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**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development**

Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque* **

Addendum

Mission to the United States of America***

Summary

The present report presents the findings and recommendations of the independent expert on the human rights to safe drinking water and sanitation from her country visit to the United States of America from 22 February to 4 March 2011.

In the report, the independent expert begins by outlining the international and domestic legal framework on the rights to water and sanitation. She then makes a general assessment of the enjoyment of the rights to water and sanitation in the United States of America, looking specifically at the following issues: sanitation, safety, affordability and excluded groups. This assessment is then underpinned by an analysis of the right to non-discrimination and equality. The last section examines United States official development assistance in the area of water and sanitation. She concludes the report with recommendations addressed to the Government.

* Late submission

** Throughout the present report, reference is made to the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, which was the title of the mandate at the time that the mission was undertaken. However, in accordance with Human Rights Council resolution 16/2, adopted on 24 March 2011, the title of the mandate has been changed to Special Rapporteur on the human right to safe drinking water and sanitation.

*** The summary of the present report is circulated in all official languages. The report itself, contained in the annex to the summary, is circulated in the language of submission only.

Annex

Report of the Special Rapporteur on the human right to safe drinking water and sanitation on her mission to the United States of America (22 February-4 March 2011)

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I. Introduction

1. From 22 February to 4 March 2011, the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, Catarina de Albuquerque, undertook an official country visit to the United States of America to assess the way in which the United States is implementing the rights to water and sanitation.
2. The independent expert thanks the Government of the United States of America for the cooperation extended in the preparation of and during the mission, especially the Department of State for coordinating the visit. Additionally, she thanks the representatives of the following federal government agencies: the Department of Justice; the Department of Interior; the Environmental Protection Agency; the United States Agency for International Development; the Department of Health and Human Services, including the Centers for Disease Control; the White House Council on Environmental Quality; the Department of Agriculture; and the Interagency Council on Homelessness. The independent expert also had the honour of participating in a hearing convened by the Congressional Tom Lantos Human Rights Commission on the right to water.
3. During the mission, the independent expert visited Washington DC; Boston and Falmouth in Massachusetts; Sacramento, Redding, including the Winnemen Wintu tribe, Seville and other communities in the San Joaquin Valley in California; and Edmonston, Maryland. In each of these locations, she had the occasion to meet with state and local authorities. The independent expert thanks them also for their time and engagement.
4. The independent expert convened seven public hearings in the various locations she visited, and had the honour of receiving personal testimony from all across the United States – including from Alabama, Alaska, Michigan, Puerto Rico and West Virginia. She especially thanks all those individuals who travelled long distances to share their stories with her. Numerous other testimonies were submitted in writing, reflecting the experiences of other individuals and communities from other regions of the United States.
5. During the mission, the independent expert was particularly struck by the vibrant and active engagement of civil society working on human rights, water and sanitation issues. She is especially grateful for their initiative to connect her with affected communities and victims. She extends a special word of thanks to all those who shared their personal stories with her.

II. International and domestic legal framework

6. At the international level, the human right to safe drinking water and sanitation derives from the right to an adequate standard of living which is protected under, *inter alia*, article 25 of the Universal Declaration of Human Rights, and article 11 of the International Covenant on Economic, Social and Cultural Rights. This right was also recently recognized by the General Assembly and reaffirmed by the Human Rights Council, with the support of the United States of America, which the independent expert welcomes¹. States obligation with regard to the right to safe drinking water and sanitation requires that water and sanitation be available, accessible, affordable, acceptable and of good quality for everyone without discrimination. This obligation must be progressively realized to the maximum of available resources, meaning that a State must take concrete and targeted steps towards ensuring universal access to water and sanitation. Any retrogressive measure – such as in a period of economic crisis – is presumed to be a violation of the human right unless fully

¹ See A/RES/ 64/292, A/HRC/RES/15/9 and A/HRC/RES/16/2.

justified by the State.² There must be opportunities for meaningful participation in decision-making; there must be transparency and access to information; and accountability mechanisms must be established to address cases where these rights are violated. Ensuring the rights to water and sanitation is closely related to the enjoyment of other human rights, including the rights to education, work, health, housing and food, among others.

7. The legal framework governing access to water and sanitation in the United States of America is a complex amalgam of federal and state statutes and common law principles. This multi-tiered system, coupled with an array of variances available to states and private actors, make generalizations about the capacity of the United States legal framework to reflect access to safe drinking water and sanitation as human rights particularly difficult. The United States has not ratified many of the relevant treaties from which these rights are derived, including the International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities. The independent expert, nevertheless, notes that the United States has signed these instruments (in 1977, 1980, 1995 and 2009, respectively) and reminds the Government that upon signing, it assumed the obligation to refrain from acts that would defeat the object and purpose of these treaties, pending decision on ratification. She encourages the United States to take steps towards ratifying these instruments without reservations.

8. Existing federal laws generally focus on maintaining water quality rather than ensuring access for all citizens. Constitutional and statutory provisions that pertain to non-discrimination and equal protection of the law create a framework that allows citizens to enforce the rights to safe drinking water and sanitation indirectly, but without the ability to ground such claims as an explicit right, the success of such claims remain uncertain.

9. While there is no federally recognized right to safe drinking water and sanitation, individual states have taken the initiative to consecrate this right. For instance, the states of Massachusetts and Pennsylvania have already recognized the right to water (though not to sanitation) in their constitutions.³ In California, a bill package has been introduced that recognizes the human right to water.⁴

10. The two primary federal statutes governing water in the United States are the Clean Water Act and the Safe Drinking Water Act. Additionally, a number of federal agencies play a role in regulating water, including the Environmental Protection Agency (EPA), the Department of Agriculture and the Department of the Interior.⁵

11. The Environmental Protection Agency (EPA) leads in establishing minimum standards for regulating pollution and water quality, as well as monitoring and enforcing these standards in federal waterways. The states are free to adopt their own regulations insofar as they meet, at a minimum, federal standards. For instance, states are responsible for monitoring and enforcing water quality standards at local sources, developing infrastructure and managing wastewater treatment.

² See Committee on Economic, Social and Cultural Rights, general comment No. 3, para. 9.

³ See Constitution of the Commonwealth of Massachusetts, art. XCVII; and Constitution of the Commonwealth of Pennsylvania, art. 1, sect. 27.

⁴ See California Legislature, 2011–12 regular session, Assembly Bill No. 685 introduced by Assembly Member Mike Eng.

⁵ Additional federal agencies, such as the Department of Housing and Urban Development and the Department of Justice, play a role in preventing discrimination in terms of access to water and sanitation services.

