressure, poverty, forced migration, refugee movements, political instability and ethno-political tensions are intertwined. In Central Asia there is a need for improved regional co-operation combined with efficient and local implementation mechanisms.

"No society can achieve sustainable development without appropriate water resources … [C]ountries must work closely together … to find viable solutions."

Chair's Summary. Seventh Meeting of the OSCE Economic Forum, Prague, 28 May 1999.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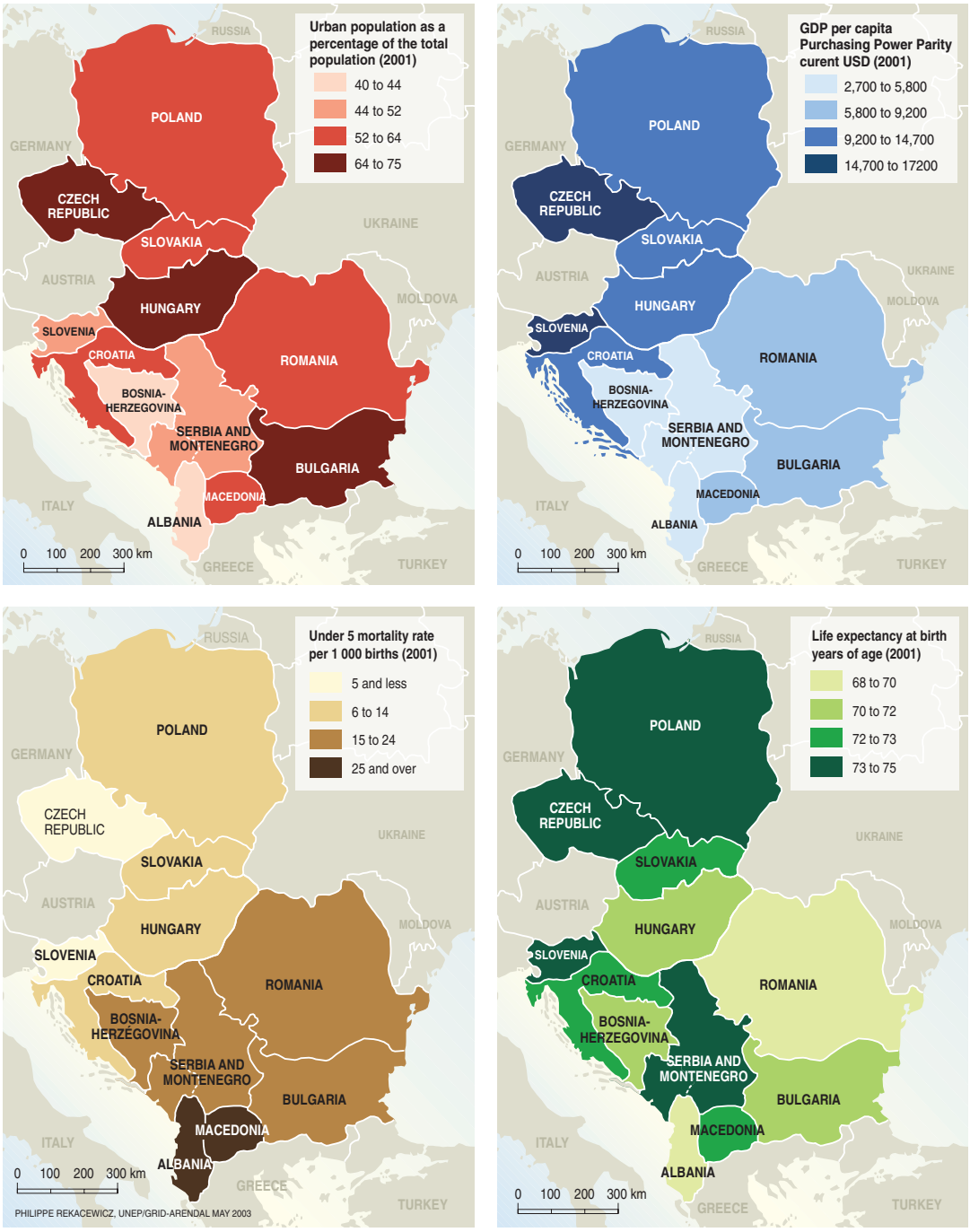
South Eastern Europe

Environment and Security

Environmental risks in South Eastern Europe

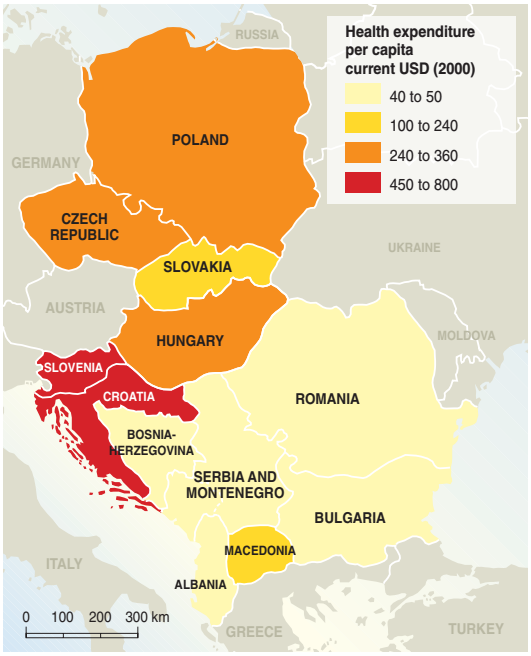
South Eastern Europe in this report covers the following countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, The former Yugoslav Republic of Macedonia, Romania, Serbia and Montenegro, and Kosovo. The past decade of conflict and transition has left the region with a legacy of inadequate growth, declining living standards and high environmental stress. The region is mainly affected by heavy industrial pollution in urban-industrial areas, intensive agriculture with yet uncalculated health impacts, a lack of water technology and infrastructure, and industrial pollution from the mining sector. The entire region has however been supported by large scale environmental protection and co-operation efforts financed by bilateral and multilateral donors, mainly in the framework of the Regional Environmental

