The background features a map of the South Caucasus region, including Georgia, Armenia, and Azerbaijan. The map is overlaid with a network of orange lines and arrows, representing infrastructure or trade routes. A large, light blue area in the center represents a major river basin, likely the Aras River. Green dotted patterns are scattered across the map, indicating specific environmental or security focus areas. The text is centered over the map in a large, bold, black font.

**The Environment-Security  
Nexus in the  
South Caucasus  
Priorities and Action**

## The Environment-Security Nexus in the South Caucasus: Priorities and Action

This report is the executive output a research project funded by the Federal Department of Foreign Affairs of Switzerland implemented by Zoï Environment Network in 2014-2015. The results were presented at the FDFA in Bern on March 5, 2015.

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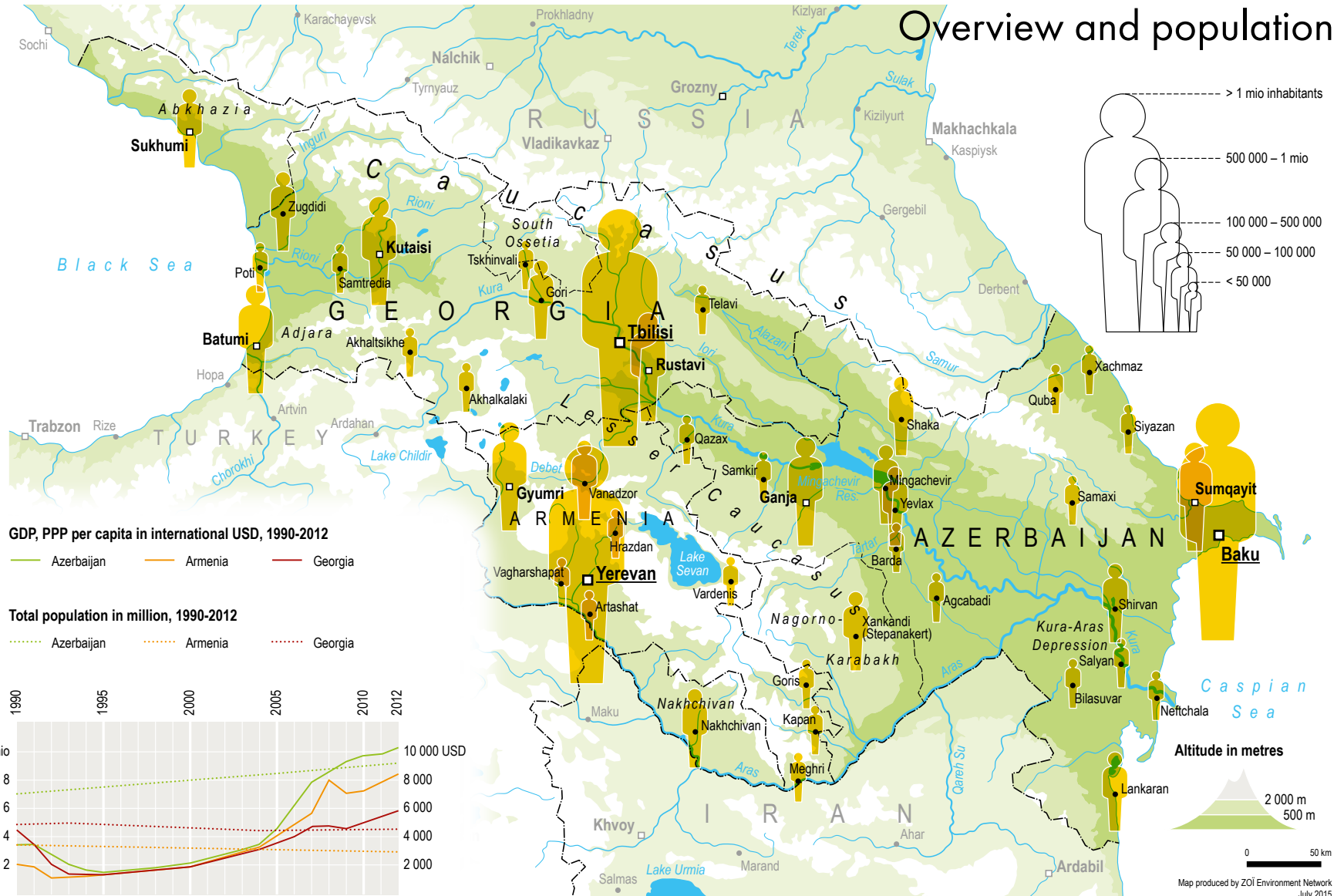
This examination of the environment and security nexus in the South Caucasus comes a decade after an initial assessment that raised awareness about the risks of environmental degradation in a region at the brink of economic boom and littered with ethno-territorial conflicts.<sup>1</sup> The consensus at that time was that environmental cooperation had the potential to build confidence and eventually to help resolve conflict. Since 2004, there were setbacks within the overall geopolitical situation in the Southern Caucasus with an open conflict between Russia and Georgia in 2008 and very little progress in resolving the so-called frozen conflicts. The aim of this study, which analyzes the 2014-2015 situation, is to reinterpret the environment and security paradigm, and one of the study's main findings is that despite the fragility of the region, new social movements may provide unexpected opportunities for progress.

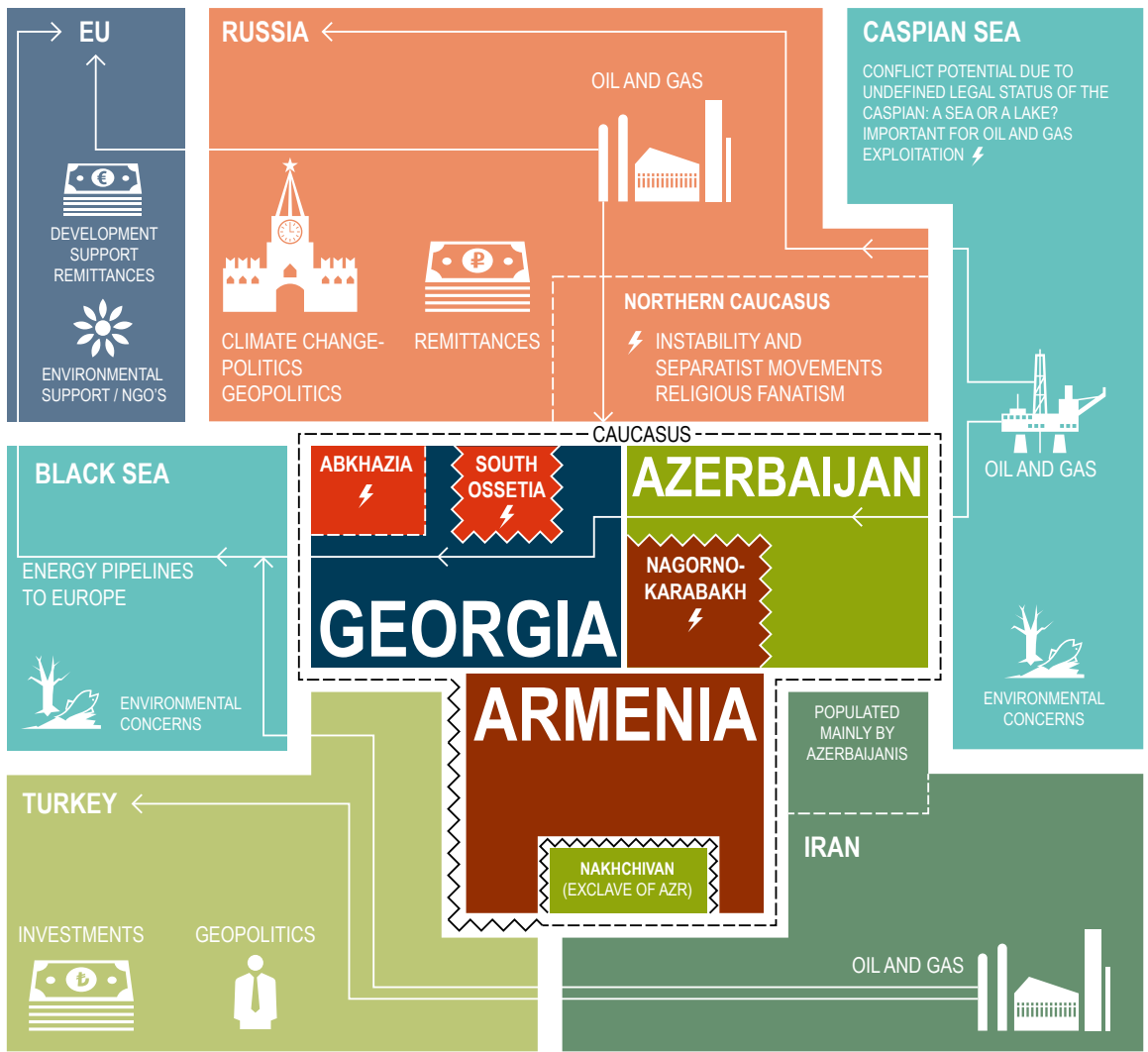
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1 - Environment and Security. Transforming risks into cooperation. The case of the Southern Caucasus, 2004, [http://www.zoinet.org/web/sites/default/files/publications/envsec\\_CAUCASUS\\_risk\\_en.pdf](http://www.zoinet.org/web/sites/default/files/publications/envsec_CAUCASUS_risk_en.pdf)



