

## TURKEY'S ENVIRONMENT: PROBLEMS, ACTORS AND NEW ISSUES

Barış Gençer Baykan<sup>1</sup>

### Executive summary

2008 Environmental Performance Index (EPI) developed by the World Economic Forum, Yale University and Columbia University, ranks Turkey 72nd out of 149 countries. According to the Environmental Vulnerability Index (EVI) Turkey is categorized as *highly vulnerable* as was 62 countries among 235. Environment, a rising issue on the national and international agenda, is being discussed through environmental problems, International institutions, governments, environmental civil society organizations and citizens work hard to overcome the heavy ecological damage. "Environment" and "environmentalism" should be analyzed through their relations with society and politics. Turkey's "Green History", "Green Civil Society" and "Green Economy" are yet to be explored.

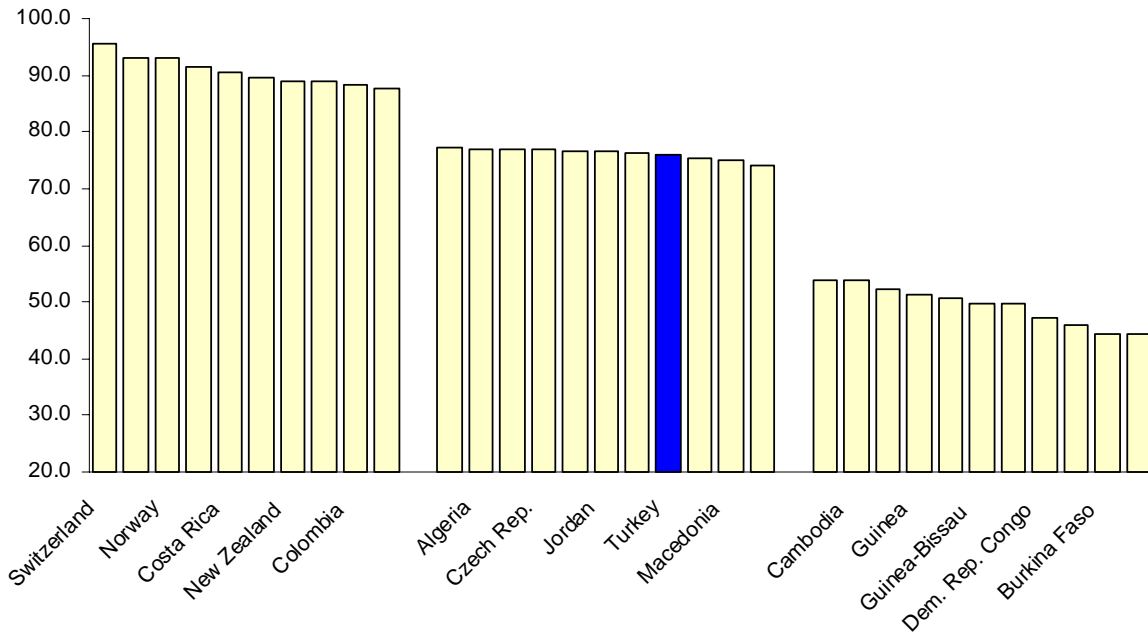
### Turkey at the World Environment League

World Economic Forum, Columbia University Center for International Earth Science Information Network and Yale University Center for Environmental Law and Policy developed the Environmental Performance Index that ranks 149 countries on 25 indicators tracked across six established policy categories: Environmental Health, Air Pollution, Water Resources, Biodiversity and Habitat, Productive Natural Resources, and Climate Change. In 2008, Turkey was ranked 72nd with a score of 75.9. Figure 1 shows the first ten, middle ten and last ten countries.