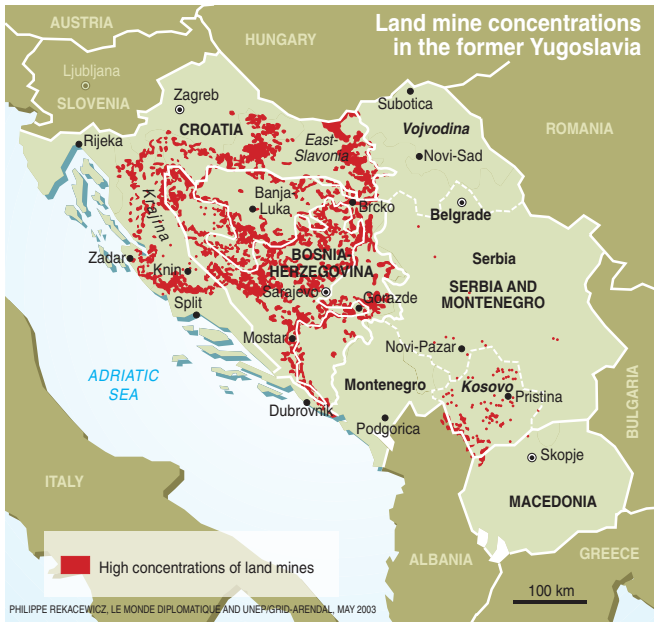


Reconstruction Programme for South Eastern Europe (REReP), the UNECE environmental conventions, the EU accession process for Romania and Bulgaria and regional conventions on the Black Sea, The Danube River and the Carpathian mountains. Transboundary efforts towards environmental protection and regional environmental co-operation are important, since many natural resources span more than one country, and environmental degradation impacts across borders.

"[Unresolved environmental problems] are among negative factors influencing subregional and transborder co-operation in Central and Eastern Europe."

Third Meeting of the OSCE Economic Forum, Prague 9 June 1995.





Conflict legacy

Even though the UNEP PCAU (Post Conflict Assessment Unit) concluded that the war in the former Yugoslavia did not result in an environmental disaster, people in the region perceive war-related environmental impacts as substantial threats to their economy, their health and their livelihoods. The legacy of military activities in the Balkans resulted in the degradation of eco-systems due to hazardous and toxic waste (depleted uranium, landmines, and pharmaceutical waste), the destruction of the water infrastructure, loss of institutional and administrative

"As Yugoslavia was absorbed in the war in the early 1990s … [t]he international embargo put pressure on the country's natural resources and pollution … went largely unchecked …"

The Environmental Performance Review (EPR) of Yugoslavia 2002.
http://www.unece.org/env/epr/studies/serbia_and_montenegro/chapter00.pdf

Land cover map of South Eastern Europe

capacities and increased pressure on local ecosystems due to refugees and returning populations. As a consequence of the conflict, living standards have sharply declined, evidenced by higher poverty, inequality and unemployment and limited prospects for economic growth.

The lack or the destruction of waste water treatment facilities led to the contamination of rivers and water reservoirs. The leakage of hazardous material from war-damaged industrial plants also affected the safety of drinking water supplies. Uncontrolled irrigation for agriculture around the lakes Scutari, Prespa and Ohrid dramatically reduced ground water levels. Military waste, in particular land mines and unexploded bombs, has impacted soils, watercourses and lakes, and has rendered difficult or impossible the use of large areas of arable land, which in turn has and is affecting the return of refugees.

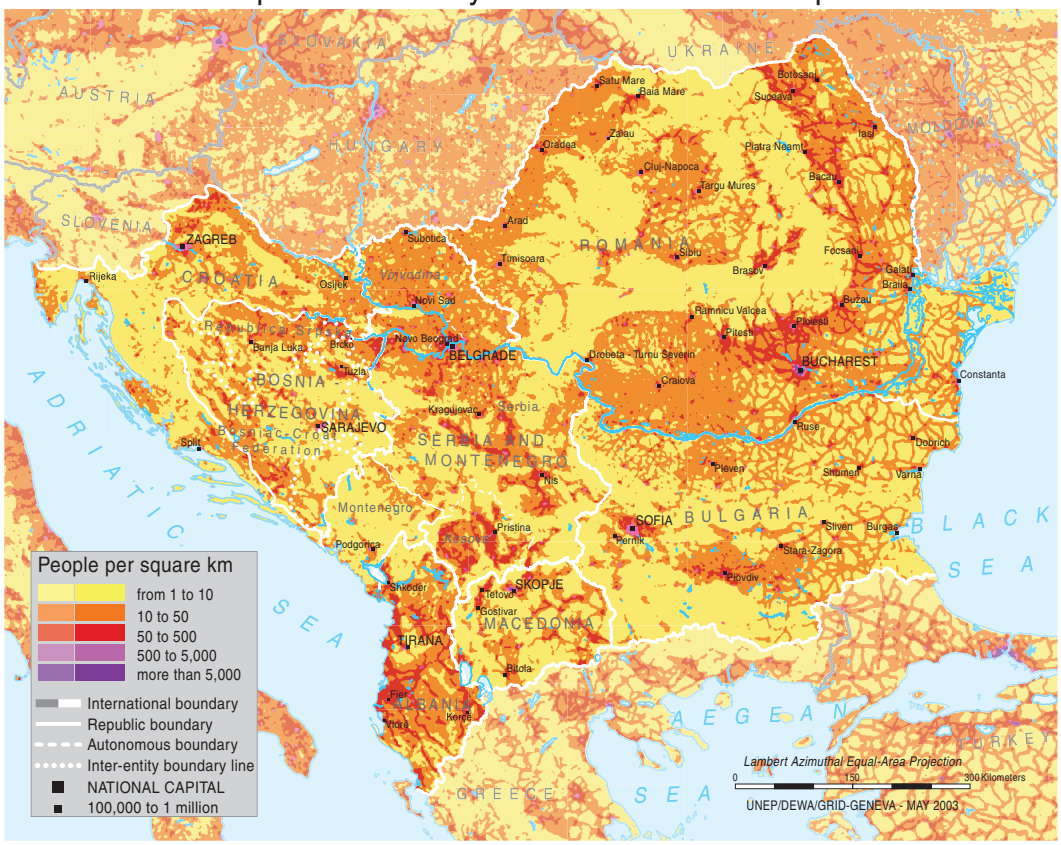
In Bosnia and Herzegovina nearly 20% of the forest lands are inaccessible because of landmines. Refugees contributed to forest depletion in the vicinity of major refugee camps in Albania and FYR Macedonia, due to their relying on fuel wood for cooking and heating.

