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与享有安全饮用水和卫生设施有关的人权义务问题独立专家卡塔里娜·德阿尔布开克的报告

增 编

对哥斯达黎加的访问*

* 本报告的概要以所有正式语文分发。报告正文摘于本概要的附件，仅以原文和西班牙文分发。

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内容提要

与享有安全饮用水和卫生设施有关的人权义务问题独立专家于 2009 年 3 月 19 日至 27 日访问了哥斯达黎加。这次访问所涉及的关键议题是由于缺乏废水处理而导致的供水污染、该国在取得饮用水和卫生设施机会方面存在着巨大差异、以及生产和旅游活动对受影响社区取得安全供水权方面造成的不良影响。

独立专家欢迎哥斯达黎加在增加人用供水和改善卫生设施方面所取得的重大进步。2007 年，99%的都市居民和 96%的农村居民都有机会取得经改善的水源，而全国人口中 82%都有机会取得安全饮水。他并满意地注意到，城市和农村地区居民中大约 98%都有机会取得改善的水源。该国所取得的这些成果使哥斯达黎加处于拉丁美洲和加勒比地区最先进的国家之列。

哥斯达黎加为保护和促进取得饮用水和卫生设施机会方面制定了全面的法律和政策框架。独立专家尤其赞赏地注意到，据该国最高法院宪法法庭指出，取得安全饮水是可以在该国法院内要求落实的不可剥夺的人权。独立专家并注意到哥斯达黎加为改善人用供水的质量、并为加强适当管理人的排泄物和废水而作出了努力。

尽管哥斯达黎加在提供饮用水和卫生设施机会方面取得了进步，但是这些领域中仍然存在一些关键性的问题。独立专家认为，由涉及管理和使用水源问题的 1946 年“用水法”所创建的法律框架已不再适应当前该国的社会和经济状况，迫切需要修改和更新。有关水和卫生设施方面的现行规范性框架分散在多种不同的法律和规则之中，使之变得十分复杂，再加上大量的机构和组织都参与了执行有关方面的法律和规定，使人们严重地顾虑到这些机构的作用和责任、各方责任的重叠、机构间协调的缺乏，有时候并造成规划和制定水及卫生设施方面政策的各方职权之间产生冲突。具有监督现行规范性框架遵守情况职能的一些机构没有充足的人力、技术和财力资源来有效开展其监督工作，同样也阻碍了水和卫生设施方面法律和政策的有效执行。

独立专家关注到哥斯达黎加一些省份和地区在取得安全饮水和卫生设施方面存在着严重差异。她尤其注意到，由于缺乏对现有基础设施的维修，水渠的管理和运作无效，又缺乏监督水的质量的方案，估计仍然有 18%的居民没有机会取得饮水。她并关切地注意到，63%的人体排泄物和废水直接排放到河流和其他水流

中，而只有 3.5%的废水在排放到自然环境之前真正得到处理。土著居民和属于其他处在社会边缘及弱势群体的人(包括生活贫困的人、非洲人后裔和移民工人)常常只能得到有限的机会或完全没有机会取得饮水和适当的卫生设施。

最后，独立专家表示关注目前该国尤其是在北部沿海地区的旅游业和房地产开发情况，因为这一情况在当地对人用供水的需求及投资者和地产开发商的经济利益之间造成了严重的社会冲突。并对哥斯达黎加的水资源以及对保护该国的自然环境都可能带来长期的消极影响。

Annex

REPORT OF THE INDEPENDENT EXPERT ON THE ISSUE OF HUMAN RIGHTS OBLIGATIONS RELATED TO ACCESS TO SAFE DRINKING WATER AND SANITATION, CATARINA DE ALBUQUERQUE

MISSION TO COSTA RICA

CONTENTS

I. INTRODUCTION

1. At the invitation of the Government, the independent expert visited Costa Rica from 19 to 27 March 2009. The purpose of the mission was to assess, in a spirit of cooperation and dialogue, how Costa Rica endeavours to implement its human rights obligations related to access to safe drinking water and sanitation, with a view to identifying good practices and assisting the Government, and other relevant actors, in their efforts to address the challenges and obstacles in that regard.