Graph 1: Environmental Performance Index

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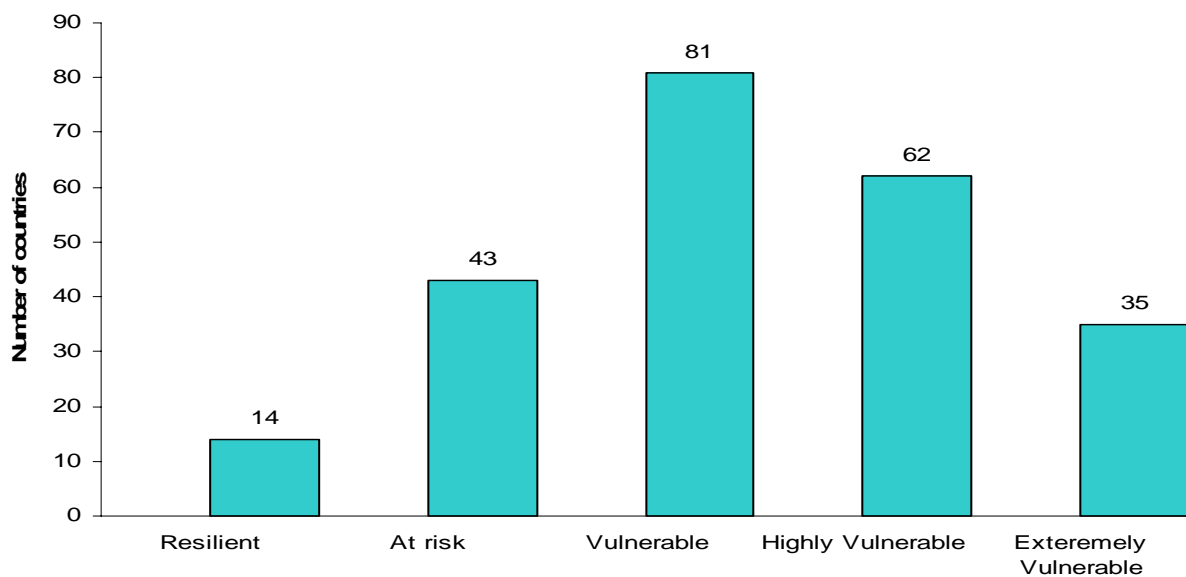
<sup>1</sup> Research Assistant, Barış Gençer Baykan, **betam**, baris.baykan@bahcesehir.edu.tr



Source: <http://epi.yale.edu>

The Environmental Vulnerability Index (EVI) has been developed by the South Pacific Applied Geoscience Commission (SOPAC), the United Nations Environment Programme (UNEP) and their partners in order to measure the environmental, economic and social sustainability of a country's development. The 50 EVI indicators are divided up into six issue categories: Climate Change, Biodiversity, Water, Agriculture and Fisheries, Human Health Aspects, Desertification, Exposure to Natural Disasters. In 2005, the Index classified 235 countries of which 14 are Resilient, 43 At Risk, 81 Vulnerable, 62 Highly Vulnerable and 35 Extremely Vulnerable. Turkey has been classified in the Highly Vulnerable group. Issues of greatest environmental vulnerability in Turkey are Wet Periods, Borders, Environmental Openness, Degradation, Mining, Conflicts.

Graph 2: Environmental Vulnerability Index



Source: [www.vulnerabilityindex.net](http://www.vulnerabilityindex.net)

As the above indices show, Turkey's environment is vulnerable and Turkey has a mediocre environmental performance. Furthermore, these data prove that the ecological balance is very fragile and not only Turkey but almost all countries are exposed to environmental risks in various degrees. Building global solutions to global environmental problems is increasingly becoming necessary as the energy and food crises occur in a global scale alongside the global warming. The sustainability of natural environment and resources desperately needs human endeavor.

## **Main Environmental Problems in Turkey**

Environment, a rising issue on the national and international agendas, is being discussed through environmental problems. Industrialization, unplanned urbanization coupled with increasing population cause a big pressure on the ecosystem. Air, water and soil pollution is increasing. In 2005, Turkey has been ranked 7th in comparison to the European Union (EU) member countries with 215 million tones of carbon dioxide while reducing carbon emissions is widely negotiated. It has been ranked 1st concerning the industrial emissions. The amount of hazardous waste is yet unknown and there is no inventory study of chemicals produced and used by the industry and the waste produced.