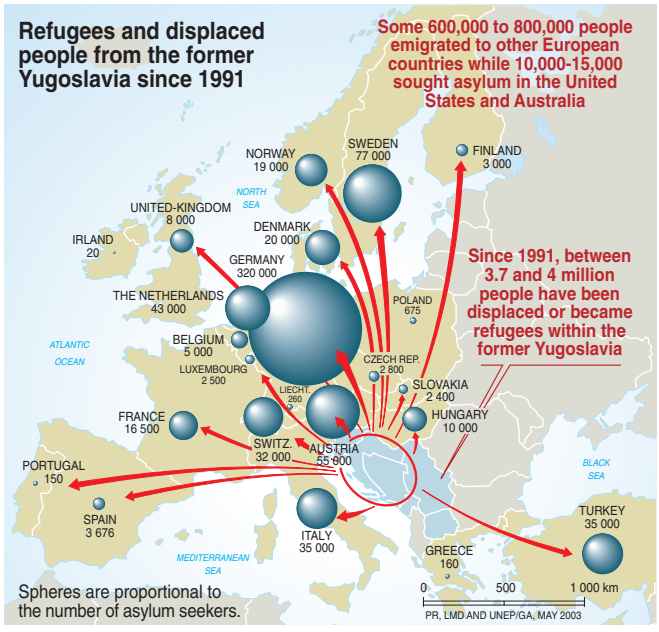
"[E]nvironmental problems caused by the stream of refugees … became an issue, with sanitation and drinking water services under enormous pressure."

The Kosovo Conflict: Consequences for the Environment. UNEP/UNCHS, 1999.

South Eastern Europe is a multi-cultural region where ethnic differences, especially under severe economic constraints, have often been perceived as threats. War, ethnic conflicts and economic decline forced people to migrate across the entire region and outside South Eastern Europe, fragmenting families and societies and destroying institutions and critical infrastructure.

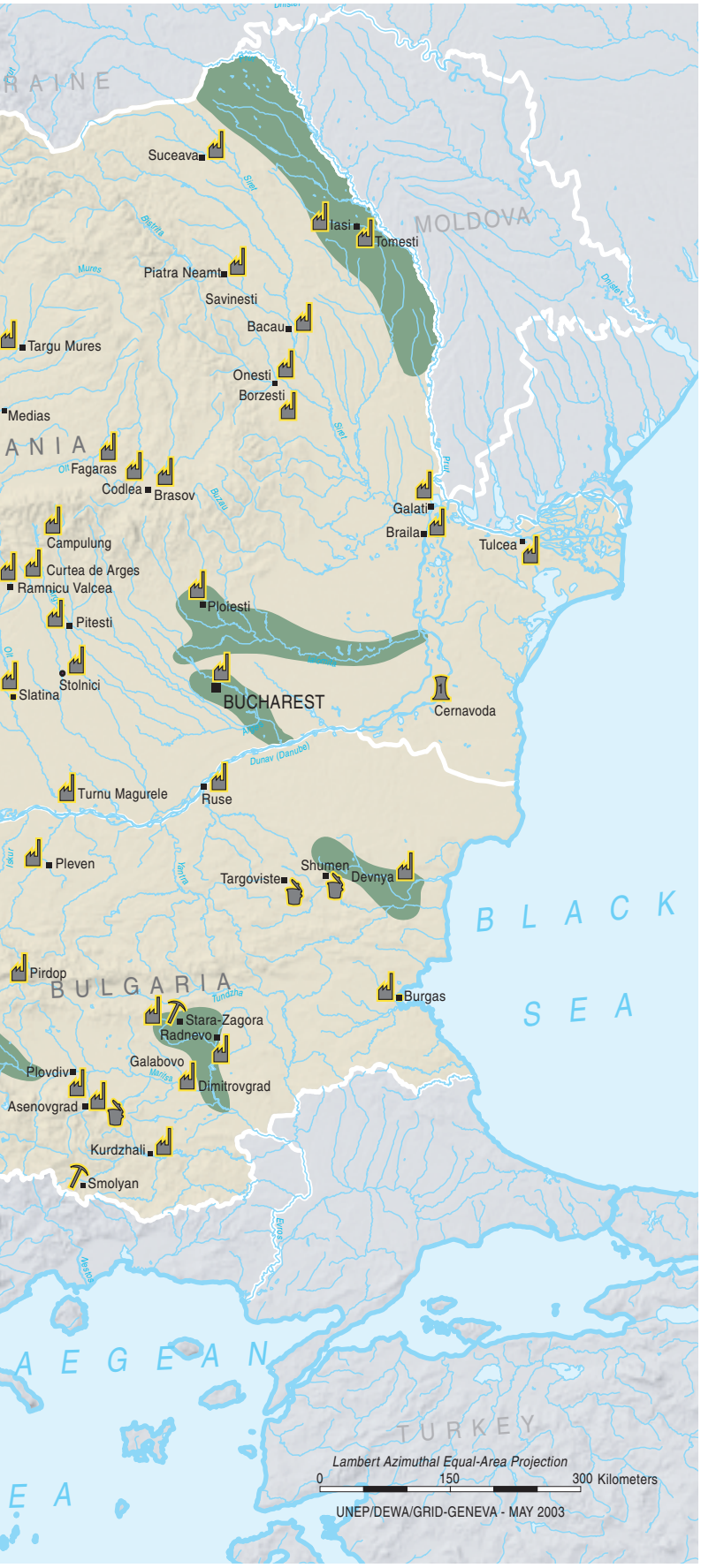
Population density in South Eastern Europe





Between 1993 and 1994, up to 4 million people have been displaced or were considered refugees within the former Yugoslavia (UNHCR 2000 Statistics). The return of migrants and refugees to their original destination creates a major challenge in terms or social and economic integration, and increases pressure on natural systems.