2. The agenda for the independent expert's visit was arranged in close cooperation with the Ministry of Foreign Affairs and the United Nations Development Programme in Costa Rica. The independent expert thanks all those involved in the preparation of her mission for their valuable cooperation and assistance.

3. During the visit, the independent expert met senior officials from the Ministries of Health, including the Vice-Minister for Health, Foreign Affairs and the Environment, Energy and Telecommunications, as well as representatives of different agencies with competencies in water management and sanitation, including the Costa Rican Institute of Aqueducts and Sewers, the Water Department of the National Meteorological Institute, the National Service for Groundwater, Irrigation and Drainage, the Regulatory Authority for Public Services, and municipalities, including the mayors of San José and Cartago.

4. The independent expert held discussions with various members of the Legislative Assembly, including the President of the Environment Commission, judges of the Constitutional Chamber of the Supreme Court of Justice and the Environmental Administrative Tribunal, and representatives of the Ombudsman's Office, including the Ombudsperson. She also had the opportunity to meet with representatives of relevant United Nations specialized agencies and programmes, civil society organizations, academic institutions and the private sector.

5. During her mission, the independent expert visited several places in the provinces of Guanacaste, Puntarenas and Limón. In Guanacaste, she visited the water basins of the Monte Alto nature reserve and Sardinal, as well as the tourist and real estate infrastructures in Playa del Coco and Playa Ocotal, and met with various civil society representatives. In the province of Puntarenas, the independent expert visited the Manuel Antonio national park, the poor residential area of La Pascua, as well as a school and a police station in Quepos. In the Limón province, she met with civil society representatives of the community of Guácimo and Siquirres to consider the alleged contamination of groundwater sources, caused in particular by pineapple plantations.

6. The independent expert wishes to express her gratitude to all those whom she met for their excellent cooperation. She was impressed and inspired by their commitment and tireless efforts in the defence of water.

II. LEGAL AND INSTITUTIONAL FRAMEWORK

A. Legal framework

1. International obligations

7. Costa Rica is party to six of the seven core international human rights treaties,[1] some of which contain explicit references to safe drinking water or sanitation.[2] Other international and regional human rights treaties ratified by Costa Rica, while not containing explicit references, show that access to safe drinking water and sanitation represent a precondition for the effective exercise of a number of human rights, including the right to life, the prohibition of torture and other forms of cruel, inhuman or degrading treatment, the right to health, the right to education, the right to adequate housing and the right to food.

8. Article 11 of the International Covenant on Economic, Social and Cultural Rights, for example, specifies a number of rights emanating from, and indispensable for, the realization of the right to an adequate standard of living, including adequate food, clothing and housing. In its general comment No. 15 (2002) on the right to water, the Committee on Economic, Social and Cultural Rights observed that the use of the word "including" indicated that this catalogue of rights was not intended to be exhaustive, and concluded that the right to water fell within the category of guarantees essential for securing an adequate standard of living, since water is one of the most fundamental conditions for survival. The Committee noted that an adequate amount of safe water was "necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements".

9. The Human Rights Committee, in its general comment No. 6 (1982) on the right to life, stressed that the expression "inherent right to life" could not be properly understood in a restrictive manner, and that the protection of that right required States to adopt positive measures to reduce infant mortality, to increase life expectancy and eliminate malnutrition and epidemics. In their concluding observations, the Human Rights Committee and the Committee against Torture have repeatedly stressed that poor sanitation conditions constitute a violation of the right of persons deprived of their liberty to be treated with humanity and with respect for their inherent dignity.

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[1] The International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the International Convention on the Elimination of All Forms of Racial Discrimination, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment and the Convention on the Rights of the Child.

[2] Art. 14, para. 2 of the Convention on the Elimination of All Forms of Discrimination against Women; art. 24, para. 2 of the Convention on the Rights of the Child.

10. The Inter-American Court of Human Rights also interpreted the right to life as including access to conditions that guarantee a dignified life,[3] and heard several cases concerning the State obligation to ensure adequate conditions of health, hygiene and sanitation for persons deprived of their liberty.