Water resources are decreasing; 20 years ago the amount of water resources per person was 4000m<sup>3</sup> while it is 1400m<sup>3</sup> today. Turkey is amongst the water poor countries. The biodiversity is under threat due to soil deterioration and loss of natural resources. Only %1 of the total surface area of Turkey is a preserved area. We do not have any inventory of our gene resources, moreover every year 2m tons of genetically modified corn, soy, colza and cotton enter illegally to Turkey. 500 million tons of fertile soil is being lost because of erosion ever year. 80-100 thousand m<sup>2</sup> of forest area is lost by forest fire and another 5-7 thousand m<sup>2</sup> by habitation and expansion of arable fields.

Unplanned urbanisation, wastewater, absence of infrastructure, tourism, uncontrolled hunting cause the pollution of seas and coasts. Although thermic power plants release 20% of national carbon emissions and have identified damages to human and environment health, there are plans of building new stations. The bidding process of the first nuclear power plant is completed. Nuclear energy, as an expensive, risky and dirty way of producing energy, is highly controversial all over the world. Nuclear energy is going to be an issue on the agenda with its unsolved waste problem, accidents, old technologies and high costs.

In the past, dams have been considered as one of the most important ways for development but recently their sustainability has become controversial regarding negative socio-economic and environmental impacts. Another point is that the sites like Hasankeyf and Allianoi which have extraordinary cultural and historic significance are under the threat of dam construction. The peasant resistances of Bergama community against gold mining and their judicial struggle have continued for 15 years. Activists and experts are confronting the wild mining that threatens the habitats in Artvin, Kaz Mountains, Uşak and in lots of other places around the country. Examples are abundant. Givent the last 50 year of domination of human over nature, this is no surprising. Environmental civil society organizations, governments, international institutions that try hard to overcome these problems.

## **Actors and efforts**

The negative impacts of climate change seem to raise awareness of the environmental issues. In 2007, GlobeScan has conducted the Climate change Monitor 2007 survey with 20.000 people in 20 countries including Turkey. To the question "How much information do you have on climate change?" 22% of

interviewees respond “a lot” and 50% respond “some” (72% in total). Another research conducted by GlobeScan and BBC in 22 countries, 75% of interviewees in Turkey said that they would change their behaviors in order to reduce greenhouse gas emissions. “Global Warming Research” conducted by Gfk Turkey reveals that global warming is becoming an increasingly worrying issue. One third of the respondents (34%) stated that *global warming* is the most worrying issue for the future, followed by *wars* (29%).

States (37%) are on the top of the list that classifies the institutions responsible for taking the measures to tackle climate change. In the 67th edition of European Commission’s regular survey Eurobarometer the EU’s and Turkey’s public opinions approach to environmental issues in the context of globalization are studied. Asked whether the EU should address climate change, EU 27 with 88% and Turkey with 76% respond “It should be addressed immediately”. Asked whether the EU should immediately implement new policies to reduce greenhouse gas emissions at least by 20% until 2020”, 89% of respondents from the EU 27 agree with and 70% of Turkey What is striking is that in the Gfk survey, the global warming considered as an important threat for the future but it has not been placed within the today’s most important environmental problems categorized by Eurobarometer 67.

Environmental civil society organizations, regional and local environmental platforms and coalitions play a greater role compared to past years in developing environmental policies and putting the environmental problems on the national agenda. Concomitantly their membership base and national and international funds are increasing. Local and national environmental NGOs are cooperating more with international institutions and groups. The number of academic publications concerning environment and environmental protection are also growing.

In spite of certain deficiencies, mainstream and alternative media are giving a paying wider attention to environment and environmental protection. Not only environmental issues and protests but also ecological living and latest trends in the world are covered in the Turkish print and digital media.