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

# Overview and population





# Geopolitical drivers

## Spheres of influence, support or alliance

- Russian
- West
- Turkish
- Armenian
- Closed or fortified border
- Abkhazia, Nagorno-Karabakh, South Ossetia: separatist governments

Diagram produced by Zoi Environment Network, July 2015.



# INTRODUCTION

## – The Geopolitical Context

Since the early 2000s researchers and international organizations have advanced the environment and security nexus as a vehicle for both conflict analysis and peacebuilding. The idea was that environmental issues – if not taken care of – can contribute to conflicts, and conversely, that working to resolve environmental problems can serve as a catalyst for peacebuilding. The conditions in the South Caucasus have resulted in considerable attention by the international community.

### Environment and security

The international community and numerous researchers have acknowledged the linkages between environment and security, and have identified regions where a combination of these two issues (for example, a conflict over shared resources) poses a potentially worrying situation needing attention and action.

The Environment and Security Initiative (ENVSEC) is addressing the environmental and security risks in Central Asia, the South Caucasus, and Eastern and South-Eastern Europe. In these regions countries experiencing economic transition or political stress are particularly vulnerable to environmental damage and competition over resources. Tensions within and across national borders stem from competition over declining natural resources such as forests, fresh water, fisheries and fertile soils. Disputes over environmental risks, problems and hazards such as cross-border pollution or environmental accidents with transboundary consequences can cause political tension and threaten peace. Natural disasters can have different consequences for human communities and their livelihoods depending on the community's coping capacity. Finally, environmental wealth in the form of non-renewable natural resources such as metals may play a key role in triggering, prolonging and financing violent conflicts.

Specific geographic areas with ongoing political and economical tensions, environmental issues and natural resource depletion are identified as hotspots. Areas with weak institutions or lacking a mechanism for transboundary environmental and security cooperation are especially vulnerable.

See: Environment and Security Initiative, [www.envsec.org](http://www.envsec.org)

A first assessment of environment and security issues for the South Caucasus was done in 2004. A decade later, the geopolitical conditions for resolving the frozen conflicts in the region have not improved. There was, however, progress in the countries with regard to environmental policy implementation, legislation and management, mainly as a result of international cooperation. Cross-border environmental initiatives within the conflict areas have been too limited to translate into confidence-building much less to have a sustained impact on the peacebuilding process.

The discussion of the environment as it relates to security nevertheless remains relevant in the South Caucasus. All three states – Armenia, Azerbaijan and Georgia – rely on extensive exploitation of natural resources for their economic revival after a decade of collapse following the break-up of the Soviet Union. This extensive exploitation of natural resources can create both interstate and intrastate frictions, which can either be managed through diplomatic skills or add to the existing tensions.

The region emerged from the collapse of the Soviet Union through a series of

ethno-territorial conflicts that remain largely unresolved.<sup>2</sup> At the same time, South Caucasus is going through several mainly external geopolitical shifts that could affect its security. Tectonic geopolitical shifts – such as Russia as a re-emerging power, Iran’s return to the global agenda and Turkey’s reorientation of its foreign policy – will certainly have an impact on the South Caucasus. How Armenia, Azerbaijan and Georgia will manage their relations with these actors and the European Union (EU) remains to be seen.

At the same time, the three frozen conflicts in the South Caucasus still need to be addressed. In 2008 we witnessed how such conflicts can turn into a war and to tensions between global powers. The Russian recognition of Abkhazia and South Ossetia as sovereign states makes the situation not less complicated.<sup>3</sup>

While the external geopolitical context is shifting, and the conflicts are preserving the status quo, tensions around resource exploitation have the potential to increase. The economies of the three countries have different structures, but all rely largely on extraction, and in all three

countries equitable income distribution remains a challenge.

Environmental protection and natural resource conservation have received increasing attention in the South Caucasus in recent decades but for many reasons are not among the countries’ highest priorities. At the same time, new environmental movements in the South Caucasus are already underway. The political cultures and realities in the countries are different, and these new movements accordingly find themselves at different stages. In Armenia, the environmental movement has gathered speed in recent years focusing mainly on the destruction of urban parks, and opposing major mining projects and the construction of small hydropower stations in the countryside. Some in the movement come from the Armenian Greens, who were strong in the 1980s and interpreted environmentalism through the lens of nationalist political values. Others are shaping a new environmental movement that links the defence of forests and rivers with questions of economic exploitation, political transparency, rule of law and good governance.

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2- See Vicken Cheterian, *War and Peace in the Caucasus, Russia’s Troubled Frontier*, Hurst/Columbia University Press, 2009.

3- Besides the Russian Federation, the only other states recognizing Abkhazia and South Ossetia as sovereign states are Nicaragua, Venezuela and Nauru.

In Georgia, there is a similar movement taking shape, but it remains a fragmented and marginalized social movement that organizes around specific struggles such as support for public gardens in the capital or opposition to the construction of major hydropower projects in the mountains. Here, too, the question of preserving the environment is linked with issues of decision-making: who decides what, and what is the role of the local community?

In Azerbaijan, similar civil society movements only exist in a limited way, although there are clear signs that the Azerbaijani public shares similar concerns. In the last few years there has been localized mobilization around the preservation of cultural heritage sites in downtown Baku, and for the defence of water resources.

A number of environmental problems can have direct security consequences. The best regional example is the Medzamor Nuclear Power Plant in Armenia. Consumption of water in the Ararat Valley for irrigation and industrial fish farming leads to declining groundwater levels, and may result in inadequate water

supplies for cooling the reactors. Plans for a new plant are an additional conflict with Armenia's neighbours: Azerbaijan sent an official complaint about Armenia to the ESPOO Convention Secretariat regarding the impact of the plant on the environment in a transboundary context.

Concerns about transboundary waters are well placed. Construction of new dams on the Chorokhi river in Turkey could lead to a decrease in water and sediment run-off to Georgia, eventually leading to increased coastal erosion. In Georgia, extensive construction of hydropower plants could – on top of changing national and transboundary water regimes – increase the risk of cross-border accidents,<sup>4</sup> which could have far-reaching repercussions. Pollution of the large transboundary Kura and Aras rivers with untreated sewage continues to be an issue that could cause friction between the countries.

Oil production in Azerbaijan is an economic priority and the main source of income, but both legacies and risks for polluting the Caspian Sea environment remain high and could increase tensions in a contested geopolitical situation.