Major industrial sites and water pollution



Industrial pollution, agriculture and health

Beyond the direct effects of war on industrial pollution through leakage, and the destruction of infrastructure, water and soil contamination also results from the process of heavy industrialisation undertaken prior to the conflict, and from deficiencies in the treatment of water, and in the management and storage of solid and hazardous waste.

Large parts of South Eastern Europe are heavily industrialised but lack adequate environmental safeguards, resulting in serious environmental degradation and impacting negatively on health. Air pollution and soil degradation deriving mainly from the chemical industry and from mining, cement and fertiliser production, have led to severe ecological damages and adverse human health impacts in local "hot spots". Major industrial "hot spots" close to urban areas often pose severe threats to health. Agricultural production is likewise characterised by inefficient practices in many places, with high water demand and overuse of fertilisers. Drinking water supplies are threatened by water shortages and poor water quality, often caused by the discharge of untreated wastewater.

Watercourses have been heavily contaminated with polluting leakage of hazardous substances from war-damaged industrial plants. However, in many cases the destruction of industry during the war also had temporary positive effects on the environment, by significantly reducing air and water pollution from declining and/or obsolete industries. Water management systems in the region suffer from weak institutional structures and a lack of governance, inefficiencies in operation, a lack of planning or even financial viability.

In Kosovo, environmental pollution from industrial activities (relying mainly on agriculture, mining and textiles) has been further exacerbated by the conflict. Yet there are also reverse trends. In Serbia and Montenegro, for example, wars and economic decline have not negatively affected infant mortality, as infant mortality even declined during the past decade by nearly 50% (UNECE 2001).

The management of nuclear power plants and nuclear safety is an important regional concern due to its potential transboundary effects. Besides Cernavoda in Romania, the operation of the old units in Kozloduy (Bulgaria's nuclear power plant) is of major concern, since these older reactors lack modern safety standards.

"Significant parts of watersheds of rivers and lakes … belong to neighboring countries … [and] water demands for agricultural and household use are not always met."

State Of Environment Report 2000, Republic of Macedonia. http://www.soer.moe.gov.mk/

Transboundary and regional co-operation

The establishment of the Stability Pact for South Eastern Europe in June 1999 provided a hope for political stabilisation and European integration for South Eastern Europe. Initiated in June 1999, it involves over 40 states and international and regional organisations. It aims at supporting SEE states in their efforts to achieve peace, build democracy, respect human rights and achieve economic growth and prosperity. Using the stability pact framework, environmental ministers agreed in Skopje in March 2000 on the creation of the Regional Environmental Reconstruction Programme for South Eastern Europe (REReP). Today, over 100 projects on transboundary environmental co-operation among SEE states have been initiated to strengthen institutional and policy development, to support environmental civil society, to enhance environmental co-operation mechanisms and cross border projects, and to reduce environmental health threats and loss of biodiversity.

With the assistance of international organisation and donors, all countries have embarked on the development or the completion of National Environmental Action Plans, and Croatia, Romania, Bulgaria have completed National Biodiversity Strategies.

Several of the REReP projects have resulted in bilateral agreements on environmental protection. Regional approaches to cross-border nature conservation and river basin management resulted in the preparation of river basin agreements on the river Sava, on coastal management (Black Sea and Mediterranean Sea) and on the Carpathian Convention, to be signed in Kiev in May 2003. Bulgaria and Romania are accession countries to the European Union, benefiting from its large scale support framework and accession instruments.

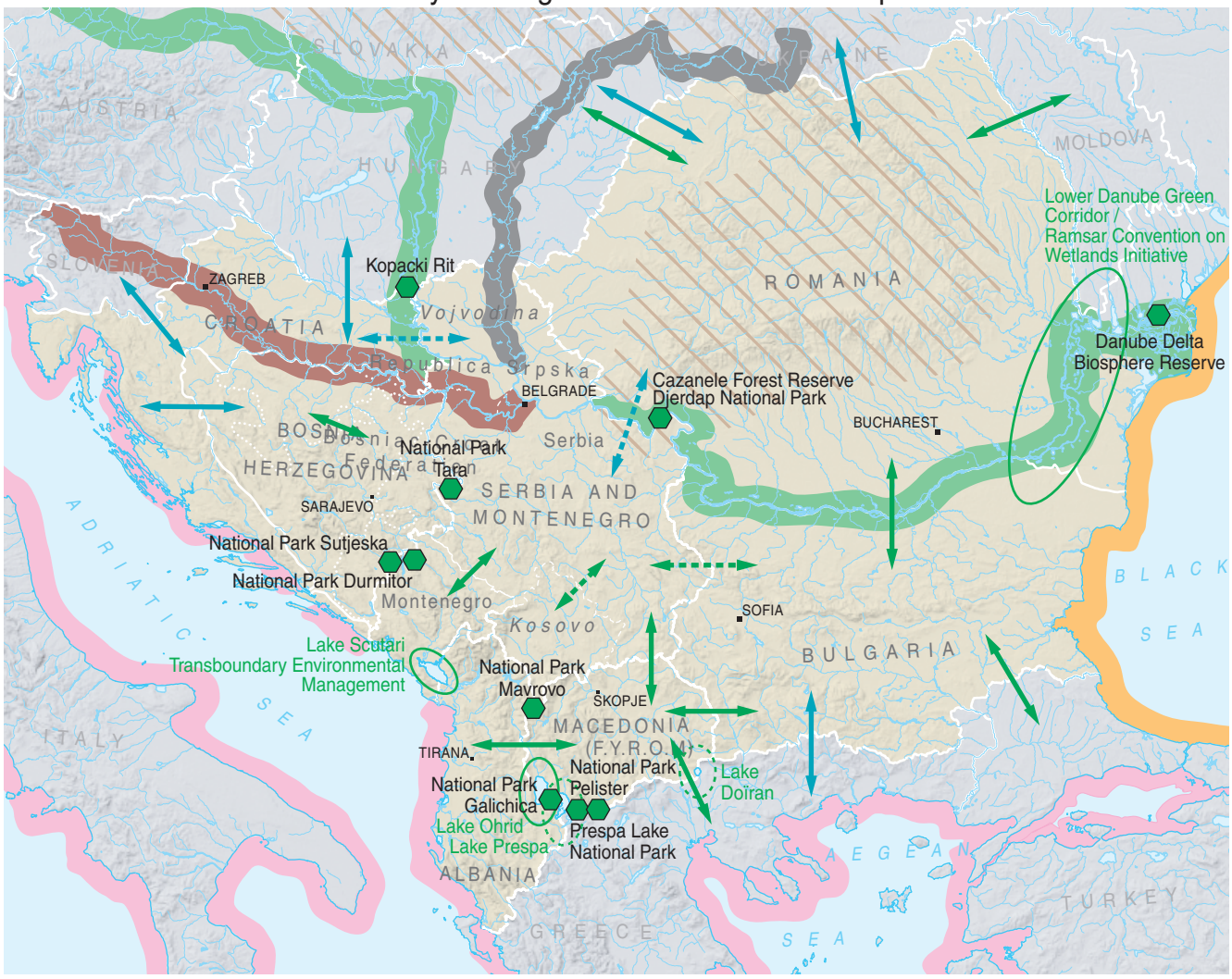
The UNECE Environmental Conventions constitute an important framework for environmental protection and co-operation in the region. Relevant conventions include those on Long-Range Transboundary Air Pollution (1979), Environmental Impact Assessment in a Transboundary Context (1991), Transboundary Effects of Industrial Accidents (2000), Access to Information, Public-Participation in Decision-making and Access to Justice in Environmental Matters (1998), and Protection and Use of Transboundary Water Courses and International Lakes (1992). UNECE conventions on water, environmental impact assessments and industrial accidents provide mechanisms to promote conflict prevention and settlement of disputes over transboundary environmental issues (Bosnjakovic 2001).