11. According to article 7, paragraph 1, of the Constitution, international treaties duly approved by the Legislative Assembly take precedence over domestic legislation. The Constitutional Chamber of the Supreme Court of Justice has stated in a number of decisions that international human rights treaties in force in Costa Rica "not only have similar status to the Constitution but also, insofar as they grant greater rights or guarantees to persons, take precedence over the Constitution".[4] Article 2 of the Constitutional Jurisdiction Act establishing the Constitutional Chamber states that the latter can apply not only the rights enshrined in the Constitution, but also those recognized under international law in force in Costa Rica.

2. National legal framework

12. The Constitution of Costa Rica, adopted in 1949, is the fundamental legal instrument for the protection and promotion of human rights. Title V of the Constitution, which protects some economic, social and cultural rights, does not include any provision on access to safe drinking water or sanitation. Nevertheless, national courts, including the Constitutional Chamber, have, on a number of occasions, used article 21 of the Constitution (right to life) and article 50 (right to a healthy and ecologically-balanced environment) as the legal bases for the recognition of a fundamental right to potable water (see paragraph 31 below).

13. The Water Law (law No. 276 of 1946) establishes the main legal framework for the management and use of water resources in Costa Rica. The State, through the grant of concessions, regulates the use of public water resources by individuals and enterprises (arts. 18-29) in accordance with the principle that, in the event of water scarcity, water for domestic consumption is to be accorded the highest priority over other possible uses (arts. 140-142).

14. In addition to the Water Law, there are a wide number of laws and regulations on the protection and sustainable use of water resources, including:

- The Potable Water Law (law No. 1634 of 1953)
- The General Health Law (law No. 5395 of 1973, arts. 264-277)
- The General Environment Law (law No. 7574 of 1995, arts. 50-52 and 64-67)

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[3] *Caso Villagrán Morales y Otros*, decision of 19 November 1999, para. 144.

[4] Second to fourth periodic reports to the Committee on Economic, Social and Cultural Rights (E/C.12/CRI/4), para. 149.

- The Regulation on the Quality of Potable Water (decree No. 32.327-S of 2005)

- The Regulation for the Evaluation and Classification of the Quality of Surface Water Bodies (decree No. 33.903-MINAE-S of 2007)

15. There is a general recognition in Costa Rica that the normative framework created with the 1946 Water Law no longer corresponds to the economic and social situation of the country. Since 2001, several draft laws have been prepared, but, to date, such efforts have not been successful. The status of the draft water law (*Expediente No. 14.585*) approved in March 2005 by the Environment Commission of the Legislative Assembly is unclear at present, and a new proposal drafted by an intersectoral commission coordinated by the Ministry of the Environment, which had not been made public at the time of the independent expert's visit, seems to have met the opposition of several non-governmental organizations working on water issues.

16. The normative framework on sanitation is similarly spread over a wide number of laws and regulations. The General Health Law and the General Environment Law contain the main principles on the collection, management, treatment and disposal of human excreta and wastewater, as well as on the protection of water resources from contamination. In addition to these laws, there are several other regulations that aim at ensuring the safe treatment and disposal of wastewater, including:

- A regulation on the management of sludge from septic tanks (decree No. 21297-S of 1992)

- A regulation on the dumping and reuse of wastewater (decree No. 26042-S-MINAE of 1997)

- A regulation on the approval and operation of wastewater treatment systems (decree No. 31545-S-MINAE, revised in 2005)

- A regulation creating the environmental tax for dumping polluting substances in water (decree No. 34431-MINAE-S of 2008)

B. Institutional framework

17. The Ministry of the Environment, Energy and Telecommunications has overall responsibility for the management of water resources. It has far-reaching functions relating to the supply, management, use, protection and monitoring of public water, including the power to grant water permits or licences for the drilling of new wells in accordance with the Water Law. The Ministry also has general responsibilities for the collection, management, treatment and disposal of human excreta, wastewater and stormwater.

18. The Ministry of Health is responsible, in accordance with the General Health Law, for preventing contamination of water resources, developing regulatory measures on water quality and for monitoring their effective implementation by water suppliers. Its responsibilities include monitoring the quality of safe drinking water provided by national operators. The Ministry is also responsible for authorizing projects concerning sewage system and wastewater treatment, as well as for monitoring their implementation.