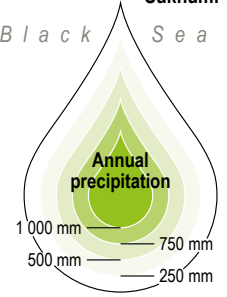
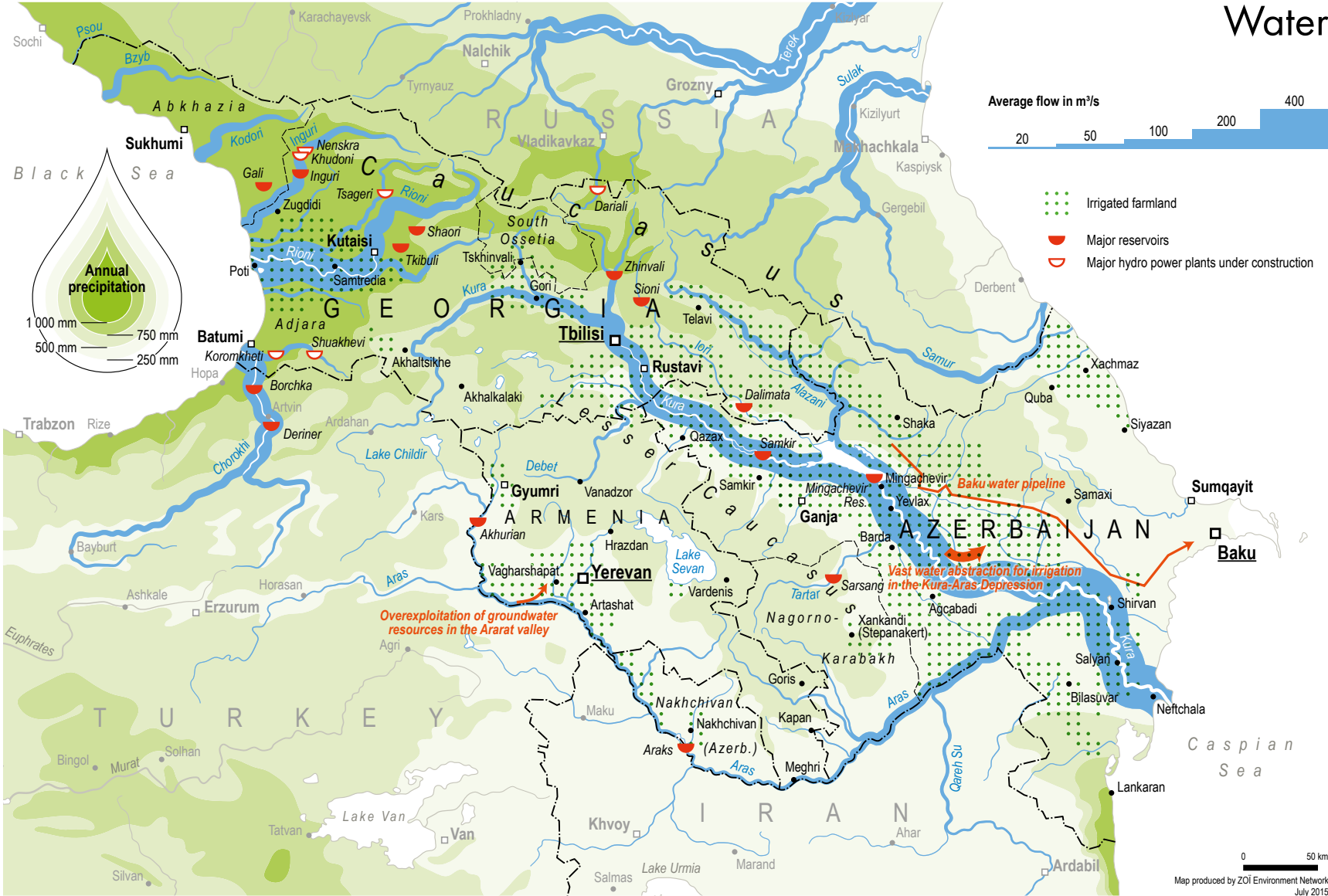
The impacts of climate change remain unpredictable but will certainly affect all countries in the region: changing temperature and precipitation regimes will negatively impact agriculture and the risk for natural disasters will also increase. All this will eventually have negative impacts on livelihoods and the economies in the region.<sup>5</sup>

The areas of frozen conflict – Nagorno-Karabakh, Abkhazia and South Ossetia – remain blank spaces on the environmental protection map of the region. With virtually no environmental governance regime, the risks continue unabated, and in the absence of hard facts, rumours alone can fuel the tensions. The frozen conflicts make it difficult to negotiate common plans and strategies – sharing water resources, for example – between neighbours.

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4- <http://blogs.agu.org/landslideblog/2014/08/23/dariali-gorge-08/>

5- ENVSEC, Climate Change in the South Caucasus – A Visual Synthesis, Zoi Environment Network, 2011.

# Water



Overexploitation of groundwater resources in the Ararat valley

Baku water pipeline  
Vast water abstraction for irrigation in the Kura-Aras Depression

# ARMENIA

Landlocked Armenia is exposed to various geopolitical pressures. Its two longest borders – with Azerbaijan in the east and Turkey in the west – are closed due to the long-standing Nagorno-Karabakh conflict and non-existing diplomatic relations with Turkey. Thirty-five per cent of the population falls below the poverty line, and out-migration has an impact on demographic equilibrium. The Nagorno-Karabakh war in the east together with the Turkish alliance with Azerbaijan prompted Armenia to join the Collective Security Treaty Organization<sup>6</sup> and to seek the preservation of the Russian military base in Gumri – where some 5 000 Russian troops are stationed – as a security guarantee. In 2013 Armenia joined the Russia-led Eurasian Economic Union, abandoning the preparation for an association agreement with the EU. Considerable shares of Armenia's power system are Russian-owned. The Metsamor nuclear power station is run by Inter RAO UES, and Gazprom owns the gas distribution system, providing gas to Armenia at reduced prices.

Armenia's economy is highly dependent on the extraction of natural resources. The country is known as a land of mountains, with highlands littered with cone-shaped volcanic summits. In this context, environmental challenges persist: water contamination, low water quality and water deficits in large cities; ineffective agricultural practices with negative effects on natural resources; degradation of agricultural land, especially in areas where agriculture plays a main role in livelihoods; overgrazed pastures; overuse of groundwater resources; climate change risks and disasters; deforestation and illegal logging; and losses of biodiversity and wildlife.

The licensing process for the use of natural resources does not include any preliminary assessment of impacts. There are few alternatives to the exploitation of natural resources, and the prospects for other incomes, especially during economic stagnation, are dim. The situation is getting worse in both urban and rural areas.

At the same time, Armenia is a party to 21 international environmental conventions. The list of organizations supporting Armenia with its obligations under conventions and agreements includes the World Wildlife Fund (WWF), the United Nations Institute for Training and Research (UNITAR), the United Nations Development Programme (UNDP), the Organization for Security and Co-operation in Europe (OSCE), the Regional Environmental Centre for Caucasus and others. Some local actions are coordinated by Aarhus centres (15 of which are in the country).

The development of a green economy is currently being discussed in the country, and some international organizations, notably the United Nations Environment Programme, have initiated some actions.

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<sup>6</sup>- The Collective Security Treaty Organization is a Russia-led military umbrella of the Commonwealth of Independent States (CIS).

## Mining

Armenia has a long tradition of mining, with an active mining industry going back to the Russian imperial period and continuing through the Soviet decades. In 1763 the first smelter was built in Akhtala. The Kapan copper mines in the south are among the oldest continuously exploited mines in the world, active since 1846, and still working today. In 1900 the country produced a fifth of Russian copper.<sup>7</sup> The country was an important industrial centre in the Soviet era, and mining played an essential role, but after the Soviet collapse, industrial production including mining came to a standstill. Since 2000, however, Armenia has once again exploited its Soviet-era mining sector, extensively promoting the country's mining potential internationally.<sup>8</sup> The intensive exploitation of some 670 mines, mainly producing construction materials and metals, has played an important role in the country's exports. In 2009, exports of copper, molybdenum, gold and other minerals in high demand constituted 40 per cent of overall exports.<sup>9</sup> The Zangezur Copper and Molybdenum Combinat remained the top taxpayer in the republic over the last several years, with a contribution of AMD 31.7 billion in 2012.<sup>10</sup> The sector contributes 3-5 per cent to the country's total GDP.

