



EARTHJUSTICE

Because the earth needs a good lawyer

3 November 2008

Office of the High Commissioner for Human Rights
Palais Wilson, 52 rue des Pâquis, CH-1201 Geneva, Switzerland

**Re: Universal Periodic Review of the Union of Comoros, March 2009
Submission of Earthjustice**

I. SUMMARY

1. Earthjustice respectfully submits to the Human Rights Council information regarding human rights violations in the Union of Comoros (hereafter Comoros) as a result of anthropogenic climate change. Via this submission, Earthjustice seeks to inform the Council of the acute impacts that climate change is having and will have on the human rights of the people of Comoros. We recommend that the Office of the High Commissioner for Human Rights include this information in its summary of stakeholders' information, and urge the Human Rights Council to adopt an outcome recognizing the responsibility of major greenhouse gas-emitting states for human rights violations suffered by the people of Comoros due to climate change.

2. In its Fourth Assessment Report, the Intergovernmental Panel on Climate Change predicts that anthropogenic climate change will have significant adverse effects not only on the natural environment, but also on the human populations that inhabit that environment and rely on its processes and services.¹ In Comoros, climate change will:

- Threaten the **physical security** and **public health** of coastal communities with sea level rise and increasingly severe storms and cyclones, resulting in tidal surges, lowland flooding, and beach erosion;
- Endanger Comorian culture by forcing people to **seek refuge** in more environmentally secure nations, where they will no longer be able to continue traditional customs and practices;
- Threaten Comorians' **access to freshwater** by warming air temperatures, decreasing precipitation, and salt-water intrusion into groundwater; and
- Jeopardize **food security** by impeding the agricultural capacity of the islands and damaging ocean ecosystems such as coral reef fisheries on which Comorians rely for food.

3. Coastal communities of Comoros are critically vulnerable to the impacts of climate change, which include biodiversity loss, coastal flooding, decrease in crop yield, damage to human settlements, decline in fishery, livestock and poultry productivity, drought, water shortages, and risks to public health, including increases in malaria and food poisoning from marine animals that have accumulated toxic algae associated with coral die-off. The changes in the physical

¹ IPCC, Working Group II Report: *Impacts, Adaptation, and Vulnerability* (2007).

environment causing these threats have been increasing in severity over the past several decades and are predicted to increase significantly by the end of the century.²

4. These impacts threaten many of the human rights guaranteed by Comoros under international law, including: the right to **life**, the right to **health**, the right to be **free from hunger**, the right to **water**, the right to a **healthy environment**, the right to an **adequate standard of living**, the right to a **means of subsistence**, the right to **property**, the right to **culture** and **traditional knowledge**, and the right to **resettlement** under humanitarian law.

II. BACKGROUND

5. The archipelago of the Union of the Comoros in the southwest Indian Ocean includes three large islands and many small islets, 300 km from both Mozambique and Madagascar. Comoros is one of the world's poorest countries, ranked 12th of the Least Developed Countries, and was ranked in a 2008 report as the nation most vulnerable to climate change risks.³ Tropical cyclones occur between December and April, and devastate island infrastructure about twice per decade. Comoros has a land base of 1861 km², only 36% of which is arable due to volcanic soils. Most islands suffer from deforestation, soil degradation and erosion on steep slopes. Landslides are common and threaten subsistence farms. Most of the population of Comoros does not have a reliable source of potable water.

6. For over one thousand years, people have lived on the islands of Comoros, developing four indigenous languages and extensive knowledge of forest and ocean ecosystems. With a population of 798,000 and 2.8% annual population growth, Comoros is one of the most densely settled nations on earth. The population is projected to reach a density of 862 people per km² by 2050. Over 66% of the population lives in rural areas, where they are dependent upon subsistence economies of agriculture, fishing and hunting. Half the population lives in coastal areas, where most cities are also located. By 2050, 65% of the population will live in coastal areas.⁴ Most infrastructure is located at less than 6 meters above sea level. Major exports are limited to vanilla, cloves, perfume essences, and copra, and the per capita GDP of Comoros is only US\$700 per year, with half the population living in absolute poverty. Emissions of global warming pollutants in Comoros is only 0.1 metric tons of CO₂ equivalent per capita, compared to 20.6 metric tons per capita for the United States.⁵

III. THE IMPACTS OF CLIMATE CHANGE ON HUMAN RIGHTS IN COMOROS

Climate change-related storms, tidal surges and changes in sea-level threaten Comorians' physical security and public health.