19. The Costa Rican Institute of Aqueducts and Sewers (AyA) is an autonomous State institution with overall responsibility for the development and implementation of legislation and policies concerning the supply of safe drinking water and the collection, management, treatment and disposal of human excreta, wastewater and stormwater in urban areas. In addition to this general responsibility, it is also in charge of administering and operating directly aqueducts and sewage systems throughout the country (see paragraph 41 below) and is responsible for ensuring the continuity of water provision when other water providers are not in a position to continue supplying water to the population.

20. The Regulatory Authority for Public Services (ARESEP) is an autonomous institution responsible for the economic regulation, including fixing tariffs, of water and sanitation services supplied by AyA, the Administrative Associations for Aqueducts and Sewers (ASADAS) and private providers (the tariffs for services provided by the municipalities are fixed by the municipalities themselves). ARESEP also adopts technical regulations aimed at ensuring the efficiency and quality of services provided by the water operators, and monitors compliance with regulations through technical inspections.

21. The National Service for Groundwater, Irrigation and Drainage (SENARA) is a technical agency with a mandate to establish, manage, maintain and develop systems of irrigation and drainage, as well as to protect and monitor the use of surface and groundwater resources. It also carries out hydrological studies to assess the potential production of aquifers, and gives permits for the use of groundwater resources, indicating the maximum amount of water that can be extracted on an annual basis. Its decisions concerning the perforation of wells and the exploitation, maintenance and protection of groundwater resources are final and must be respected.

22. Over 20 other ministries and public institutions play a role in the water sector, sometimes with overlapping functions and responsibilities. These include the Ministry of Agriculture and Livestock, the Costa Rican Institute of Tourism and the Costa Rican Institute of Electricity.

C. Water and sanitation policies

23. The definition of the principles, objectives and strategies concerning the management and use of water resources and the collection and treatment of wastewater falls within the competence of the Ministry of the Environment as the leading agency for the water sector. However, Costa Rica has not yet elaborated and implemented a comprehensive national strategy for the sustainable management and use of water resources, and water and sanitation policies are currently spread over a wide number of laws, regulations and policy documents.[5]

[5] See *Contraloría General de la República, Informe sobre la Evaluación de la Aplicación de Políticas y Normativa en Materia de Recursos Hídricos por el Ministerio del Ambiente y Energía*, 2007.

24. The Jorge Manuel Dengo Obregón National Development Plan 2006-2010 does not include comprehensive policies and strategies concerning the sustainable management and use of water resources. The priorities, goals and actions relating to the water sector are vague and narrowly defined, and form part of the Government strategies concerning health and environmental protection. The Plan includes two strategic actions regarding water, namely the elaboration and implementation of a national plan for the comprehensive management of water resources and the adoption of a new water law. The strategy for the comprehensive management of water resources provides for the creation of a national water authority (*Dirección Nacional del Recurso Hídrico*) with the task of elaborating and implementing the national plan, but progress towards the implementation of the strategy has been limited.[6]

25. The water strategy of the Government is delineated in a more detailed fashion in executive decree No. 30480-MINAE of June 2002, in which the guiding principles of the national water policy are defined. The decree acknowledges that access to water constitutes an inalienable human right, and states that the management and use of water resources should be based on the principles of equity and inter-generational solidarity. It also recognizes that the Ministry of the Environment, as the leading ministry in the water sector, is responsible for the definition of the principles, policies and strategies concerning the management and use of water resources, which should be implemented in an integrated, decentralized and participatory way.

26. The national programme of potable water improvement and quality sustainability of potable water services for the period 2007-2015 (decree No. 33953-S-MINAE of 2007), implemented by AyA in conjunction with other water providers, aims at improving the quality of potable water by protecting surface and groundwater sources, increasing the treatment and disinfection of water for human consumption and preventing health risks caused by contaminated water. In order to monitor the quality of water, the decree establishes a national monitoring commission on the quality of potable water, composed of representatives of the Ministry of the Environment, the Ministry of Health, AyA and the Pan American Health Organization.