12. The Clean Water Act of 1972 is a broad initiative aimed at controlling pollution in all surface waters. Among other things, the Clean Water Act bans the discharge of pollutants into navigable waters and sets water quality standards for contaminants in all surface waters. The Water Quality Standards Regulation accompanies the Clean Water Act and authorizes EPA to establish water quality standards. EPA publishes recommended criteria for various designated uses, and plans to propose amendments to its water quality standards in summer 2011. Although clear water quality standards are set, a complex system of exceptions means that often these standards are legally disregarded. Each state is responsible for reviewing, establishing and revising water quality standards for waters within its borders, within the minimum standards set by EPA. EPA has review powers over state regulations. Federally recognized American Indian tribes may also apply for eligibility to develop their own water quality standards

13. The Safe Drinking Water Act of 1974 sets maximum levels for contaminants in drinking water and its sources, and requires water systems to test regularly for contaminants. These standards apply to every public water system in the United States. The 1996 Amendments to the Safe Drinking Water Act allot federal funds to states to develop programmes to protect groundwater. The majority of regulations related to water quality, modelled on those promulgated by EPA, can be found in state statutes, and are enforced through state environmental agencies.

III. The right to water and sanitation in the United States of America

14. People living in the United States enjoy near universal access to safe water. Nationwide, there are an estimated 161,000 public water systems⁶, which may be publicly or privately owned. Community water systems are public water systems that serve people year-round in their homes. The majority of people in the United States (268 million) receive their water from a community water system (54,000 systems).⁷ Approximately 15 per cent (46 million) of Americans rely on their own private drinking water supplies, and these supplies are not subject to EPA standards, although some state and local governments set rules to protect users of these wells. With no regular monitoring, the burden is on households with private systems to take precautions to ensure the protection and maintenance of their drinking water supplies.⁸ Additionally, over 53,000 rural water utilities exist, 90 per cent of which serve communities of 10,000 people or less. These figures highlight the fragmentation of the sector, which presents enormous challenges when trying to regulate, monitor and find solutions for universal access.

15. Twenty-five percent of all households in the U.S. have on-site wastewater treatment systems, and most others are connected to sewerage networks and wastewater treatment facilities. But according to EPA, in general, states and communities have not established adequate management programmes to assure proper functioning of onsite systems for wastewater treatment.

16. The United States has aging water and wastewater systems, with decreasing investment in research and development, coupled with an increase in the population. By the

⁶ The Safe Drinking Water Act defines a public water system as one that serves piped water to at least 25 persons or 15 service connections for at least 60 days each year.

⁷ United States Environmental Protection Agency, "Water on Tap: What you need to know," December 2009, p. 2, available from www.epa.gov/safewater/wot/pdfs/book_waterontap_full.pdf.

⁸ Environmental Protection Agency, Private Drinking Water Wells, available at <http://water.epa.gov/drink/info/well/index.cfm>.

year 2020, the population will likely be over 325 million and systems will need to increase capacity. Furthermore, the population is shifting geographically, requiring rapid increases in system capacity in some parts of the country, and maintenance of aging systems in other parts of the country with diminishing populations (and a diminishing rate base).

17. In the last 20 years, communities have spent one trillion dollars on drinking water treatment and supply and wastewater treatment and disposal. Ninety per cent of these costs are financed by consumers. However, this may not be sufficient to keep pace with infrastructure needs of the future. Hence, EPA estimates that over the next 20 years, \$200 billion to \$400 billion will be required to ensure the sustainability of water and wastewater systems. In a time of scarce financial resources, the United States needs greater efforts to ensure that available funding, including loans and grants provided through the Safe Water and Clean Water State Revolving Fund, prioritizes those who are in the most precarious situations. While acknowledging that states must provide a minimum of 15 per cent of the available funds for loans to small communities, which enables them to address the challenges faced by poor and marginalized communities to a certain extent, the possibility for a state to provide up to 30 per cent of the grant received to provide additional assistance to disadvantaged communities remains a mere “option.”

18. The independent expert welcomes the fact that there is near universal access to water and sanitation in the United States and commends the Government for its achievements in this regard. By its nature, a human rights analysis focuses on the situation of the most marginalized and excluded. Thus, this report especially concentrates on the situation of these groups with regard to their access to water and sanitation. While these groups comprise a small proportion of the population, the independent expert emphasizes that they require priority attention.

A. Sanitation

19. In the United States, it is often the poorest and the most marginalized groups that lack access to sanitation. Without proper sanitation, human excreta contaminate drinking water sources, with severe public health implications. Ensuring access to adequate sanitation for all is not only fundamental for human dignity and privacy, but is also key to protecting water quality. States must progressively extend safe sanitation services, particularly to rural and deprived urban areas, taking into account the needs of disadvantaged groups.⁹

20. The independent expert received testimony concerning the wastewater situation in Lowndes County, Alabama. The County has a population of 12,293, of which 70.1 per cent is Black, with an annual median household income of \$30,225 and 25.4 per cent living below the poverty line.¹⁰ As a mostly rural county, about 18 per cent of the population are served by conventional municipal sewer systems. The remaining 82 per cent rely on on-site wastewater systems, typically septic tanks and in-ground dispersal fields (trenches). The Alabama Department of Public Health estimates that the number of households in Lowndes County with inadequate or no septic systems range from 40 to 90 per cent; it has reported that 50 per cent of the conventional, on-site septic systems are currently failing or are expected to fail in the future.

⁹ E/C.12/2002/11, para. 29

¹⁰ United States Census Bureau, Lowndes County, Alabama, State & County Quick Facts, 4 November 2010, available at <http://quickfacts.census.gov/qfd/states/01/01085.html>.

21. In 1999, the Alabama Department of Public Health initiated legal action (litigations and arrests) against 41 sites for releasing raw sewage into the ground surface, despite repeated violation notices in an attempt to oblige wastewater management to meet minimum environmental and health standards. Many individuals, who could not afford to take remedial action, were arrested. They now have arrest records for not having been able to afford the costly remedy. More recently in 2008, following complaints from a neighbour, the Department of Public Health initiated steps towards the arrest of a 27-year-old single mother, who lived in a mobile home with her autistic child, for not maintaining her septic system according to applicable health standards. The septic system replacement cost was higher than her annual income of \$12,000, and she did not have the means to access funding.

22. Key to understanding the serious need for adequate wastewater systems and management in Lowndes County is the nature of the native soils, which consist principally of heavy clay material that does not transmit water well and results subsequently in significant effluent run-off problems. The most common on-site wastewater alternative ranges in price from \$6,000 to as much as \$30,000 – money that most residents of Lowndes County do not have. As such, the right to sanitation is inaccessible for a substantial proportion of Lowndes County residents.

23. The independent expert welcomes recent news that EPA has issued a \$575,000 grant to the Alabama Center for Rural Enterprise to develop a master plan to address the need for access to sanitation services in Lowndes County.