Mining remains a high environment and security risk in Armenia, and monitoring and compliance mechanisms of the regulatory institutions need to be strengthened. The concrete risks associated with the extraction of metals include pollution of water courses, including transboundary rivers, with heavy metals; pollution of surface and groundwater by heavy metals due to improper tailings management; overuse of water and poor water resources management; and pollution of air that later affects human health, especially among children.<sup>11</sup>

7- Mining in Armenia, Zoi Report, 3/2012, pages 7 and 10.

8- Mining Journal Armenia Supplements 2005 and 2011 <http://mining-journal.com/focus/supplements>

9- <http://www.armenialiberty.org/content/article/1889521.html>

10- Armenpress, Yerevan, January 31, 2013: <http://armenpress.am/eng/news/706683/>

11- <http://crm.oua.am>. The Center for Responsible Mining at the American University of Armenia is monitoring and addressing issues related to mining and environment.

## Hydropower

To diversify its energy needs, and to find local energy sources, the government encouraged the development of a large number of small hydropower plants (SHPP). Since 2000, the government, in collaboration with international donors, has encouraged the construction of 80 new SHPPs.<sup>12</sup> The idea is attractive for Armenia because with small investments and limited environmental impacts, local energy sources can be harnessed. In 1997 the country had 11 SHPPs; by 2013 the number of units had grown to 137, with another 77 under construction.<sup>13</sup> Currently, the SHPPs provide 16 per cent of the overall energy production in Armenia.

Even though the individual units may be small, the sheer number of SHPPs puts considerable pressure on local ecosystems by affecting hydrological regimes and water availability. Climate change is likely to exacerbate these pressures.

Both the extensive development of the mining sector, and the way SHPPs were implemented ignited much debate, social mobilization and resistance.

12- UNIDO, ICSPH 2013. World Small Hydropower Development Report 2013; [www.smallhydropower.org](http://www.smallhydropower.org)

13- Gayane Mkrtychyan, "Armenia's Greens Take On Hydro Schemes", Environment News Service, December 19, 2013: <http://ens-newswire.com/2013/12/19/armenias-greens-take-on-hydro-schemes/>

## Ararat Valley

Ararat Valley has had water management issues since the Soviet era. The use of artesian sources for irrigation has led to salinization of the soil and a drop in groundwater levels. In recent years, fish farming has become another source claiming water resources, leading to further drops in groundwater. Due to intensive development of fish farms in the last 7-8 years, the abstraction of groundwater solely for fishery purposes in the Ararat Artesian Basin has increased from 34.7 m<sup>3</sup>/sec to 55.6 m<sup>3</sup>/sec, while the flow of the Metsamor River, which is fed mainly from groundwater, declined by 83 per cent from 1983 to 2013.<sup>14</sup> According to a recent report, the drop in groundwater (as well as artesian water) could endanger the cooling process of the Metsamor nuclear plant.<sup>15</sup>

Ararat Valley could be considered an environmental and security hotspot that requires immediate and appropriate actions in natural resources management and in agriculture practices.

14- USAID Clean Energy and Wagter Program "Assessment Study of Groundwater Resources of the Ararat Valley: Final Report" [http://cew.am/uploads/library/AGWS\\_Final\\_Report\\_\\_March\\_ENG1.pdf](http://cew.am/uploads/library/AGWS_Final_Report__March_ENG1.pdf)

15- World Bank Group, 2015. Winston Yu, Rita E. Cestfi, and Ju Young Lee. Toward Integrated Water Resources Management in Armenia.

## New social movement

In the Soviet period, Armenia as well as other republics had strong environmental movements. The environmental impacts of rapid industrialization, coupled with the attitude of the authorities towards the expression of environmental concerns, explain the strength of environmental movements. Yet these movements often had nationalist concerns when it came to the environment: the “national” land, water and cultural heritage were being defended against a “foreign” modernizing agent.<sup>16</sup> Those environmentalists were active in mobilizing demonstrations in Armenia in the early perestroika period, in 1986 and 1987, against such projects as the Nairit synthetic rubber plant in Yerevan, or the Metsamor nuclear plant, which alarmed the public following the Chernobyl accident.

The environmental movement lost much of its attraction as the nationalist movement took precedence. The environmental activists were even accused of causing the energy crisis following the independence of Armenia, as they had spearheaded the closing of Metsamor.

In the last decade, a new type of social movement<sup>17</sup> has been taking shape in Armenia, bringing together environmental concerns with issues of governance, transparency and popular participation in decision-making. This movement, which is independent from political parties, is the most contemporary of political expressions in Armenia, revealing both the strength and weaknesses of an avant-garde movement.

After its emergence in 2007, around the struggle to stop the Teghut mining project, the environmental movement succeeded in mobilizing a few thousand people around issues such as preserving public parks in Yerevan.

A number of success stories reinforced the movement: the relocation of a highway planned to cut through the Shikahogh Reserve in southern Armenia; cancellation of a hydropower plant on Trchkan waterfall in northern Lori province after villagers and activists organized a protest camp; and the reversal of a decision on a construction project in Mashtots Park in central Yerevan after a struggle that continued for three months. These victories encouraged the environmental movement in Armenia, and raised awareness in the wider society. On

the question of the advisability of mining in Armenia, the movement has opened a debate encompassing the decision-making process, the interpretation of laws, taxation and good governance.

While the environmental movement has largely started as an urban – Yerevan – phenomenon, rural areas have recently mobilized around environmental causes. The movement opposes government plans, but lacks organization and the capacity to link individual struggles to overall policies, and has failed to propose convincing alternatives. Political parties use the movement to gain voter support.

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16- Vicken Cheterian, “Politics of Environment in the Caucasus Conflict Zone: From Nationalizing Politics to Conflict Resolution”, in Hans Günter Brauch (et al, eds.), Facing Global Environmental Change, Environmental, Human, Energy, Food, Health and Water Security Concepts, Springer, April 2009, pages 925-938. For a broader discussion on environmental nationalism in Soviet tradition, see Jane I. Dawson, Eco-Nationalism, Anti-nuclear activism and national identity in Russia, Lithuania, and Ukraine, Duke University Press, 1996.

17- See Armine Ishkanian, Civil Society, Development and Environmental Activism in Armenia, London School of Economics and Political Science, October 2013: [http://eprints.lse.ac.uk/54755/1/Ishkanian\\_Civil\\_Society\\_Development\\_Environmental\\_Activism\\_America\\_2013.pdf](http://eprints.lse.ac.uk/54755/1/Ishkanian_Civil_Society_Development_Environmental_Activism_America_2013.pdf).

## Nuclear power plant

The only nuclear power station in the South Caucasus – the Metsamor plant – is ageing and the Armenian government intends to construct a new reactor expected to cost US \$4-5 billion.<sup>18</sup>