Transboundary co-operation has been established in the region as an important tool to mitigate the adverse environmental impacts on the economy and health of affected communities and to explicitly create trust and confidence among nations, which previously experienced political tensions and even violent conflict.

"Regional environmental co-operation [is] important for peace and stability in South-Eastern Europe".

Preparatory Seminar for the Eighth OSCE Economic Forum on "Environmental Impact of Conflicts and Rehabilitation Measures", Sarajevo, 13-14 December 1999.

Transboundary and regional environmental co-operation



REREP (Regional Environmental Reconstitution Programme)

Lambert Azimuthal Equal-Area Projection
0 150 300 Kilometers
UNEP/DEWA/GRID-GENEVA - MAY 2003

Multilateral agreements on marine areas

- Convention for the Protection of the Black Sea against Pollution
- Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean Sea

Multilateral agreements on freshwater basins

- Danube River Protection Convention
- Sava Basin Commission Initiative
- Tisza River Programme

Bilateral agreements

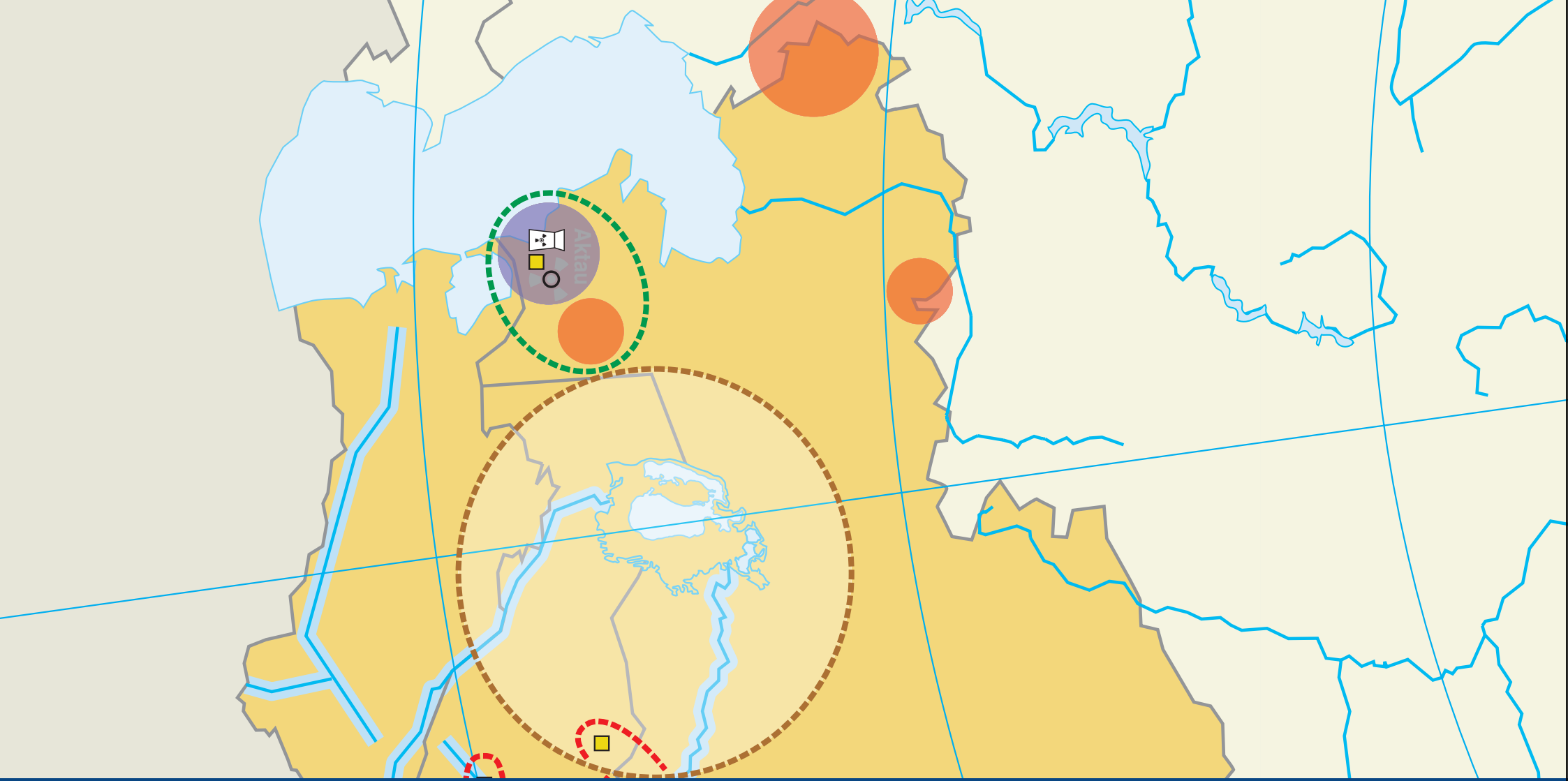
NATIONAL

- Water management
- Water management - in preparation phase
- Environmental co-operation
- Environmental co-operation - in preparation phase
- Inter-entity/republic environmental co-operation
- Inter-entity/republic environmental co-operation - in preparation phase