24. The central Appalachian region of Maryland, Pennsylvania, Virginia and West Virginia faces similar challenges in realizing the right to sanitation. This rural region is populated by many communities without basic water and sewer infrastructure, and which face some of the highest poverty and lowest education attainment rates in the United States. The independent expert received testimony from communities that were forced to directly discharge untreated sewage into streams and ground surfaces, and she was informed that in West Virginia and southern Virginia, as many as two-thirds of homes were discharging raw sewage.

25. In Falmouth, Massachusetts, the surrounding bays and estuaries are increasingly contaminated with nitrates, and a centralized sewage system is being proposed as a solution. Should such a project move forward, those living in the community would be required to pay an estimated \$50,000 to \$60,000 to implement it. In Falmouth, however, the median annual income for over 60 per cent of the residents is \$20,000.¹¹

26. Falmouth is emblematic of situations occurring all around the country. Repairing aging infrastructure in cities and building new water and sewer systems in rural areas in traditional ways is increasingly untenable and federal funding for water and sanitation tends to be structured around conventional centralized systems, resulting in per-household costs that are too high and discouraging investment in rural systems.

27. Consideration should be given to decentralized water and wastewater systems in rural communities. Multiple benefits could be realized with decentralized systems, including fulfilling the rights to access water and sanitation services; reaping economic and environmental savings; and providing opportunities to expand businesses that develop decentralized systems that could be used globally. Pilot projects in rural communities could

¹¹ This figure was reported to the independent expert by a former Massachusetts State representative. While official census figures for 2009 indicate a median annual household income of \$30,913, the lower figure refers to the lower income portion of the population. Census figures are available at <http://quickfacts.census.gov>.

test innovative technology and compile information on construction costs, performance, and operation and maintenance costs. In this context, the independent expert recalls that the Government has well-developed programmes to assist rural communities through the Rural Utilities Program of the United States Department of Agriculture, among others. Nevertheless, poor, disadvantaged, minority and indigenous communities are often unable to access federal, state and local funding sources due to technical, managerial and financial capacity requirements, among others. The independent expert calls on federal, state and local governments to consider innovative and ecologically-friendly solutions to ensure sustainable systems that are affordable for the community, while recalling the need to establish adequate programmes to assure proper functioning and maintenance of on-site systems for wastewater treatment.

28. The independent expert notes that EPA has articulated the Clean Water and Drinking Water Infrastructure Sustainability Policy, which aims to work with states and local governments to develop guidance, provide technical assistance, and target the federal Clean Water State Revolving Fund capitalization assistance to support the increase in the sustainability of water infrastructure in the United States and the communities it serves. She also acknowledges the Alaska Native Villages and the US–Mexico Border water infrastructure programmes that are designed to address urgent infrastructure needs in two areas that are economically disadvantaged and had documented examples of untreated sewage discharges.

29. This is a positive development, and the gains of such policies and programmes would be enhanced if brought in line with human rights norms.

B. Safety

30. Water and sanitation must be safe and of good quality, and must not pose a threat to human health. According to a report by the Environmental Working Group, since 2004, water-quality testing by utilities has found 315 pollutants in tap water; EPA has set enforceable standards for 114 pollutants. For those pollutants subject to regulation, 49 were found in one place or another at levels above EPA guidelines, exposing some 53 million people to polluted tap water.¹² Moreover, drinking-water quality analysis conducted by the Environmental Working Group found that utilities achieved 92 per cent compliance with EPA mandatory health standards for the 114 regulated contaminants, demonstrating that utilities can and do comply with regulatory standards when they exist. This finding comports with EPA’s own annual performance assessment for 2010, which reported that 92 per cent of people were served by community water systems that met applicable health-based drinking water standards.¹³ Nevertheless, the goal of universal access to clean and safe water has yet to be attained. Infants, older persons, persons with certain medical conditions and other vulnerable groups remain at risk from exposure to water that does not meet federal standards. Moreover, hundreds of substances found in water remain unregulated, and some sources of water, namely private drinking-water supplies, are also unregulated.

31. In addition, the independent expert received worrying testimony regarding lead contamination of water in Washington DC. The presence of lead in drinking water can

¹² Environmental Working Group, “National Assessment of Tap Water Quality,” December 2009. The report analysed almost 20 million records of drinking water quality tests obtained from state water officials.

¹³ United States Environmental Protection Agency, “Highlights: Fiscal Year 2010 Financial and Program Performance,” February 2011, p. 14.

cause adverse health effects. From 2001 to 2004, the District of Columbia experienced elevated lead levels in its drinking water system, triggered by a change in disinfectant. Although the change in disinfectant brought the water quality in line with EPA regulations concerning the concentration of potential carcinogens (a by-product of chlorine disinfection), it altered the chemistry of the water, causing lead to leach from pipes and elevating water lead levels in homes throughout the city.

32. The Water and Sewer Authority (now known as DC Water) did not notify the public until 2003. The notices were unclear and thousands were exposed to harmful lead levels. Following a story published in *The Washington Post* in 2004, the city made efforts to replace thousands of lead pipes (on public property) servicing 17,600 homes. Homeowners were responsible for authorizing and paying for the work on their property, but many did not have the financial means to do so. On the advice of the Centers for Disease Control and EPA, however, the programme was suspended in late 2008 as partial pipe replacements were found to cause spikes in water lead levels in homes.

33. Residents have been advised to completely replace all lead service lines, the cost of which may be prohibitively expensive for low-income residents, therefore leaving them without safe water. In this context, the independent expert notes that DC Water has offered to replace the public portion of a lead service line if a homeowner voluntarily replaces the private portion. Also, the DC Department of Housing and Community Development offers a grant programme to income-qualified property owners who are interested in replacing the private portion of their lead service line. Nevertheless, concerns remain for those households that, even with financial support from such programmes, are unable to afford lead service line replacements.

34. The San Joaquin Valley in central California is also experiencing enormous challenges, particularly nitrate contamination, with regard to drinking water. The Valley represents around 10 per cent of the total population of California, with a population of 3.8 million people, 20 per cent of whom live below the poverty line, and 46 per cent of whom are Latino.¹⁴ While nitrates occur naturally at low levels, crop fertilizers, animal manure or septic systems can elevate nitrate levels in drinking water sources. Because it is difficult to assign responsibility for this type of pollution (non-point source pollution), no one is obliged to pay for the clean-up costs. In these circumstances, the affected community inevitably bears these costs.