7. According to the IPCC, "Small Islands...have characteristics which make them especially vulnerable to the effects of climate change, sea-level rise and extreme events. Sea-level rise is expected to exacerbate inundation, storm surges, erosion and other coastal hazards, thus

² IPCC, Working Group I Report: *The Physical Science Basis: Summary for Policymakers* (2007).

³ Maplecroft Consulting, *Climate Change Risk Report* (2008).

⁴ Union of Comoros General Directorate of the Environment, *UN Framework Convention on Climate Change Initial National Communication* (2002) .

⁵ UNDP, *Human Development Report 2007/2008—Comoros* (2007).

threatening vital infrastructure and facilities that support the livelihoods of island communities.”⁶ Sea-level rise is potentially the most cataclysmic long-term impact of climate change facing Comoros. Even if greenhouse gas concentrations were to be stabilized, anthropogenic warming and sea-level rise are predicted to continue for centuries due to the timescales associated with climate feedbacks.⁷ Sea levels have risen in the Indian Ocean by about 1.5mm/year between 1950 and 2001.⁸ The predicted sea level rise in Comoros of 20cm by 2050 would flood 734 hectares and displace 10% of the coastal population.⁹

8. On average, major cyclones hit Comoros twice per decade, causing widespread damage to infrastructure as well as social and economic dislocation. In the Indian Ocean, cyclones are predicted to become larger and more destructive with global warming.¹⁰ Currently, 17 health centers and 35 nursing stations are at risk from cyclones, storms and flooding.¹¹ Damage to coastal infrastructure, including ports, airports, fuel tanks and power plants, is predicted to be US\$400 million by 2050, or 2.2 times the country’s GDP for 2001.¹²

9. Malaria, already the number one health problem in Comoros, is expected to increase as air temperatures rise, spreading from lowlands to higher altitudes. Outbreaks are expected to last year round, rather than during the rainy season alone.¹³ Cholera outbreaks also occur after cyclones.¹⁴

10. Shoreline erosion increases susceptibility to floods during storms and tide surges. As shorelines recede, habitable areas of Comoros are reduced. Without habitable coastal lowlands, the lives and livelihoods of tens of thousands of Comorians will be adversely affected. As their lands become submerged, eroded or rendered unproductive, many Comorians will have no choice but to emigrate.¹⁵ It is essential that the international community take seriously the responsibility to assist people displaced by climate change.

11. The physical destruction of land and property in Comoros due to sea-level rise, increased air temperatures, climate-related storm events, increased shoreline erosion, and climate-related threats to public health violates Comorians’ human rights to life, food, health, property, culture, traditional knowledge and the right to a means of subsistence, an adequate standard of living, and a healthy environment.

Climate change threatens access to freshwater in Comoros.

⁶ IPCC 2007, *supra* note 1.

⁷ *Id.* at 16.

⁸ IPCC, Working Group II Report: *Small Islands* (2007), at 692.

⁹ General Directorate of the Environment 2002, *supra* note 4.

¹⁰ IPCC, Working Group I Report: *Regional Climate Projections* (2007), at 915.

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ UNICEF Humanitarian Action, East and Southern Africa, Donor Update, March 2007.

¹⁵ IPCC Working Group II (2007) (see *supra* note 1) predicts that 150 to 200 million people worldwide will be displaced by climate change by the year 2050.

12. Air temperatures in Comoros are predicted to rise 1⁰C by 2050,¹⁶ while precipitation is predicted to decline 5 to 10% by 2099.¹⁷ This will exacerbate existing water shortages, which are already compounded by contamination of groundwater from poor waste management. Salt water intrusion into coastal aquifers due to sea-level rise and storm surges will also reduce access to freshwater. On the island of Anjouan, more than half of the island's 40 original rivers have disappeared due to land degradation.