27. The national programme for the adequate management of wastewater in Costa Rica for the period 2009-2015 seeks to elaborate a comprehensive strategy for the management of domestic wastewater by creating an inventory of the different systems of treatment for domestic wastewater existing in the country and monitoring their impact on surface and groundwater. The aim of the programme, which is implemented by AyA in conjunction with other institutions having competencies in the field of sanitation, is to strengthen the protection of surface and groundwater by reducing contamination by wastewater. It seeks to establish a mechanism to monitor sewage systems and other systems for the collection, management, treatment and disposal of domestic wastewater, and a system for the evaluation of the risk that wastewater may pose to public health and the environment.

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[6] See Y. Astorga, *Situación del recurso hídrico, Décimo Cuarto Informe sobre el Estado de la Nación*, 2008.

D. Monitoring bodies

28. In addition to the monitoring functions carried out by the institutions that are part of the water sector, other institutions have responsibilities in monitoring the effective implementation of Costa Rican legislation on water and sanitation.

29. Within the legislative branch, such control is exercised by two auxiliary bodies of the Legislative Assembly, which are functionally and administratively independent of the Assembly in the performance of their duties:

(a) The Office of the Comptroller-General (*Contraloría General de la República*) monitors the Public Treasury. All institutions working in the field of water management and sanitation are subject to its oversight;

(b) The Ombudsman's Office (*Defensoría de los habitantes*) has the general responsibility of investigating, either on own initiative or at the request of a party, complaints concerning alleged human rights violations by public authorities through administrative acts or omissions in the exercise of administrative functions. The Office has acted upon several complaints concerning water and sanitation, including cases concerning the inadequate disposal of human excreta and wastewater in Jaco and the construction of a new aqueduct in Sardinal.

E. The judiciary

30. National courts also play an important role in the protection and promotion of access to safe drinking water and sanitation.

31. The Constitutional Chamber (*Sala Constitucional*) of the Supreme Court of Justice has the primary function of ensuring the protection of the fundamental rights embodied in the Constitution or in international human rights treaties to which Costa Rica is a party.[7] Since its creation in 1989, the Constitutional Chamber has produced an impressive body of jurisprudence, and has played a leading role in safeguarding human rights at the domestic level. The Constitutional Chamber has stated in a number of decisions that water represents a fundamental right, since the realization of many rights enshrined in the Constitution and international human rights treaties, such as the right to health, life, healthy environment, food and adequate standard

[7] According to article 48 of the Constitution, every person has the right to the remedy of habeas corpus to guarantee his or her personal liberty or integrity, and the remedy of *amparo* to maintain or re-establish the enjoyment of rights set out in the Constitution or in international human rights treaties to which Costa Rica is a party. *Amparo*, which is the remedy used in cases of alleged violation by the State of its obligations regarding access to potable water or sanitation, may be invoked against any provision, agreement or decision made by public organs, as well as against arbitrary actions or omissions based on wrongly interpreted or improperly applied provisions.

of living, depends on access to safe drinking water.[8] With regard to sanitation, the Chamber recently held that the inundation of dwellings in periods of heavy rainfall, caused by the overcharge and lack of maintenance of the sewage system, and the direct discharge of wastewater in rivers and other streams amounted to a violation of the constitutional rights to health and to a safe and ecologically-balanced environment (decisions No. 11796 of 17 August 2007 and No. 17007 of 21 November 2007).

32. The Environmental Administrative Tribunal, established in 1995 by the General Environment Law, has exclusive jurisdiction over cases concerning alleged violations of environmental legislation or the legislation on the protection of natural resources (including the General Health Law and the Water Law) caused by any act or omission of a public or private entity. When the Tribunal finds that a violation has occurred, it can impose fines and administrative sanctions for the elimination or mitigation of the damage caused. It can also take interim measures of protection in accordance with the principle *in dubio pro natura*, and can carry out on-site visits to determine the existence of environmental damage. The decisions of the Tribunal cannot be appealed. A great number of cases heard by the Tribunal concern pollution of rivers and streams caused by real estate developments, industrial or agricultural activities (such as pineapple production).