35. The San Joaquin Valley accounts for over half of the agricultural production of California. It is populated by numerous concentrated animal feeding operations, with an estimated 1.6 million dairy cows and 161,000 beef cattle in 2008; a typical cow produces over 30 tonnes of solid manure per year.¹⁵

36. It is vulnerable to nitrate contamination because groundwater serves as the primary source of drinking water for almost 90 per cent of its residents.¹⁶ According to the United States Geological Survey, millions of pounds of nitrate (in fertilizers and manure) and pesticides are applied to cropland annually, with some of these chemicals filtering into the groundwater and thereby threatening public health.¹⁷ During the mission, the Department of Agriculture acknowledged the need to address the challenges posed by targeting the small

¹⁴ Carolina Balazs, "Just Water? Social Disparities in Nitrate Contaminated Drinking Water in California's Central Valley," PhD dissertation, University of California at Berkeley (forthcoming).

¹⁵ Community Water Center, "Water and Health in the Valley: Nitrate Contamination of Drinking Water and the Health of San Joaquin Valley Residents," p. 3.

¹⁶ *Ibid.*, p. 2.

¹⁷ Neil Dubrovsky and others, "Water Quality in the San Joaquin-Tulare Basins, California, 1992-95," US Geological Survey Circular 1159, 1998.

and disadvantaged water systems and noted some initiatives in this regard (see para. 26 above).

37. The independent expert visited Tulare County, the poorest county in California, where minorities comprise the majority of the local population (58.3 per cent Latino, 3.8 per cent Asian and Pacific Islander, 2.1 per cent Black, 1.9 per cent American Indian)¹⁸. One of the top three agricultural producing counties in California,¹⁹ Tulare County has many public water systems with nitrate levels over the maximum contaminant level (MCL) of 45 parts per million. Approximately 20 per cent of Tulare County's small public water systems (defined as 5 to 199 service connections/homes) are unable to meet the nitrate MCL on a regular basis, and another 20 per cent are over half the nitrate MCL.²⁰

38. The independent expert received testimony from various rural communities in Tulare County, representing Alpaugh, Cutler, East Orosi, Orosi, Seville and Tooleville, among others. These communities suffer from drinking water contaminated by nitrates, arsenic, banned pesticides and disinfectant by-products. Seville, a small, low-income community, is illustrative of the broader problems plaguing Tulare County.

39. For Seville residents, the reliance on groundwater means that when it becomes contaminated, there are no alternative water supplies. Besides paying the regular water bill, families are forced to purchase bottled water to ensure safe and clean water for drinking and cooking. The cost of bottled water thus becomes the de facto water rate, which is not including the cost of transport to the store. With a median household income of \$14,000 per year, households, in total, are devoting approximately 20 per cent of their income to water and sanitation.²¹ Households who are unable to afford alternative solutions, such as buying bottled water, uninformed about the water quality or forced to make difficult trade-offs, such as forgoing other basic needs, fall into a protection gap.

40. Research conducted by the University of California at Berkeley found that in smaller water systems, communities with larger percentages of Latinos and renters are potentially exposed to drinking water with higher nitrate levels, compared to communities with higher proportions of White residents and homeowners.²² The independent expert expresses concerns about such racial disparities, and urges the Government to take concerted action to eliminate discrimination in practice, as well as to ensure country-wide regulation and monitoring of private drinking water supplies.

41. The independent expert received concerning reports on hydraulic fracturing and its impact on water. New technological developments have allowed the oil and gas industry to extract natural gas from shale resources previously believed too expensive and difficult to tap. Hydraulic fracturing has been used in the industry for over 60 years and is now utilized

¹⁸ United States Census Bureau, Tulare County, California, State & County Quick Facts, 4 November 2010, available at <http://quickfacts.census.gov/qfd/states/06/06107.html>.

¹⁹ United States Department of Agriculture, National Agricultural Statistics Service, "Dairy Cattle and Milk Production," Census of Agriculture 2007.

²⁰ County of Tulare, "Agenda Item: Modification of the membership of the Tulare County Water Commission and the authorization of submission of a Proposition 84 grant application," 17 July 2007.

²¹ The annual water bill is around \$960 and households are spending at least an additional \$1,000 a year on bottled water. The sanitation bill is roughly \$800 to \$1,000 a year.

²² Carolina Balazs, "Just Water? Social Disparities in Nitrate Contaminated Drinking Water in California's Central Valley," PhD dissertation, University of California at Berkeley (forthcoming).

in around 90 per cent of the country's oil and gas wells.²³ Projections suggest that shale gas will comprise over 20 per cent of total gas supply in the United States by 2020.²⁴

42. Hydraulic fracturing is a well-stimulation process used to extract underground resources, such as oil, natural gas and geothermal energy. In 2005 the Congress exempted this practice from regulation under the Safe Drinking Water Act,²⁵ making this the only industry allowed to inject known pollutants into the ground near water sources without federal oversight. In 2010, EPA was tasked with studying the potential adverse impacts of hydraulic fracturing on drinking water.²⁶

43. Residents in regions where hydraulic fracturing occurs have reported drinking water contamination. In some cases, reports have been received of flammable tap water in a severe incident causing a home to explode.²⁷ Federal and state agencies have determined the drinking water in several rural towns, such as Dimock, Pennsylvania, and Pavilion, Wyoming, non-potable due to chemical contaminants used in nearby hydraulic fracturing operations.

44. Natural-gas extraction in rural areas increases the likelihood that water contamination will go undetected, as rural water supplies are difficult to monitor. The 1996 amendments to the Safe Drinking Water Act permit variances for rural utilities (less than 10,000 connections) to provide lower quality water. Moreover, as already highlighted, EPA does not have the authority to regulate private wells, which are the primary source of drinking water in many rural areas.

45. Large urban cities are better equipped to withstand pressure from the natural gas industry. For example, the Marcellus Shale – cutting across New York and Pennsylvania – is believed to contain valuable natural gas resources. This notwithstanding, the New York City Department of Environmental Protection has asserted that “hydraulic fracturing poses an unacceptable threat to the unfiltered water supply of nine million New Yorkers and cannot safely be permitted within the New York City watershed.”²⁸

46. A policy disconnect seems to exist between polluting activities and their ultimate impact on the safety of drinking water sources. The absence of integrated thinking has generated enormous burdens, including increased costs to public water systems to monitor and treat water to remove regulated contaminants²⁹, and detrimental health outcomes for individuals and communities. The independent expert recommends a holistic consideration of the right to water by factoring it into policies having an impact on water quality, ranging from agriculture to chemical use in products to energy production activities.

²³ Riverkeeper Report, “Fractured Communities: Case Studies of the Environmental Impacts of Industrial Gas Drilling,” September 2010, p. 3.

²⁴ United States Environmental Protection Agency, Office of Research and Development, “Hydraulic Fracturing Research Study Fact Sheet,” June 2010.

²⁵ Energy Policy Act of 2005, Public Law No. 109-58, sect. 1(a), 119 Stat. 594 (2005).