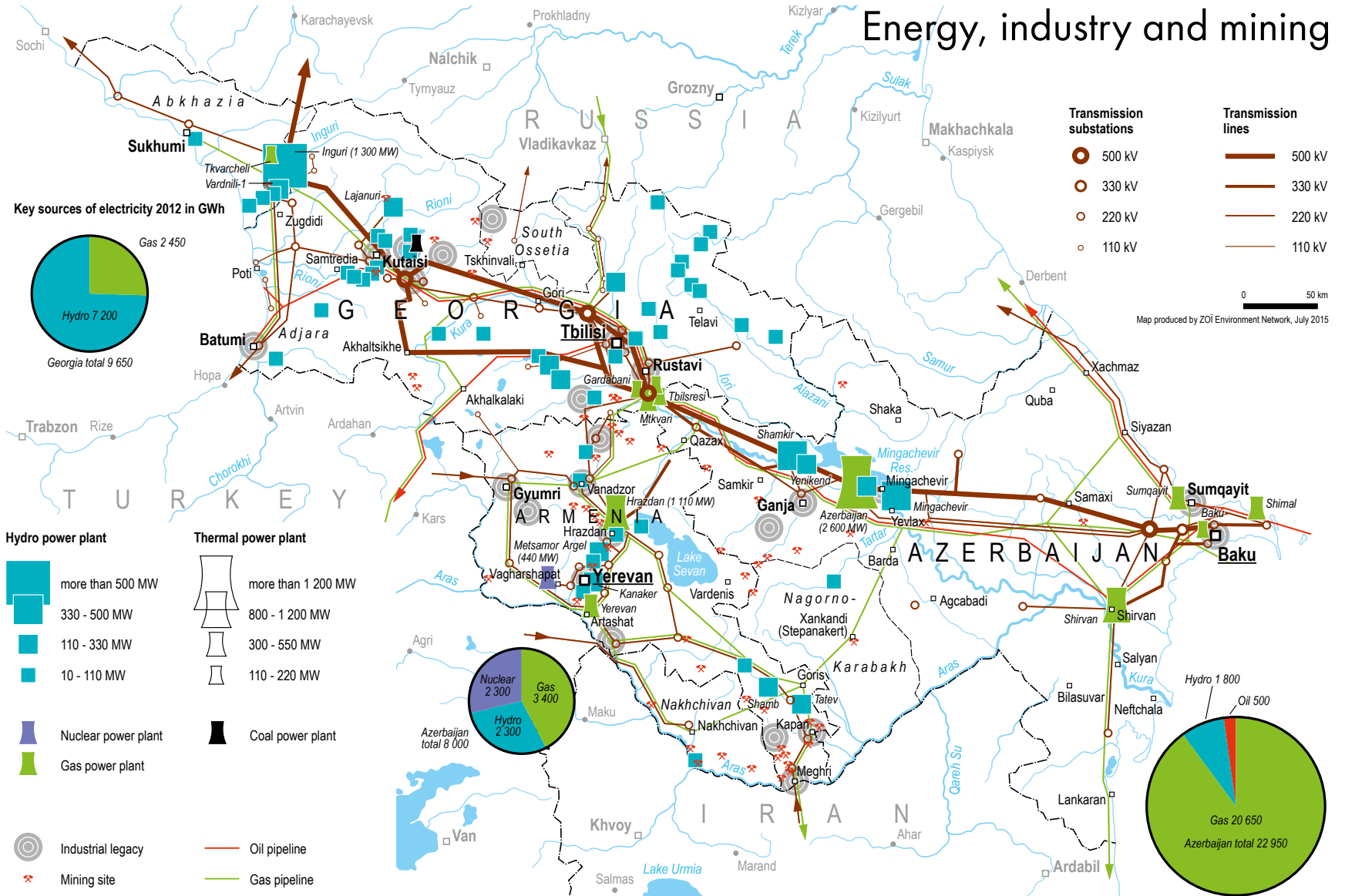
A nuclear power plant carries risks to the population living nearby, but so far the available information on risks is inadequate and a public debate has not yet taken place in Armenia. Additionally, the nuclear power plant is expected to use groundwater including valuable artesian water (which is currently declining) for cooling. Neighbouring countries’ concerns about a new nuclear power plant are addressed, discussed and monitored by the United Nations under the UNECE Espoo convention.<sup>19</sup>

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18- Interview with Anna Shahnazaryan, Yerevan, September 18, 2014

19- <http://www.unece.org/env/eia/>



# Energy, industry and mining





# AZERBAIJAN

In the last decade Azerbaijan has become relatively wealthy through the export of oil and gas. The construction of the Baku-Ceyhan pipeline, with its capacity of 1 million barrels/day, has contributed significantly to the country's income.

Azerbaijan has created a sovereign wealth fund – the State Oil Fund of the Republic of Azerbaijan (Sofaz) – which has reinvested most of the US \$110 billion in income it has received. The current account of Sofaz is estimated at US \$40 billion. In the last decade the authorities invested an estimated US \$70-120 billion in infrastructure to support the oil industry.<sup>20</sup>

How much the country will be able to exploit this boom to develop a modern democratic state remains to be seen. Offsetting the positive economic developments are limited political opposition and restrictive conditions for some NGOs and human right activists. The country's annual defence budget has increased from US \$300 million in 2003 to US \$3.6 billion in 2013 making the military option a possibility for conflict resolution.

Rapid economic development can create environment and security risks, but in contrast to its neighbours Azerbaijan has experienced few instances of local domestic grievances or organized advocacy or protests by NGOs, a situation in keeping with the general political climate in the country.

Environmental protection is not yet among government priorities, although climate change will affect all sectors of the country. On a positive note, the national development concept "Azerbaijan 2020: Look into the Future" does contain a chapter on environmental protection and ecological issues.<sup>21</sup>

There are environmental success stories in Azerbaijan. The clean-up of the Absheron Peninsula, an environmental hotspot ranked in the Top 10 Most Polluted Places in 2007,<sup>22</sup> is advancing rapidly. A new national hazardous waste site was installed and the oil industry is gradually moving outside the Greater Baku region. Polluted sites are gradually being remediated. The Hovsan wastewater treatment facilities and the

Balakhani solid municipal waste landfill have undergone significant improvements as well.<sup>23</sup>

Nevertheless, the rapid urbanization in Baku means that issues related to water quality and quantity and the complex environmental issues concerning the Caspian Sea remain challenges.

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20- Frank Kane, "The guardian of Azerbaijan's oil riches", The National, October 7, 2014: <http://www.thenational.ae/business/economy/the-guardian-of-azerbajians-oil-riches> ; Palash Ghosh, "Azerbaijan – A Repressive, Corrupt Country That The West Loves: There Must Be Oil", International Business Times, June 23, 2012: <http://www.ibtimes.com/azerbaijan-repressive-corrupt-country-west-loves-there-must-be-oil-704066>

21- [http://www.president.az/files/future\\_en.pdf](http://www.president.az/files/future_en.pdf)

22- [http://www.worstpolluted.org/projects\\_reports/display/27](http://www.worstpolluted.org/projects_reports/display/27)

23- Zoi Environment Network 2013. Waste and Chemicals in Azerbaijan. A Visual Synthesis. <http://issuu.com/zoienvironment/docs/aze-waste-and-chemicals-2013>

## Baku urbanization

Urbanization is taking place in Azerbaijan, and Baku is the main centre of gravity. While officially Baku has 2.15 million<sup>24</sup> inhabitants, unofficial sources put this figure closer to 4 million. The increasing demand for housing is driving massive construction activities in the city, including the demolition of entire historic districts and the displacement of large numbers of people. Grievances of the people living there have become known internationally, but the developments continue.<sup>25</sup>

Transport contributes to air pollution in the city, and directly affects public health and life expectancy, which, at 71 years, is lower in Azerbaijan than in other Caucasus countries. A new national energy strategy with the aim of decreasing air pollution sets new limitations and rules: cars that were manufactured before 2006 may no longer be imported, and “black” oil (mazut) is no longer used for vehicles and heating. Since April 2014, Euro 4 emission standards are being applied in Azerbaijan.

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24- <http://www.stat.gov.az/indexen.php>

25- <http://www.hrw.org/features/azerbaijan-forced-evictions>

## Oil pollution

Oil extraction, the main industry in the country for the last 100 years, comes with unavoidable pollution.<sup>26</sup> Oil spills, soil contamination and Caspian Sea pollution are crucial problems in Azerbaijan, and the part of the Absheron Peninsula where Baku is located suffers from all of these. Soil contamination has been present in Baku for decades, and the Black City neighbourhood outside Baku literally turned black because of oil extraction. Currently the government is attempting to clean up the peninsula and transform the Black City into the White City, though it will take a while to get rid of the accumulated pollution.