13. The impacts of climate change on Comoros's freshwater resources violates Comorians' human rights to life, health, food, water; and the rights to a means of subsistence, an adequate standard of living, and a healthy environment.

Climate change jeopardizes Comoros's food security and traditional livelihoods.

14. Increasing temperatures, droughts, cyclones, flooding and sea-level rise threatens subsistence and traditional agriculture in Comoros. Without subsistence crops, the nutrition, health, and standard of living of most Comorians will worsen, as they cannot afford to replace these with imported food. Without traditional crops, Comorians cannot practice or benefit from their traditional knowledge and culture.

15. Climate change threatens the integrity of the reefs and coastal ecosystems on which thousands of Comorians depend. Climate change will have severe impacts on coral reefs and fisheries due to increasing carbon dioxide in the atmosphere, acidification of sea waters, rising sea temperatures and increasing storm intensity.¹⁸ Decline of coral communities will reduce the richness of fish species and will result in local extinctions and loss of species within key functional groups of fish.¹⁹ Such changes impact the sustainability of reef fisheries on which Comorians depend as a vital source of dietary protein. Coastal communities are also at risk of episodes of collective food poisoning if they consume marine animals that have accumulated the toxic algae that accompanies coral die-off.²⁰

16. Destruction of subsistence agriculture and coral reef ecosystems essential to Comorian livelihoods violates their rights to life, health, food, culture, traditional knowledge, and the rights to a means of subsistence, an adequate standard of living, and a healthy environment.

IV. CONCLUSION AND RECOMMENDATIONS

17. A serious threat to the human rights of the people of Comoros is the environmental vulnerability of their small islands to the impacts of climate change. The plight of Comorians illustrates how fundamental the right to an ecologically sustainable environment is to guaranteeing other rights such as the right to life, food, health, water, and culture.²¹

¹⁶ General Directorate of the Environment 2002, *supra* note 4., citing IPCC 2001.

¹⁷ IPCC 2007, *supra* note 2 at 16.

¹⁸ IPCC Working Group II Report: *Impacts, Adaptation and Vulnerability; Cross-chapter case study: Impacts of Climate Change on Coral Reefs* (2007), p. 850-54, available at: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-xccc.pdf>.

¹⁹ *Id.*

²⁰ General Directorate of the Environment 2002 *supra* note 4.

²¹ See, e.g., *Human Rights and the Environment: Final Report by Mrs. Fatma Zohra Ksentini, Special Rapporteur, U.N. ESCOR, Hum. Rts. Comm., U.N. Doc. E/CN.4/Sub.2/1994/9* (1994).

18. Responsibility for human rights violations caused by climate change requires consideration not only of the actions of the Union of Comoros, but also of other states that are major emitters of greenhouse gasses. The international community – particularly those nations historically and currently responsible for the greatest portion of greenhouse gas emissions – has a responsibility to prevent violation of the human rights of Comorians and, if violations occur, to mitigate the harms and assist the victims.

19. Earthjustice respectfully recommends that the Human Rights Council encourage the government of the Union of Comoros to increase efforts to provide citizens with information and education on the impacts of climate change, and to provide opportunities for public participation in decision-making concerning measures to mitigate and adapt to the harms that will result. Recognizing the role of other states in causing climate change, the government of the Union of Comoros must do all within its power to increase its mitigation and adaptation efforts to protect the right of the people of Comoros to a clean and ecologically sustainable environment.

20. Article 22 of the Universal Declaration of Human Rights underscores that protection of human rights requires “national effort and international co-operation.” Every state has the obligation to do no harm either to its own citizens or to the citizens of another state. Earthjustice therefore respectfully recommends that the Human Rights Council 1) recognize the responsibility of major greenhouse gas-emitting states for the human rights violations suffered by the people of Comoros, and 2) encourage the international community to take immediate action to decrease global greenhouse gas emissions, to assist the Union of Comoros in its efforts to mitigate and adapt to the effects of climate change, and to collectively provide for or offset the costs of resettlement of Comorians displaced by climate change on a basis proportional to their greenhouse gas emissions.

Respectfully Submitted,



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