²⁶ The final hydraulic fracturing study is expected to be released in 2012.

²⁷ Ohio Department of Natural Resources, Division of Mineral Resources Management, “Expert Panel Technical Report: Subsurface Gas Invasion, Bainbridge Township, Geauga County, Ohio,” June 2010.

²⁸ Press Release, New York City Department of Environmental Protection, “Department of Environmental Protection Calls for Prohibition on Drilling in the New York City Watershed,” 23 December 2009.

²⁹ According to industry estimates, drinking water utilities spend more than \$4 billion annually on water treatment chemicals; see Environmental Working Group, “National Assessment of Tap Water Quality.”

C. Affordability

47. Another element of the human rights to water and sanitation is affordability, meaning that direct and indirect costs and charges associated with securing water and sanitation must not compromise the ability to pay for other essential needs guaranteed by other human rights such as the rights to food, housing, education and health.

48. The cost of drinking water is rising, as suppliers need to service aging infrastructure, comply with ever-stringent public health standards and expand access. In most cases, increasing costs have caused water suppliers to increase rates, or otherwise charge users for repairing and upgrading the network as described above. Nevertheless, water is generally still inexpensive compared to other utilities, such as electricity and phone service. In the United States, combined water and sewer bills average only about 0.5 per cent of household income.³⁰ EPA has elaborated voluntary affordability guidelines, suggesting that a maximum of two per cent of household income should be allocated to water services.³¹

49. Nonetheless, for lower income households, the rates for water and sanitation services fall outside the above-mentioned average and above the two per cent ceiling. These households are often faced with difficult financial choices (e.g., late or non-payment of bills, reduced service levels, etc.) in meeting basic service needs. Moreover, lower-income households often occupy substandard housing with inadequate and leaking plumbing fixtures, which contribute to costly wasted water.

50. The relationship between affordability of services and patterns of water shut-off policies is another concern. The independent expert received information that water shut-off policies disproportionately impact marginalized persons along race, class and gender. For example, a study by Massachusetts Global Action examined the racial impact of the water pricing and shut-off policies of the Boston Water and Sewer Commission, and found that for every one per cent increase in the city ward's percentage of people of colour, the number of threatened cut-offs increases by four per cent.³²

51. She also received information about situations where children were separated from parents and placed into custodial care, based on applicable child protection laws that seek to safeguard the best interest of the child, because the household water supply was shut off. Water utilities must be able to collect payment for services from customers, but regarding shut-off for non-payment, the independent expert emphasizes the need for due process. The authorities should address the underlying causes of the inability to pay, instead of merely its symptoms. The principle of the best interest of the child should guide decision-making in these cases. The independent expert expresses concern about the discriminatory impact of water shut-off policies, particularly for low-income children and older persons.

52. In some states, legal protections are provided against water shut-offs. For example, investor-owned utilities in Massachusetts are not allowed to shut off water to households with children under 12 months, persons over 65 years or persons with certain medical conditions; unfortunately, the same does not apply to public utilities. In Rhode Island, the protection with regard to children extends to two years of age, and covers public and private utilities. In the view of the independent expert, a federal standard should be established to provide protections against water shut-offs for vulnerable and marginalized groups.

³⁰ United States Environmental Protection Agency, "Water on tap: What you need to know," December 2009, p. 9.

³¹ The World Bank has suggested a guideline of three to five per cent of household income.

³² Suren Moodliar and Kimberly Foltz, Massachusetts Global Action, "Human Right to Water in the United States," letter to the independent expert, 22 September 2009.

53. From the observations of the independent expert, it is clear that EPA voluntary guidelines on affordability are insufficient to ensure the right to water for all without discrimination. Currently, there is no federal legislation, either directly by statute or through a regulatory agency, mandating affordability standards for water and sanitation. The Federal Government has used its power in other areas to legislate minimum standards – this has been the case of the Low-Income Home Energy Assistance Program. The Federal Government has also set minimum standards in relation to water quality and minimum wage standards, deriving its authority from the Commerce Clause of the Constitution. While these laws place ultimate responsibility on the Federal Government, legislation aims to build a regulatory foundation on which states may enact additional rules and take primary responsibility for monitoring and enforcing standards.

54. In this regard, the independent expert calls on the Government to adopt a mandatory federal standard on affordability for water and sanitation.

D. Excluded groups

55. The independent expert met with numerous communities and groups who face challenges in accessing safe water and sanitation. The situations of homeless people and indigenous persons have particular features that warrant a specific human rights analysis.

Homeless people

56. As a part of her mission, the independent expert examined the situation of the homeless with regard to access to water and sanitation. Up to 3.5 million people experience homelessness in the United States every year, and on any given night over 800,000 people are homeless. In some cities, homelessness is being increasingly criminalized. Criminalization includes fines, arrests and severance of social protection benefits or even access to employment. Local statutes prohibiting public urination and defecation – which can constitute a sexual offence in some cases –, while facially constitutional to protect public health, are often discriminatory in their effects. Such discrimination often occurs because such statutes are enforced against homeless individuals who often have no access to public restrooms and are given no alternatives. Furthermore, there is an increasing trend in local governments to limit opening hours or close entirely public restrooms. Such decisions are contrary to the need to create an enabling environment so homeless individuals can realize their rights to water and sanitation.

57. The independent expert notes that in 2010 the Inter-Agency Council on Homelessness published the first federal plan to end homelessness. The plan includes constructive alternatives to the criminalization of homelessness.

58. Because evacuation of the bowels and bladder is a necessary biological function and because denial of opportunities to do so in a lawful and dignified manner can both compromise human dignity and cause suffering, such denial could, in some cases (e.g., where it results from deliberate actions or clear neglect) amount to cruel, inhumane or degrading treatment. Individuals are sometimes compelled to go to extraordinary lengths to prevent such suffering. The independent expert visited a community of homeless people in Sacramento, California, where she met a man who called himself the “sanitation technician” for the community. He engineered a sanitation system that consists of a seat with a two-layered plastic bag underneath. Every week Tim collects the bags full of human waste, which vary in weight between 130 to 230 pounds, and hauls them on his bicycle a few miles to a local public restroom. Once a toilet becomes available, he empties the content of the bags; packs the plastic bags with leftover residue inside a third plastic bag; ties it securely and disposes of them in the garbage; then sanitizes his hands with water and

lemon. He said that even though this job is difficult, he does it for the community, especially the women.

59. The fact that private citizens are compelled to provide such services is an indication of failure by the State to meet its responsibilities to ensure the provision of the most fundamental of services. The remarkable contribution of this single human rights defender to assume such a burden in defence of human dignity and the human right to sanitation in no way reduces the responsibility of public authorities to correct this and similar situations elsewhere in the country.