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26- Al Jazeera Azerbaijan Oil Spills 29 October 2008 <https://www.youtube.com/watch?v=hW-F8YQWUfc>

## Water issues

Azerbaijan is a downstream country, with a high water dependency ratio: three fourths of the water resources in Azerbaijan originate outside of the country (compared to 8 per cent in Georgia), with implications for both water quality and quantity. Sewage from Tbilisi flows untreated down the Kura River to Azerbaijan affecting water quality, and increased competition among agriculture, domestic and industrial uses and abstractions for hydropower generation all affect quantity. Climate change brings further uncertainties, and the water-agriculture-energy nexus in Azerbaijan will require particular attention and cooperation at the international and local levels. The recently completed large-scale engineering works on the Oguz-Gabala-Baku water pipeline has – with a capacity of 5 cubic metres per second – at least brought relief to Baku’s chronic drinking water supply problems.<sup>27</sup>

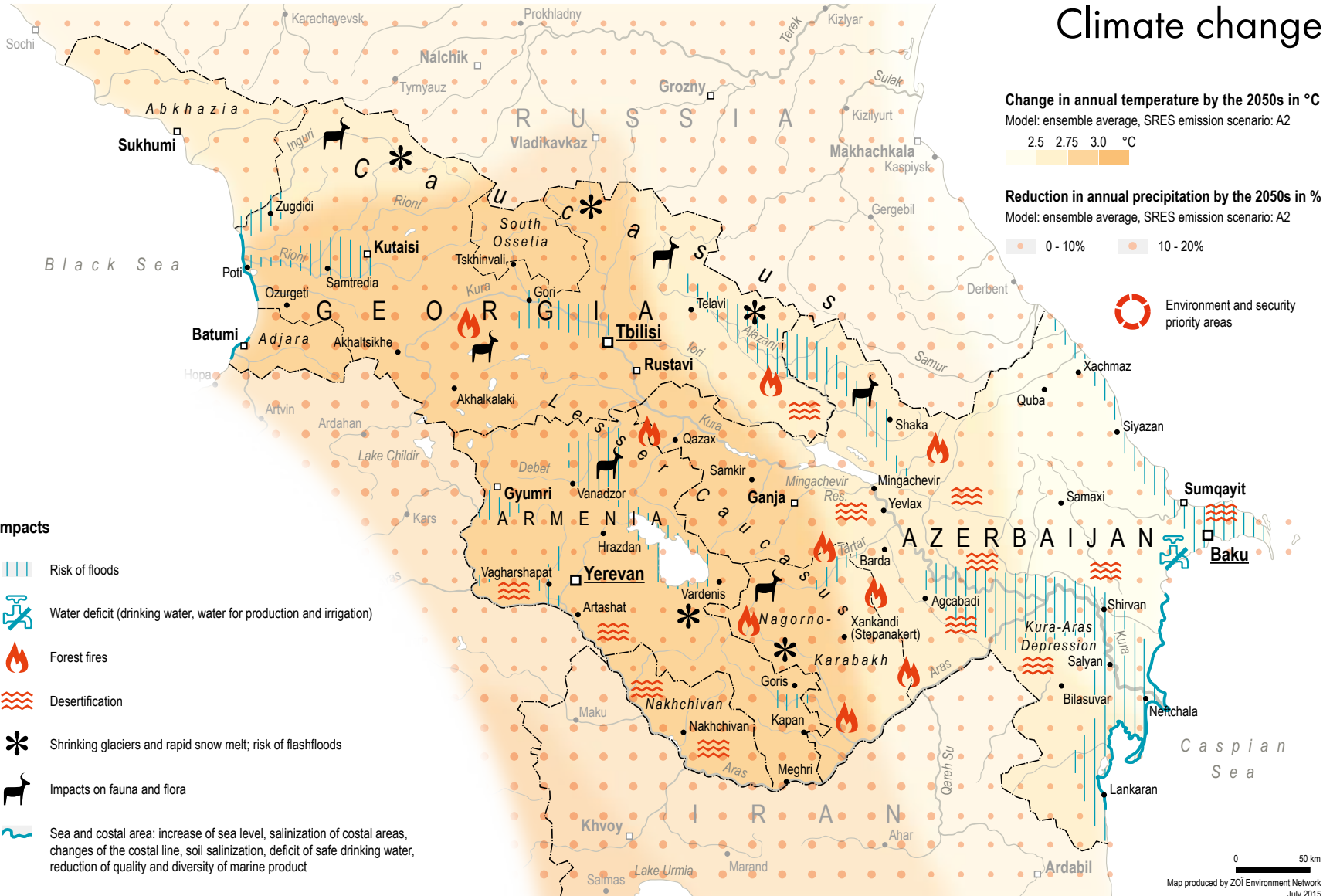
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27- <http://en.trend.az/business/economy/1813528.html>

## Caspian environment

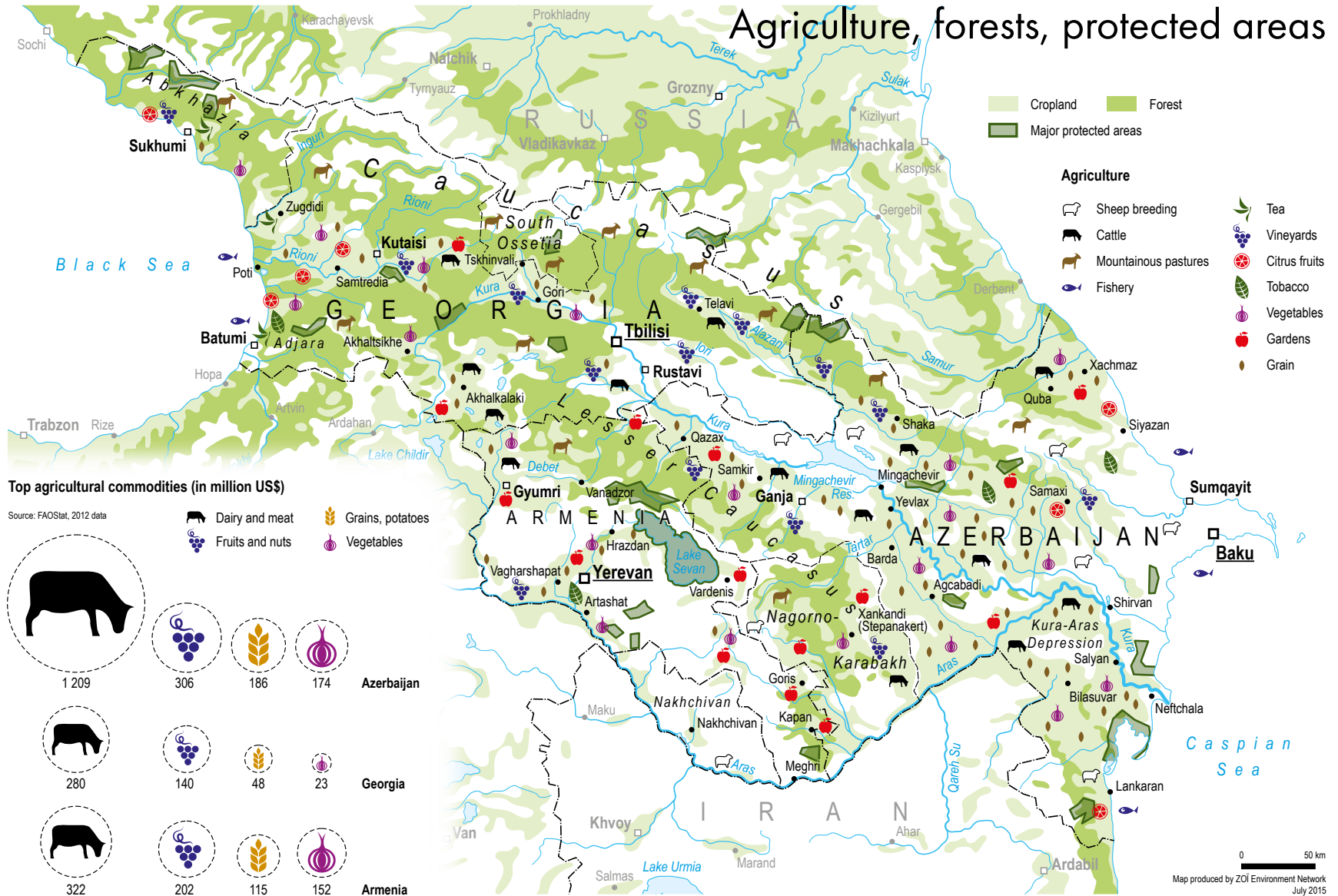
The Caspian Sea is not only an unresolved geopolitical hotspot, it is also linked to a complex array of environment and security concerns – pollution related to oil exploration and transport, declining fish stocks and sea-level fluctuations. Plans for the construction of the Trans Caspian gas pipeline from Turkmenistan to Azerbaijan are not uncontested by some of the other Caspian countries. With the Tehran Framework Convention for the Protection of the Marine Environment of the Caspian Sea a multilateral instrument for addressing environmental issues exists.