- Draft Carpathian Convention

LOCAL

- Transboundary protected areas
- Bilateral conservation projects
- Bilateral conservation projects - in preparation phase

- International boundary
- Republic boundary
- Autonomous boundary
- Inter-entity boundary line



Environment and Security

Conclusions / The road ahead

Conclusions

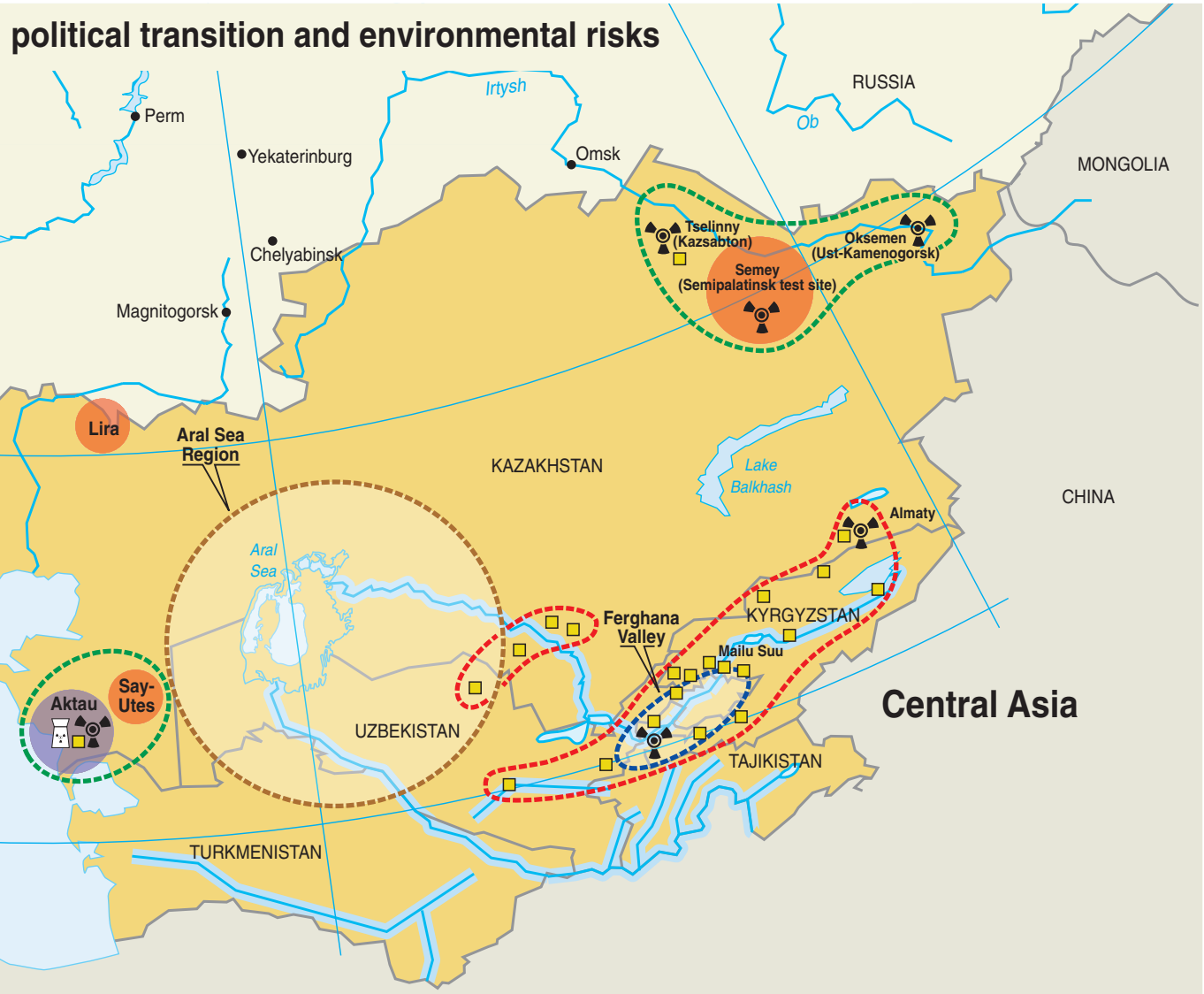
Participants of the regional consultation workshops in Belgrade and Ashgabat

- *welcomed* the Environment and Security Initiative by UNEP, UNDP and OSCE as a collaborative mechanism to integrate security, environment and development concerns in the regions.
- *noted* that sustainable and equitable management of the environment can be an effective means for building peace, and reducing vulnerability both of individuals and nations.

"Cognizant … [that] implementation of environmental action plans requires political will … [Ministers expressed their] determin[ation] to achieve significant success in combating environmental degradation."

Tehran Declaration On Cooperation among ECO Member States on Environment, 15 December 2002.

- *acknowledged* the importance of the Initiative as a contribution to the Environment for Europe process and understood its complementarity to other regional programs, such as the UNECE Environment, Water and Security Initiative or the Regional Environmental Action Plan for Central Asia.