60. The United States, one of the wealthiest countries in the world, must ensure that everyone, without discrimination, has physical and economic access, in all spheres of life, to sanitation which is safe, hygienic, secure, socially and culturally acceptable, and which provides privacy and ensures dignity. An immediate, interim solution is to ensure access to restrooms facilities in public places, including during the night. The long-term solution to homelessness must be to ensure adequate housing.

Indigenous people

61. There are roughly 2.7 million indigenous people, including American Indians, Alaska Natives and and Native Hawaiians, living in the United States. This number rises to 4.9 million when those who identify themselves as American Indian in combination with another race are included.³³ The vast majority of these belong to one of 565 recognized tribes. Approximately 50 per cent of American Indians live west of the Mississippi River and about 40 per cent live on reservations.³⁴ Many more belong to federally unrecognized tribes. In California alone, there are over 300,000 American Indians who belong to federally unrecognized tribes.

62. Roughly 25 per cent of American Indians live below the poverty line.³⁵ On some reservations, however, the number can be as high as 63 per cent.³⁶ The United States Census Bureau also reports that educational attainment and life expectancy in American Indian communities continue to lag behind national averages.³⁷

63. American Indian communities lack access to safe drinking water and basic sanitation in disproportionate numbers. Thirteen per cent of American Indian households do not have access to safe water and/or wastewater disposal. In non-native households, this number is 0.6 per cent.³⁸ This disparity is particularly pronounced in Interior and Western Alaska communities and Navajo Nation. EPA estimates that 54,000 members of Navajo Nation lack access to a public water system. Around 30 per cent of Navajo households report having to haul water, which, in addition to being time-consuming and frequently unsanitary, costs them \$550 more per year than Navajo households with a connection to the

³³ United States Department of Health and Human Services, Office of Minority Health and Millennial Housing Commission, "Native American Housing Needs & Proposed Recommendations," 2002.

³⁴ Ibid.

³⁵ American Indian Relief Council, Living Conditions, available at www.nrcprograms.org/site/PageServer?pagename=airc_livingconditions.

³⁶ Ibid.

³⁷ United States Census Bureau, "We the People: American Indians and Alaska Natives in the United States," February 2006.

³⁸ United States Tribal Water Access Partnership, Infrastructure Task Force Access Subgroup, "Meeting the Access Goal: Strategies for Increasing Access to Safe Drinking Water and Wastewater Treatment to American Indian and Alaska Native Homes," 2008.

Tribal Utility Authority. Alaska natives frequently transport human waste in 5-gallon “honeybuckets” from their homes to local water sources for dumping.³⁹

64. The independent expert notes that in 2004 several federal agencies, including the Environmental Protection Agency, the Department of the Interior, the Department of Housing and Urban Development, the Department of Agriculture and the Indian Health Service, formed the US Tribal Water Access Partnership. The Partnership aims to improve access to safe drinking water and sanitation for American Indian households by 50 per cent by 2015. It cautions, however, that improving access in these communities is particularly costly because many live in rural or isolated areas, and that they will not meet this goal without additional funding. Additionally, EPA runs an independent Tribal Water Plan that provides financial and logistical support for small drinking-water systems on tribal lands.⁴⁰

65. The independent expert welcomes the decision by the United States to support the United Nations Declaration on the Rights of Indigenous Peoples. Besides being entitled to the rights to water and sanitation like everyone, indigenous people possess broader rights to water which emanate from their relationship with traditional lands and the natural resources thereof. The Declaration on the Rights of Indigenous Peoples affirms that indigenous peoples have the right to the lands, territories and resources that they have traditionally owned, occupied or otherwise used or acquired (art. 26.1); that indigenous peoples also have a right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned lands, territories, water and coastal seas (art. 25).

66. The independent expert visited the Winnemen Wintu in Redding, California, a tribe facing challenges in accessing safe drinking water and sanitation. This tribe is not recognized by the Federal Government. Winneman means “middle water people,” and water is core to their identity. The tribe inhabits ancestral territory from Mount Shasta down to the McCloud River watershed.

67. Tribal existence and identity do not depend on federal recognition or acknowledgment of the tribe. Federal recognition does not create tribes, but rather recognizes social/political entities that predate the United States. It creates a trust relationship between the tribe and the Federal Government, entitles tribes and their members to certain federal benefits, and activates a body of domestic law involving respect for tribal sovereignty. In practical terms, it allows tribes to make claims under federal law for example to develop gaming and other forms of economic development that take advantage of the sovereign status of the tribes. In addition, tribes can receive start-up funds and continuing federal support for their tribal governments, including law enforcement, courts and health services. Federal recognition introduces federal authority and also enables tribes to gain control over their affairs.

68. The Winnemen Wintu tribe currently occupies a 42-acre plot of land, on which a number of families live. This area is not within the boundaries of Redding, and thus is not connected to any public water system; it is not feasible to drill a private well. As such, the tribe must partner with the City of Redding or the county to obtain access to water. In these situations, individual households find alternative means of connecting to water sources and often rely on individual septic systems. As they are categorized as individual households (and not as a tribe), they are ineligible for virtually any financial assistance. The independent expert is concerned that unrecognized tribes fall into a protection gap, particularly with regard to the realization of the rights to water and sanitation. She is also concerned about the enjoyment of cultural rights of this tribe, particularly with regard to use

³⁹ Ibid.

⁴⁰ Environmental Protection Agency, Tribal Water Plan, available at http://water.epa.gov/aboutow/goals_objectives/waterplan/tribal_index.cfm#1.

or access to water for different traditional and cultural uses, such as fisheries and religious ceremonies such as the puberty ceremony.⁴¹ Federally recognized tribes also encounter difficulties in exercising their right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned lands and water, as is the case for the Pit River tribe.⁴²

69. The situation of Winnemen Wintu resembles that of other tribes. For example, the independent expert received information about concerns about the Acoma and Laguna Pueblos, Chickaloon Native Village, Navajo Nation and Oglala Lakota People, among others, relating to access to safe drinking water and sanitation due to mining activities. Mining activities are reportedly leading to contamination and depletion of surrounding groundwater and surface-water resources, not only affecting access to clean drinking water, but also threatening the wildlife and plants used as traditional food sources and vital to traditional cultural practices. Additionally, the absence of accountability for pollution and clean-up harms use by future generations.

E. Prioritization of personal and domestic uses

70. The latest available estimates from 2005 of water use in the United States indicated that approximately 1,552 billion litres (410 billion gallons) per day are withdrawn for eight categories of uses (public supply, domestic, irrigation, livestock, aquaculture, industrial, mining and thermoelectric power), of which freshwater withdrawals comprised 85 per cent of the total.⁴³ Thermoelectric power (49 per cent) was the largest category of water use, followed by irrigation (31 per cent) and public supply (11 per cent). The remaining categories of water uses together were less than ten per cent of total water withdrawals, with domestic water use comprising just one per cent of the total.⁴⁴ Unfortunately, no complete nationwide mapping of available water – for surface and groundwater – exists in the United States. The independent expert, however, notes that the United States Geological Survey is currently undertaking such a mapping and she hopes it will continue to receive the necessary funding to finish such a crucial endeavour.