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28- <http://www.tehranconvention.org>

# Climate change



# Agriculture, forests, protected areas



# GEORGIA

## GEORGIA

In recent years Georgia faced two security challenges. The first was the five-day Russo-Georgian war of August 2008 during which Russian troops advanced rapidly through central and western Georgia. Following the war, Russia recognized Abkhazia and South Ossetia as sovereign independent countries, a step that is strongly rejected by Georgia. Thanks to western financial aid, the Georgian state managed to stand firm following the shock of the war and the territorial losses.

The second challenge was the struggle between the ruling National Movement led by Mikheil Saakashvili and the opposition Georgian Dream coalition led by Bidzina Ivanishvili. In two elections (parliamentary of October 2012, and presidential in October 2013) the Georgian Dream became the new ruling party. Power changed hands peacefully through electoral choice.

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29- Georgia Overview, World Bank, February 14, 2014:  
<http://www.worldbank.org/en/country/georgia/overview>

The change in government led to adjustments in foreign policy. Tensions with Russia eased and trade improved – positive developments in the view of many Georgians.

The interaction of environment and security is important in Georgia, and environmental issues have recently received more attention. In 2014 Georgia signed an association agreement with the European Union, a step that means a greater focus on European environmental standards. The new authorities announced support for the agricultural sector, and the intention to provide health insurance to all Georgian citizens, a plan to be achieved through subsidies. Effective measures in the agricultural sector may improve productivity: agriculture currently employs over 55 per cent of the workforce, but produces only 8.2 per cent of GDP.<sup>29</sup> Another priority for the current government is to strengthen the tourism sector. The main environment and security challenges are intensive hydro-power projects, mining and development in urban areas.

## Mining

Mining activities were recently authorized at Sakdrisi in the Bolnisi district of the Kvemo Kartli region south-west of the capital. In 2004, mining activity going back to the third millennium BCE was discovered on the site, considered one of the oldest gold mines in the world, after which Sakdrisi was designated as a cultural heritage site. Sakdrisi has since become plagued by legal battles, pollution scandals and workers' strikes demanding better working conditions.<sup>30</sup> Discussions over Sakdrisi led to internal tensions in the government and the dismissal of high-level officials in the Ministry of Culture and Monument Protection of Georgia.<sup>31</sup> Despite public protests, work on the mining site is going ahead. Mining is also an issue with regard to Georgian manganese in Chiatura in the Western part of the country.

Mining can pose a significant risk to people and the environment, and the international community and NGOs urge mining companies to adopt transparency, environmental assessments and consultations with local populations as standard practices.<sup>32</sup>

## Hydropower

Georgia plans to expand its hydropower generation through the construction of new stations, and has proclaimed its ambition to be a "hydropower giant".<sup>33</sup> Currently, there are more than 150 medium and large hydropower projects in Georgia.<sup>34</sup> Experts and activists criticize some of these projects for lack of adequate environmental impact assessments and for potentially using the entire water flow of some rivers, leaving insufficient water resources for biodiversity or local communities. Activists also denounce international organizations and development banks for not respecting some rules and procedures, such as applying genuine social and environmental impact assessments.

Some of the hydropower projects are considered environmental risks. The two mud-slides in Dariali Gorge near Kazbegi Mountain on the Georgian-Russian frontier (on May 17, 2014 and August 20, 2014) have clearly shown risks as-

sociated with hydropower development in mountain areas. The mud-slides took place in the vicinity of a hydropower plant construction site, and claimed several victims including workers at the site. The slides blocked Dariali Gorge leading to the disruption of traffic between Russia and Georgia, as well as to the disruption of the north-south pipeline that provides Russian natural gas to Armenia.<sup>35</sup> The incidents have, however, also shown that in time of disasters, transboundary cooperation between Georgia and Russia still functions.

Large hydropower projects in Georgia – such as Dariali and Khudoni – have met resistance by local communities for various reasons, including landscape characteristics, tourism values and national historical and cultural heritage perspectives.<sup>36</sup> In addition to concerns over adequate environmental and social safeguards, issues of economic and technical viability have also been raised.<sup>37</sup>

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30- Civil Georgia, "Strike-Hit Gold Mine Spills Polluted Water into River", February 27, 2014: <http://www.civil.ge/eng/article.php?id=26986> see also Paul Rimple, "Georgia Opts for Gold Mining at Protected Historical Site", EurasiaNet, March 18, 2014 See also <http://www.bbc.com/news/world-europe-27499882>, May 28, 2014: <http://www.eurasianet.org/node/68161>

31- <http://dfwatch.net/culture-ministry-deputies-dismissal-approved-by-georgian-pm-84524>, <http://dfwatch.net/culture-minister-fires-deputy-amid-dispute-over-ancient-mine-97916>

32- <http://www.euroeastculture.eu/en/news/view-joint-statement-by-cenn-and-icomos-regarding-environmental-cultural-and-social-impacts-of-mining-ac.html>

33- Statement of Georgia at the UN Climate Summit 2014 <http://statements.unmeetings.org/media2/4627980/georgia.pdf>

34- Interview with Manana Kochladze, Green Alternative, Tbilisi, September 24, 2014.

35- Civil Georgia, "Landslide Hits Dariali Gorge", August 21, 2014: <http://www.civil.ge/eng/article.php?id=27596>

36- David Chipashvili, "Georgian hydro projects are a test case for the EBRD's good governance policies", Bankwatch, February 12, 2014: <http://bankwatch.blogactiv.eu/2014/02/12/georgian-hydro-projects-are-a-test-case-for-the-ebd's-good-governance-policies/>

37- <http://www.eia.nl/en/publications/advisory-reports/501-i>

## Black Sea coastal zone

Despite projected sea level rise due to climate change and a permanent pattern of flooding and erosion risks along the Black Sea coast, major Black Sea developments such as a deep seaport and tourist zones are being promoted without addressing the environmental risks of such developments. An additional security concern may also be the proximity to Abkhazia.<sup>38,39</sup>

38- <http://m.voanews.com/a/1734134.html>

39- <http://www.economy.ge/en/request-for-expression-of-interest-eoi-for-the-construction-and-development-of-the-anaklia-new-deep-water-black-sea-port>

## Irrigation and dams linked to South Ossetia

Another development creating new environmental challenges was the construction of an irrigation offtake dam on the Didi Liakhvi River in a Georgian-controlled area downstream of Tskhinvali, South Ossetia.<sup>40</sup> This development was done without the disclosure of an environmental impact assessment, and mitigation measures such as fish ladders were not implemented. Operating costs to pump water into the irrigation network are significant, but cost-effective, win-win solutions would be available by rehabilitating and operating gravity offtake in Tskhinvali. Alternatives to the direct discharge of untreated wastewater into the downstream irrigation system could also be developed through diplomatic channels and confidence-building activities.<sup>41</sup>

40- Postwar 2008 environmental assessment report can be found at this link [http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/OSCE-UNEP-GFMC-Env-Assessment-Georgia-Oct-2008-OSCE-34577\\_en.pdf](http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/OSCE-UNEP-GFMC-Env-Assessment-Georgia-Oct-2008-OSCE-34577_en.pdf)

41- <http://www.osce.org/secretariat/81156>

## Hazardous events

Floods, flash floods, landslides and mudslides cause social, economic and ecological damage including physical and livelihood losses. The linkage between environmental issues and human security is visible through natural hazards.