Soviet legacy management

Aral Sea and Surrounding Region

Diversion of rivers feeding the Aral Sea led to exposure of seabed to open air, allowing airborne transport of salts and heavy metals in a radius of 600 - 800 km. Desertification and salinization of arable land, resulting in the collapse of fisheries and agriculture, impoverishment, and outward migration.

Ferghana Valley

Highly populated, ethnically diverse region with severely degraded forests and soils, limited rule of law, and widespread traffic in contraband merchandise. Lack of energy sources and supply. Region under the threat of collapse of the Kyrgyz radioactive tailing ponds

Water-related tensions:

Conflicts over distribution of water between upstream and downstream countries. High economic dependence on irrigated agriculture (rice and cotton), with steadily deteriorating soils.

Kyrgyzstan and South Kazakhstan mines

Presence of poorly-maintained radioactive waste sites in seismically active zone, located near highly populated areas and important surface water

North-East Kazakhstan: Tselinyy-Pavlodar-Semei-Oksemen and Aktau on the Caspian Sea coast

Area contaminated with radioactive fallout from experimental nuclear explosions and inadequate waste storage. High mortality rate compared to Central Asian average.

"Comprehensive and coherent conflict prevention strategies offer the greatest potential for promoting lasting peace and creating an enabling environment for sustainable development."

UN Secretary General Kofi Annan at the United Nations Security Council on 7 June 2001.

During the consultation meetings, numerous hot spots were identified by participants where environmental stress resulted in environmental migration or population displacement and insecure access to resources for basic needs, undermining agricultural productivity, economic development and widespread impacts on public health. The problems include:

- Water and groundwater pollution, availability and distribution, effected by energy generation, agricultural production and leakage from hazardous waste dumps, and impacting on economic development and public health;
- The legacies of conflict and of the ageing of industrial and power generation developments, impacting negatively on human health through toxic and radioactive waste, and on regional stability through transboundary air and water pollution;
- Land degradation through over-use of pesticides and fertilisers, desertification, salinity and wind erosion, often resulting in population migration or displacement;
- Depletion of natural resources, deforestation and erosion in mountain areas, impacting on and being caused by migration and poverty;
- Direct legacies of previous conflicts, including migration, and the foreclosure or contamination of lands and water bodies due to land mines, depleted uranium and unexploded ordinance. Conflicts have displaced peoples across South Eastern Europe and Tajikistan. In the wake of conflicts, the return of refugees is generating local tensions related to contested ownership of land, as records are incomplete or non-existent, and ethnic and historical anger simmers beneath the surface;
- Policy failure and a lack of financial means to maintain ageing industrial sites, to repair and upgrade sewage, water and air treatment facilities, and to ensure the safe disposal of waste and of harmful chemicals. Each poses serious threats to the health and safety of people in the regions;
- Environmental disasters (landslides and earthquakes) including human-induced ones and their potential interaction with other risks impacting on migration.

In order to address the socio-economic aspects of environmental problems, and particularly those of resource scarcity or resource pressure, migration and social tensions, integrated approaches are needed. These approaches must take political, economic, social and environmental dimensions into consideration. Examples might include mechanisms to integrate the poverty-environment connection into environmental policy; and environmental concerns in poverty reduction strategies. In addition:

- Water resource and water facility management capacity should be strengthened (including distribution and allocation). Ageing sites should be refurbished or remedial action taken to restore environmental equilibrium and reduce migration;
- Transboundary co-operation could be reinforced through local-level pilot projects, and by extending existing regional collaborative schemes into other areas (e.g. Commissions on Water Management);
- Transnational policy learning among states and civil society in the case study regions and donor countries should be enhanced, and could focus on experiences that have worked in the past (e.g. successful river basin management commissions);
- Monitoring and enforcement capacities should be improved, and government capacity reinforced, particularly at sub-national level;
- Legal provisions and regulations should be improved and further clarified, to tackle the specific problems outlined above, and international legislative harmonisation pursued;
- Participatory decision-making mechanisms and civil society capacity should be strengthened to enhance transparency and reinforce implementation; and
- Regional focal points for co-ordinated and integrated responses to these problems should be established or reinforced, building on successful existing processes and institutions e.g. the Regional Environmental Centres.

Participants stressed that basic policies and measures to address these links already exist, at global, regional and domestic levels, but lack implementation at the sub-state level.

They called upon the partner organisations of this Initiative to develop a plan for further action and committed to a continued and deepening co-operation in the development and implementation of the Environment and Security Initiative.

The road ahead

The presentation of the preliminary findings on the links between environment and security in South Eastern Europe and Central Asia, in May 2003, at the Fifth Ministerial Conference "Environment for Europe" in Kiev and at the 11th OSCE Economic Forum in Prague, is a starting point for the second phase of the Initiative. During this phase the UNEP, UNDP and OSCE will actualise their partnership, broaden its membership, and solidify its capacity to promote peace and human security. The three organisations will continue consultation meetings with stakeholder groups in the case study regions with the aim of discussing the results with experts from each of the regions, improving the accuracy of the maps and analysis and identifying priority areas for the implementation of activities. In this context, the Initiative acknowledges the offer of the government of Tajikistan to host the next consultation meeting on Central Asia in Tajikistan.

As a first step to improve the understanding of the complex linkages between the degradation of natural resources, relevant socio-economic conditions and tensions or even violent conflicts, the UNDP commissioned a study on "Addressing Environmental Risks in Central Asia – Risks, Conditions, Policies, Capacities", embedded in the Environment and Security Initiative. This overall report will also be presented at the fifth Ministerial Conference "Environment for Europe" in Kiev.