71. The average per capita residential water use is about 340 litres of water per day. For the most part, water treated to meet drinking water standards is used to flush toilets, water lawns, and wash dishes, clothes and cars. Nearly 14 percent of the water a typical homeowner pays for is never even used, mostly due to leaky pipes and faucets.⁴⁵

72. There are ever-increasing demands for water for energy, agriculture, industry and recreation, and the effects of climate change exacerbate these competing demands. While water for the realisation of the human right, represents a small percentage of total water use in the United States, the absence of clear legal standards to give priority to water for personal and domestic use threatens to undermine the realization of the human rights to water and sanitation for all.

73. An area of potential conflict between water for personal and domestic use and other uses is that of bottled water, Americans being the largest consumers of bottled water

⁴¹ Winnemem Wintu, available at <http://www.winnememwintu.us/>.

⁴² The Pit River tribe and Calpine Corporation claim competing interests in the Medicine Lake Highlands in northeast California, and are in legal proceedings to resolve the matter.

⁴³ Joan F. Kenny and others, "Estimated Use of Water in the United States in 2005," United States Geological Survey Circular 1344, 27 October 2009, p. 4.

⁴⁴ *Ibid.*, p. 5. The average urban water use is approximately 371 litres per day (p. 19).

⁴⁵ United States Environmental Protection Agency, "Water on Tap: What you need to know," December 2009, p. 10.

globally (33.4 billion litres). The landscape concerning the impact of water-bottling operations on local water sources, democratic governance of local water resources and how communities have responded to these impacts has many contours. A range of concerns has been expressed, including about water availability for future generations in a context of overextraction. Moreover, there are also transparency and accountability concerns about the lack of information on the process of obtaining permits to operate and the attendant rights acquired, and the marketing practices that promote bottled water as inherently safer than tap water.

74. Corporate Accountability International estimates that, in the past decade, there have been new water-bottling sites – proposed or operational – in at least 11 states and in more than two dozen communities. Most operations that have raised concerns deal with bottled spring water or groundwater. The independent expert received testimony from individuals in California, Maine and Michigan who expressed concern about the impact and process.

75. Regarding impacts, concerns have been voiced about future water availability and quality, where the conditions under which a company enters a community would prioritize the rights of the company over those of the community to meet personal and domestic needs. Communities have also pointed to problems related to environmental and sustainability issues.

76. Regarding process, complaints regarding inadequate information and consultation were heard. The independent expert expresses concern that in some cases communities have allegedly learned about proposed deals near completion point or ex-post facto. Everyone has a right to seek, receive and impart information concerning water issues; authorities must take decisions in a transparent and fair manner, involving local populations in the process.

77. Another key matter concerns accountability and decision-making mechanisms that communities can use or employ to address their grievances. For example, in Mecosta, Michigan, issues were raised with the closed-door proceedings between Nestlé and public officials to issue a permit to access the watershed. Local grassroots organizations filed a lawsuit against Nestlé, which resulted in an out-of-court settlement after several years of litigation, with Nestlé agreeing to reduce water withdrawal rates and to an adjustment for seasonal environmental conditions.

78. As a consequence of opposition by some local communities to new water-bottling plants, in 2008, Nestlé committed to working with stakeholders on a framework to better manage their siting process and make it more transparent. The framework includes principles and specific commitments to help guide its conduct in local communities during the process of identifying sites, and to ensure better communication, dialogue and engagement with local communities.

IV. Non-discrimination and equality

79. Although the vast majority of the population in the United States enjoys regular access to safe drinking water and sanitation, the above analysis reveals categories of people who are excluded. Individuals who do not have regular access, who face obstacles in access or are otherwise deprived of the same level of access as the general population, also generally face discrimination in society more broadly. The people with whom the independent expert met and who are facing obstacles in their enjoyment of the rights to water and sanitation were disproportionately Black, Latino, American Indian, homeless or otherwise disadvantaged.

80. Human rights require a focus on the most vulnerable, those who are most often excluded from progress. Often, these people are the most difficult to reach, but this cannot be justification for neglecting them – on the contrary. Human rights require that there be universal access. Hence, merely addressing formal or direct discrimination will not ensure substantive equality. To eliminate discrimination in practice, special attention must be paid, and priority must be given, to groups of individuals who suffer historical or persistent prejudice, instead of merely comparing the formal treatment of individuals in similar situations.

81. The International Covenant on Civil and Political Rights, to which the United States is a party, states that all persons are equal before the law, and that the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any prohibited ground (art. 26).⁴⁶ In this regard, the Human Rights Committee has noted that article 26 does not merely duplicate the guarantee already provided for in article 2 (general guarantee against non-discrimination in the exercise of Covenant rights) but provides, in itself, an autonomous right. It prohibits discrimination in law or in fact in any field regulated and protected by public authorities. Article 26 therefore is concerned with the obligations imposed on States parties with regard to their legislation and the application thereof. Moreover, the application of the principle of non-discrimination contained in article 26 is not limited to those rights that are provided for in the Covenant, but extends to economic, social and cultural rights.⁴⁷

82. In the view of the independent expert, the United States has achieved significant gains in eliminating formal or direct discrimination in law. Nevertheless, she remains concerned that several laws, policies and practices, while appearing neutral, disproportionately affect the enjoyment of human rights by certain groups, or are enforced without attention to specific circumstances. Moreover, the independent expert notes that there is a lack of data regarding who does and who does not have access to water and sanitation. Availability of accurate and disaggregated data is fundamental in the design of appropriate and efficient policies and programmes to address the many outstanding challenges related to water and sanitation.

V. Official development assistance

83. International cooperation is a fundamental principle of human rights law.⁴⁸ Countries that provide official development assistance (ODA) must ensure that it is consistent with human rights norms.

84. Both the development and the implementation of development cooperation policy should incorporate principles of non-discrimination, participation and accountability. This is reflected in, inter alia, the Accra Agenda for Action, which declares that “developing countries and donors will ensure that their respective development practices and programmes are designed and implemented in ways consistent with the agreed international commitments on ... human rights...”⁴⁹

⁴⁶ The United States is also a State party to the Convention on the Elimination of All Forms of Racial Discrimination, which prohibits racial discrimination.

⁴⁷ Human Rights Committee, *Pauger v. Austria* (Communication No. 716/1996), 25 March 1999.