Up until 1995, Georgia had 3-5 floods and flash floods per year, but between 2007 and 2009 the frequency increased to 7-20 per year. The regions most vulnerable to floods and flash floods are Imereti, Guria and Samegrelo in western Georgia; Mtskheta-Mtianeti in eastern Georgia; Kura River area; and the Alazani left bank area. During the last two decades heavy precipitation has also caused an almost two-fold increase in the frequency of mudflows in Kvemo-Svaneti.<sup>42</sup> In Georgia, landslides have increased by 43 per cent since 1980.<sup>43</sup> A large area of Georgia is at risk of landslides. A 2011 landslide risk assessment found that 17 per cent of the country (an area of 11 866 km<sup>2</sup>) is located in a high hazard zone, 38 per cent in a

moderate hazard zone and 44 per cent in a low hazard zone.<sup>44</sup>

Since independence Georgia and Armenia have made significant progress in drafting new environmental laws and regulations. The transition from the Soviet tradition of political decisions that were the monopoly of an elite relying on “experts” to a system with broader discussions and the participation of stakeholders is still a work in progress. In this sense, the social movement emerging around environmental themes supports the rule of law, and is democratic in spirit.<sup>45</sup>

42- MoEPNR (2009). Georgia’s Second National Communication to the UNFCCC. Ministry of Environment Protection and Natural Resources of Georgia

43- World Bank (2014) Building Resilience to Climate Change in South Caucasus Agriculture, <https://openknowledge.worldbank.org/bitstream/handle/10986/18033/9781464802140.pdf?sequence=1>

44- Geoportals of Natural Hazards and Risks in Georgia. <http://drm.cenn.org/index.php/en/>

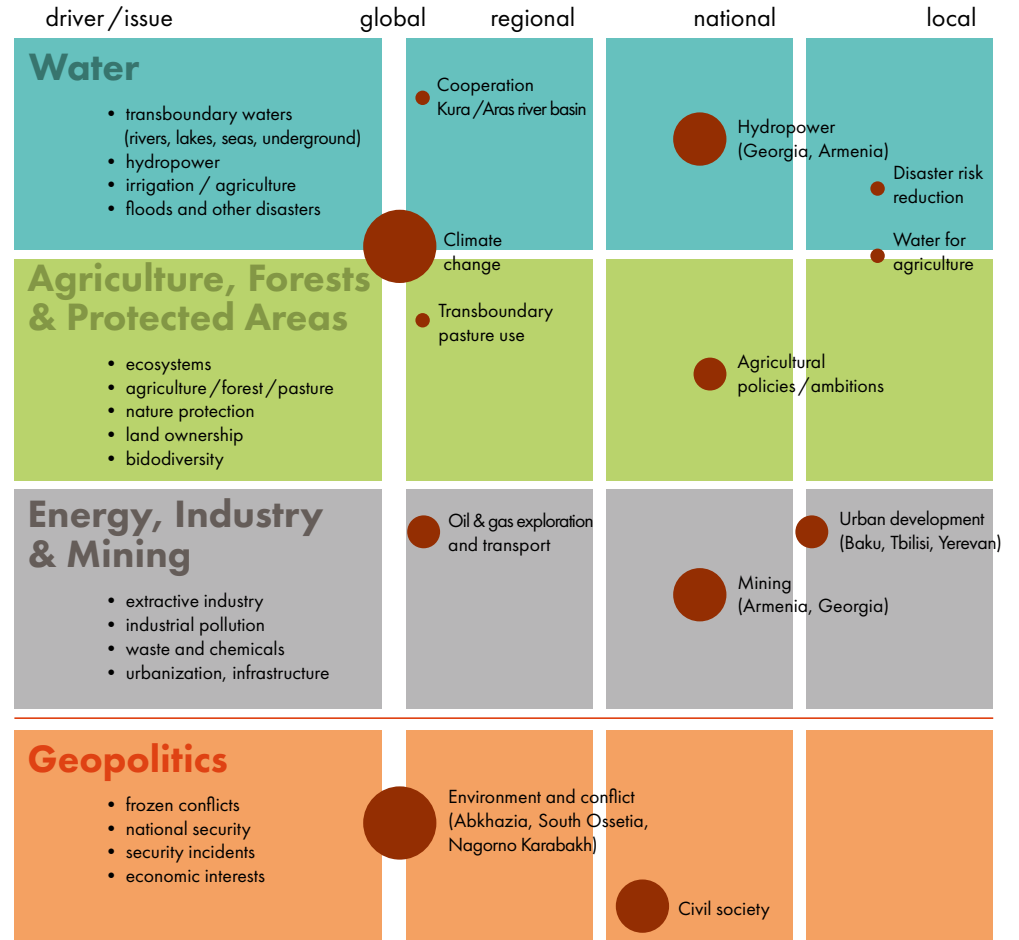
45- This said, it should be underlined that there is also a nationalist, isolationist trend continuing from Soviet times that sees the environmental issue from a totally different ideological premise.



# Environment-Security Priorities Caucasus 2015

## CONCLUSIONS

A careful examination of the environmental linkages to security in the South Caucasus today reveals both positive and negative trends. On the “dark side” are the geopolitical situation and emerging hotspots, and on the “bright side” are the prospects for a green economy and the mainstreaming of the environment into national policy development.





## Geopolitical situation

With the geopolitical situation in the region remaining complex, many of the transboundary environment and security concerns remain challenging, particularly in the areas with frozen conflicts. The challenges related to water, the use of natural resources, waste and wastewater in Karabakh, South Ossetia and Abkhazia only increase the security risks. The dearth of reliable basic information leaves room for speculation not necessarily conducive to resolving the existing conflicts.

## Emerging domestic environment and security hotspots

With economic development in the region picking up, and the economies increasingly dependent on resource extraction and hydropower, some environmental issues are becoming highly political. Thus, more domestic environment and security risks are now emerging. Most of these hotspots are related to hydropower developments and to new mining activities in Georgia and Armenia, and to rapid urban development in Azerbaijan. There are concrete incidents of public protest which need to be addressed in an open and participatory (democratic) manner.

## Mainstreaming the environment

Good environmental governance at all levels (local, national, international) can resolve many issues and reduce environmental risks considerably. The South Caucasus, with international cooperation as an important catalyst, has made enormous progress in this regard over the last 20 years. Joining global and regional conventions and moving closer to the EU (albeit to various degrees) has led the countries of the region to adopt legislation with subsequent impacts on environmental policies and management. The concept of a green economy is no longer foreign to the governments and civil society in the region.

In this dark-side, bright-side analysis, climate change cuts both ways: climate change tends to exacerbate environment and security problems, but the response of the international community includes the provision of climate financing that may be crucial to the development and implementation of solutions. Opportunities for cooperation on disaster risk reduction and management may also arise as a consequence of the availability of climate financing.

# RECOMMENDATIONS

In light of the international experience with the geopolitical complexities of the South Caucasus, where all possible diplomatic instruments have been attempted or considered, the recommendations here are general in nature.

## International security risks

While some transboundary cooperation on environmental issues exists, it remains challenging in the region. The protection of common natural resources is a good starting point. Cooperation on water, for instance, offers concrete entry points at all levels, ranging from the whole Kura/Aras watershed to a micro-irrigation scheme across borders. After all, these issues in general are solvable.

The areas of frozen conflict – Nagorno-Karabakh, Abkhazia and South Ossetia – pose ongoing challenges in the region. In this context a good way to start is to watch and monitor the environment and security linkages, and if an opportunity arises, inter-

vene. The OSCE-led mission to the fire-affected territories in and around the Nagorno-Karabakh region in 2006 and related follow-up activities is a good example on how tackling environmental issues can serve as an entry point to peacebuilding.<sup>46</sup> These interventions are also due to the persistence and cooperation of non-government actors such as the Global Fire Monitoring Center.

The international community – both governmental and non-governmental – plays a crucial role in monitoring the environment and security situation in these territories with unclear jurisdiction and governance. These actors have an obligation to monitor and communicate the issues. Well-established facts will undermine the ability of any party to use environmental arguments to fuel the conflicts.

International NGOs can play a role in reducing interstate and regional tensions by periodically visiting de facto states, reporting about the state of the environment and countering rumours and propaganda to set the record straight.

## National security risks

The further strengthening of environmental legislation and policies, and stronger enforcement and improved environmental management in general are important for resolving the emerging domestic environment and security issues in Armenia, Azerbaijan and Georgia. Here, political transformation is needed – including strengthening the political will to protect the environment.

Where civil society offers protection of civil rights, including rights to a clean environment and safe food, it can contribute considerably to the development of the South Caucasus.

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<sup>46</sup> [http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/SEEurope\\_8.html](http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/SEEurope_8.html)



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