To address the issues identified as priority concerns for the environment and security, the OSCE, UNDP and UNEP will present a paper on "Addressing Environmental Risks and Promoting Peace and Stability – The post Kiev Process" in Kiev and Prague in addition to the reports already mentioned. They will then develop activities within the framework of the Initiative, around three axes:

- *Vulnerability assessment, early warning and monitoring of regions "at risk"*: Continue and strengthen the assessment for the two pilot regions, applying similar assessment strategies to additional vulnerable regions (e.g. Caucasus and Russia), issue areas and sectors, and launch a comprehensive awareness generation and communications campaign through publications and dissemination, training and education, consultation and dialogue. Promote vulnerability assessment, develop appropriate indicators, set up integrated database and establish a long-term monitoring system.
- *Integrated policy development and implementation*: Promote the integration of conflict and environment linkages in the full spectrum of policies and programs, from Multilateral Environmental Agreements and Conflict Prevention activities through national, regional and sectored environmental plans and assessments, whilst forging links with other assessment efforts, research networks and policy programs.
- *Institutional development, capacity building and advocacy*: Facilitate regional, national and civil society programs to strengthen institutional and individual capacities to prevent and resolve disputes peacefully and use environmental co-operation to strengthen socio-economic development. This will be addressed through informal and formal dispute resolution mechanisms and peace-building measures, by increasing access to and the sharing of information, and by implementing stakeholder training projects.

The Environment and Security Initiative represents a unique attempt to flexibly co-ordinate and integrate the wide variety of efforts by various stakeholders and actors, towards the common goals of the Initiative. Its three axes provide a framework into which many activities and projects that seek to address either environment or security links can be integrated and co-ordinated, to more efficiently achieve their common aim of a more secure and sustainable future.

The Initiative will be governed by a management board of representatives of the lead agencies, with an advisory committee providing scientific and policy advice. A Project Manager will be appointed to co-ordinate activities amongst the institutions and act as the secretariat for the Initiative.

The UNDP, UNEP and OSCE commit themselves to a two-year process to achieve the initial aims of the Environment and Security Initiative and to raise and generate the necessary donor support to develop this Initiative into a type II partnership for "Environmental Peace Making – Mitigating Environmental Risks and Promoting Peace and Stability through Sustainable Development and Environmental Co-operation".

The UNDP, UNEP and OSCE invite other organisations, institutions, foundations and donors to join the Initiative as full partners, to sponsor and co-operate in the implementation of activities within the framework of the Initiative, and to lend their expertise to this common effort to address threats to security triggered or accelerated by environmental stress.

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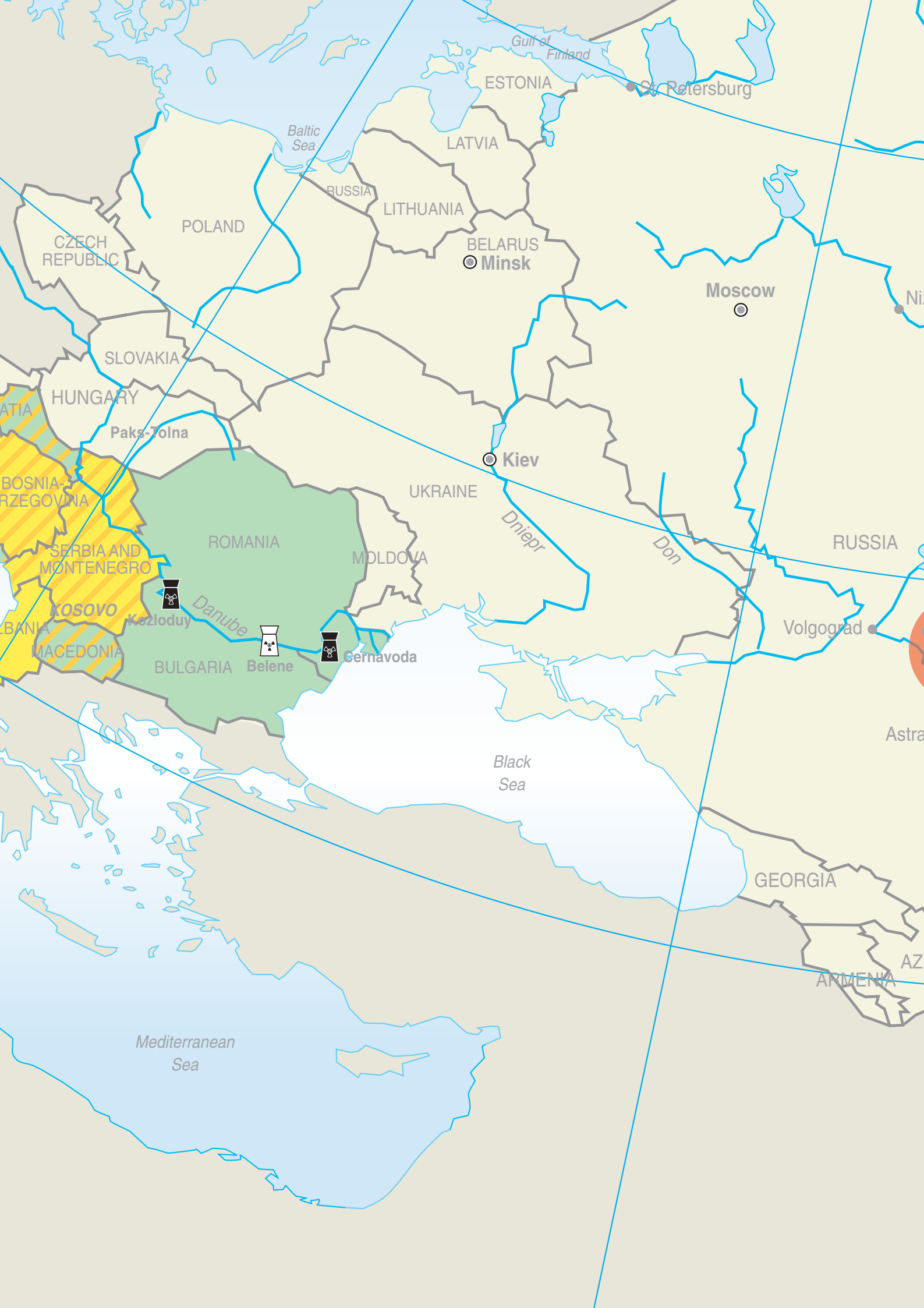
Gulf of Finland
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Dniepr
Don
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