⁴⁸ Charter of the United Nations, arts. 1(3) and 56; International Covenant on Economic, Social and Cultural Rights, arts. 2(1) and 11(1); Convention on the Rights of the Child, art 4.

⁴⁹ Accra Agenda for Action, para. 13(c); see also OECD Development Assistance Committee, “Action-Oriented Policy Paper on Human Rights and Development,” 2007, principles 5 and 8.

85. First and foremost, donors must not negatively affect the human rights situation in their partner countries.⁵⁰ Moreover, they should ensure that their assistance facilitates the ability of each developing country to comply with its own human rights obligations.⁵¹ They should take positive action to work with partner governments to identify how development assistance can best support that government's own efforts to realize human rights. Finally, donors have an obligation to ensure that third parties involved in the delivery and implementation of their development assistance (e.g. private contractors and technical advisers) do not interfere with the enjoyment and realization of human rights in partner countries.⁵²

86. The Senator Paul Simon Water for the Poor Act (2005) sets United States foreign appropriations policy for the water sector. It is the first instance where United States water policy reflects the normative content of the human right to water, which the independent expert welcomes. The Act establishes as the policy of the United States that foreign aid for water and sanitation will "further ensure affordability and equity in the provision of access to safe water and sanitation for the very poor."

87. The independent expert is concerned about the implementation of the Act, particularly regarding criteria used to identify recipient countries, target poor communities, and decide on funding envelopes. The United States Agency for International Development (USAID) acknowledged difficulties in reaching the poorest of the poor, and the need for greater policy guidance in this regard. She notes that USAID is in the process of developing a strategy and criteria to target countries and communities in greatest need. In this context, she draws attention to her recent report on the Millennium Development Goals (A/65/254) and calls on the Department of State/USAID to ensure that funding of water and sanitation projects reaches those most in need, and is guided by the normative content of the rights to water and sanitation.

VI. Conclusions and recommendations

88. With the introduction of centralized water and sanitation systems in the 19th century, the United States achieved enormous public health gains through the 20th century, resulting in the vast majority of people living in the United States acquiring access to clean and safe drinking water and sanitation. Aging and deteriorating water and sanitation infrastructure forces the question of whether 19th and 20th century technology – appropriate at the time – will carry the country into the 21st century. Estimates indicate an annual \$4 billion to \$6 billion funding gap for infrastructure in the sector. The United States needs to develop a national water policy and plan of action guided by the normative content of the rights to water and sanitation.

89. More concerted efforts are required to ensure targeting of policies and programmes to reach the hidden and poorest segments of the population. Problems of discrimination in the United States water and sanitation services may intensify in the coming years with climate change and competing demands for ever scarce water resources. Ensuring the rights to water and sanitation for all requires a paradigm shift towards new designs and approaches that promote human rights, that are affordable and that create more value in terms of public health improvements, community development, and global ecosystem protection.

⁵⁰ OECD, Development Assistance Committee, "Action-Oriented Policy Paper on Human Rights and Development," 2007, principle 8.

⁵¹ E/C.12/2001/10, paras. 16-17.

⁵² E/C.12/2002/11, para. 33.

90. A holistic, systemic approach is required, whereby the water sector is not viewed in isolation from the agricultural, chemical, industrial and energy sectors. From agricultural pollution to industrial waste to pollution stemming from urban runoff, the absence of political will inevitably means poor planning and scarce funding, and ultimately leads to pollution that jeopardizes water quality and increases costs. Accordingly, a stronger regulatory system should be put in place to prevent pollution of surface and groundwater, and to ensure affordability. Already communities such as Edmonston, Maryland, are undertaking low-cost and innovative initiatives (“green streets”) to address challenges in the area of water and sanitation. The independent expert welcomes these and hopes they can be further replicated across the country.

91. Such a paradigm shift for the water and sanitation sector entails policy changes, including support for research, pilot projects and incentives, changes in engineering practices, such as integrated water management (e.g. wastewater, storm water, recycled water) and decentralized systems, and community education and empowerment.

92. Placing the human rights to water and sanitation at the centre of policy formulation for both domestic and international aid policies is crucial to ensure that all people in the United States, as well as those benefiting from its development assistance, have access to affordable, accessible, acceptable and safe water and sanitation in sufficient amounts to protect human health and human dignity. In this regard, the independent expert offers the following recommendations:

(a) Ratify the International Covenant on Economic, Social and Cultural Rights and the Optional Protocol thereto, as well as the other core international human rights treaties it has not ratified thus far. To this end, the Government should reconvene the Interagency Working Group on Human Rights (Executive Order 13107);

(b) Adopt a comprehensive federal law on water and sanitation guaranteeing the rights to safe water and sanitation without discrimination and clearly delineating the responsibilities of public officials at the federal, state and local levels. Such a law must prioritize water for personal and domestic use and set affordability standards, among others.

(c) Formulate a national water and sanitation policy and plan of action, guided by the normative content of the rights to water and sanitation, that devote priority attention to improving aging infrastructure, as well as innovative designs and approaches that promote human rights, are affordable and create more value in terms of public health improvements, community development and sustainability;

(d) Ensure proper regulation and monitoring of the water quality of private drinking water systems;

(e) Exemptions under the Safe Drinking Water Act, including for the oil and gas industry, must be re-assessed and repealed if resulting in a negative impact on the enjoyment of the right to water;

(f) Strengthen the regulatory system on water and sanitation to prevent upstream pollution (agricultural, industrial, chemical, including pharmaceutical, stormwater run-offs, etc.) as well as ensure adequate regulation of the bottled water industry;

(g) Engage in public education and information campaigns about water quality in the languages spoken by the community to assure people of the safety of drinking tap water;

- (h) Evaluate the extent to which people living in poverty face challenges in paying for water and sanitation services, and adopt, at the federal level, a national minimum standard on affordability of water and sanitation, as well as due process guarantees in relation to disconnections;
 - (i) Ensure that all municipalities provide access to safe drinking water and sanitation to homeless people, including through ensuring the opening and regular maintenance and upkeep of public restrooms, as well as availability of public water fountains, including during the night;
 - (j) Engage in dialogue with homeless communities to assist these individuals to find more secure housing solutions, including stable access to adequate water and sanitation;
 - (k) Enact the necessary legal action to change the status of unrecognized and terminated tribes to enable them to realize their rights to water and sanitation, as well as express religious and cultural rights;
 - (l) Ensure adequate consultation and prior and informed consent of indigenous communities regarding activities affecting their access to water;
 - (m) Guide the ODA by human rights principles, including the rights to water and sanitation, and devote larger proportion of aid to ensuring the human rights to water and sanitation to those who do not yet have access. Ensure that affected communities have access to information and opportunities to participate in the formulation, implementation and evaluation of projects.
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