Recently, political parties are emphasizing the importance of the environment and diversifying the issues they mention in their election manifestos. Instead of uninspiring texts on soil erosion and forests, they incorporate global warming, renewable energies, and biodiversity. They put forward the cooperation with international institutions and national environmental NGOs so as to respond voters demand.

Business world keeps up with developments by investing on green technologies, increasing energy efficiency in production processes and sponsoring social responsibility projects on environment as well. According to European Environment Agency (EEA), Turkey has a great potential in organic farming and especially in renewable energies such as wind, geothermal and solar energies. In the example of wind power energy, Turkey’s installed wind power capacity is 200 MW but the investors have applied to The Electricity Market Regulatory Authority for a license of 77.000 MW. In fact, this Authority considers Turkey’s wind power potential as 48.000 MW.

Turkey is already party to 40 international agreements and 30 protocols on environment and environment protection. Mr. Erođlu, Minister of Environment and Forestry, emphasized that they keep on preparing for the Kyoto Protocol and said that “But we have some conditions. We have already said before. Turkey is a developing country. I hope that our specific conditions would be taken into consideration. We are always ready to sign the Kyoto Protocol”.

However, all these efforts prove to be insufficient vis-à-vis the emergency and importance of social and environmental problems. We are witnessing an environmental awareness in the society whilst its impact on decision makers is relatively weak. Governing elites hardly recognize the environmental transformations in Turkey and around the world; therefore they can not develop the adequate answers. Defending the idea that Turkey is immune to global food and energy crisis is a good example of this attitude. It is hard to expect consistent environmental policies with this mindset. Exploiting the natural resources as much as the developed countries inhibits us from perceiving the possible environmental issues in short and middle term. The boundaries and vulnerability of global ecosystem are becoming more tangible and we can stay immune by no means

## **What can we do?**

We should analyze the environment and environmentalism through their relations with society and politics rather than restricting in a narrow frame. Furthermore we should not disregard the fact that we can provide solutions for today's local and global environmental problems from an ecological perspective. What follows is a list of several research areas that we need to develop.

Turkey's Green History is yet to be documented. It is indispensable to have a green history writing which will enable us to have an ecocentric way of looking at our past and future. Thus, we can realize that environmental problems have their roots in our domination relation with nature. We should know the exact ecological damage done by the industrialization and urbanization. In the light of new findings and techniques, the ecological damage can be traced back to the late Ottoman period. On the other hand, we should build a detailed framework of environmental protection efforts beyond the official and judicial dimension. We need to look at the historic development of environmental NGOs and environmental movements in detail. Their campaigning issues in different periods, organizational activities and achievements, relations with society, state and transnational actors and lastly their capacity to develop and transform environmental policies should be taken into consideration.

Turkey's Green Economy is yet to be developed. Roland Berger Strategy Consultants is calculating the global market value of green technologies (products and services) as 1 trillion euro and anticipating a 5% annually growth. Compared to the developed countries and European countries, Turkey is falling behind in progress. The EU established as The European Coal and Steel Community, is now leading the international community on green economy, renewable energies and climate change issues. Turkey's industry should abandon the *polluter pays* principle and change the old and dirty technologies with green and efficient technologies. She should break fossil fuel dependency and head towards clean renewable energy resources. The private sector and the State have to focus on environmentally friendly and energy efficient alternatives. The interdependence between environment and agriculture should be reformed; a modern and sustainable agricultural vision is needed.

A significant characteristic of green economy is its capacity to generate "green jobs", an employment area related to the environmental sector. The United Nations Environment Programme (UNEP) projection reveals that if the current policies on renewable energy sector are maintained, 950 000 full-time jobs can be created within the EU 15 countries. In the USA, probably the leader in the issue, renewable energy and energy efficiency sectors employ 8.5 million people in 2006 (American Solar Energy Society). What will be the place of Turkey in this developing area remains to be seen.