III. WATER AND SANITATION IN COSTA RICA

A. Demand and availability of water

33. The sustainable management of water resources presupposes the realization of a national water balance, a diagnostic model used to evaluate the actual availability of water for human consumption by assessing the quantity and quality of surface and groundwater available (water supply) and the quantity and quality of water needed in relation to different water uses (water demand). To date, Costa Rica has not elaborated its national water balance, which would constitute the first step towards the elaboration of a national plan for the comprehensive management of water resources (see paragraph 24 above).

34. To date, water balances have been realized with regard to 16 of the 34 water basins of the country,[9] taking into account the current water demand and its possible evolution in the future. These studies show that, in some regions, water supply is very close to the current demand and that a number of aquifers present problems, such as lack of adequate infrastructures or wastewater treatment plants; scarce water supply during certain periods of the year; conflicts over different water uses, especially in coastal areas; water contamination; and vulnerability to climate change.[10]

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[8] See also the decisions of the Constitutional Chamber No. 4654 of 27 May 2003; No. 1923 of 25 February 2004; No. 5732 of 13 July 2004; No. 7953 of 26 May 2006; No. 7983 of 2 June 2006; No. 18441 of 22 December 2006; and No. 4790 of 27 March 2008.

[9] *Décimo Cuarto Informe sobre el Estado de la Nación*, op. cit., p. 219.

[10] Y. Astorga, op. cit., pp. 11-19.

B. Water and sanitation coverage

35. Costa Rica has made significant progress in recent years in expanding access to improved sources of water. According to the National Water Laboratory,[11] 98.3 per cent of the population had access to water for human consumption[12] (94.3 per cent directly in their dwellings) in 2007, one of the highest rates in the Latin American and Caribbean region.[13] Approximately 99 per cent of the urban population and 96 per cent of the rural population are connected to a water supply (the percentage of the urban and rural population connected to an improved water supply in the Latin American and Caribbean region is 97 per cent and 73 per cent, respectively).[14]

36. Recent statistical data also show important progress with regard to the supply of safe drinking water,[15] with the national coverage increasing from 50 per cent in 1991 to an estimated 82 per cent in 2007.[16] In 2007, there were 2,259 aqueducts in Costa Rica, 1,227 of which provided safe drinking water to more than 3.5 million people. On the other hand, 1,032 aqueducts supplied non-potable water to almost 700,000 people, or 16.5 per cent of the population.

37. Costa Rica has also made important progress in the field of sanitation; an estimated 98 per cent of the rural and urban population have access to improved sanitation.[14] In 2006, in the Latin American and Caribbean region, the proportion of the urban and rural population with access to improved sanitation facilities was 86 per cent and 52 per cent, respectively.[13]

38. Septic tanks remain the most common type of sanitation system, used by 67.3 per cent of households. In the vast majority of cases, only human excreta is disposed of in septic tanks, whereas other types of wastewater, such as water used for personal hygiene, cooking or washing

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[11] D. Mora, *Estado del agua para consumo humano y saneamiento en Costa Rica*, 2007, p. 5.

[12] In the present report, "water for human consumption" denotes water used by human beings in their daily activities, independently of its quality. Therefore, the term should not be regarded as a synonym of safe drinking water.

[13] In 2006, the average percentage of persons with access to improved water sources in the Latin American and Caribbean region was 92 per cent. See UNICEF, *Panorama del acceso al agua potable y al saneamiento en América Latina y el Caribe*, 2008.

[14] WHO/UNICEF, Joint Monitoring Programme for Water Supply and Sanitation, Coverage Estimates: Improved Drinking Water, July 2008.

[15] In the present report, the terms "safe drinking water" and "potable water" denote water that meets the physical, chemical and microbiological requirements indicated in the regulation concerning the quality of potable water, and can therefore be drunk without endangering the user's health. See article 2 of the said regulation (decree No. 32327-S of 2005).

[16] D. Mora, op. cit., p. 5.

clothes, are directly discharged into rivers through the storm drains without any treatment. The sludge removed from septic tanks is also often disposed of in rivers and streams, and thus constitutes an additional source of pollution.

39. Only 28.5 per cent of the population (mostly from urban areas) are connected to the sewage system; in most cases, the system discharges wastewater into rivers without any treatment. Some 8.4 per cent of the population is connected to a sewage system and to a wastewater treatment plant; however, only 3.5 per cent of wastewater is actually treated before being discharged into rivers or other waterways, since 4.9 per cent of treatment plants do not actually operate. Overall, 69 per cent of existing plants in the country are idle.[17] It is therefore not surprising that the water basin of the Río Grande de Tárcoles, in the central plateau of Costa Rica, is the most polluted in Central America.[18]

40. The remaining part of the population uses latrines or cesspools (3.4 per cent) or other systems (0.3 per cent), while 0.5 per cent of households do not have access to any type of sanitation system at all.

C. Water and sanitation providers

41. In Costa Rica, drinking water and sewerage services, including sanitation treatment, are supplied by a number of entities:

(a) In 2007, AyA administered and directly operated 180 aqueducts providing water to 46.4 per cent of the national population, mostly in urban areas. Recent statistical data show the important progress made by AyA with regard to the supply of safe drinking water, with the coverage of users receiving potable water increasing from 63.6 per cent in 1989 to 97.8 per cent in 2007;[19]

(b) ASADAS, which are community association groups created to supply water to their communities, usually in rural areas, are the main water providers in the country.[20] In 2007, ASADAS administered 1,827 rural aqueducts, which provided water to 26.3 per cent of the

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[17] D. Mora, op. cit., p. 15.

[18] Ministry of National Planning and Economic Policy, *Plan Nacional de Desarrollo*, op. cit., p. 74.

[19] D. Mora, op. cit., p. 6. According to the National Water Laboratory, the percentage of population supplied with potable water by AyA decreased between 2005 (98.9 per cent) and 2007 (97.8 per cent).

[20] In accordance with decree No. 32529-MINAE, all aqueducts in the country are subject to control by AyA, which can delegate their management and operation to ASADAS through a delegation agreement. To date, only 50 per cent of ASADAS associations have concluded such agreements, since they greatly limit the autonomy of ASADAS in the management of rural aqueducts.

Costa Rican population. In terms of water quality, ASADAS only supplied safe drinking water to 59.8 per cent of its users (51 per cent in 1999), whereas 889 rural aqueducts continued to provide non-potable water to more than 472,000 people (40.2 per cent of the population supplied by ASADAS);[21]

(c) In 2007, municipalities administered 240 aqueducts, which supplied water to 17.1 per cent of the national population. Municipalities made important progress with regard to the supply of potable water, with the coverage of users receiving safe drinking water rising from 37 per cent in 1996 to 76.3 per cent in 2007. A total of 104 municipal aqueducts continue to provide non-potable water to more than 180,000 people (23.7 per cent of the population supplied by municipalities);

(d) The Heredia Public Services Company (ESPH S.A.) is an autonomous multi-services public utility constituted under private law that provides water, sewer and electricity services to the province of Heredia. In 2007, its 12 aqueducts supplied safe drinking water to 100 per cent of its clients (4.6 per cent of the national population).[22]

42. Sewage systems are administered by the same entities that provide water supply. In 2003, only AyA, the ESPH S.A. and the Municipality of Cartago administered sanitary sewers connected to a wastewater treatment plant.[23] The elimination of sludge from septic tanks is carried out by private companies (*tanqueros*) at the expense of the owner.

D. Water contamination

43. Some 1.8 per cent of the aqueducts are connected to a water treatment plant, especially in urban areas, while 24.7 per cent of the aqueducts, which nonetheless cover 76 per cent of the population, are equipped with disinfection systems. All aqueducts are subject to occasional water quality controls by AyA; however, only 20.7 per cent of them, which supply 73.4 per cent of the population, are subject to systematic water quality control. Furthermore, water quality controls carried out in Costa Rica are solely bacteriological, and do not include any analysis of toxic substances, such as hydrocarbons or pesticides, that may be present in water.[24] Studies concerning the sources of water contamination show that, while faecal contamination no longer constitutes a serious problem in Costa Rica, pollution of surface and groundwater sources caused by hydrocarbons and pesticides is increasing, owing to industrial and agricultural development.[25]

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[21] D. Mora, op. cit., p. 7. As in the case of AyA, it is interesting to note that the percentage of population supplied with potable water by ASADAS decreased between 2005 (65.2 per cent) and 2008 (59.8 per cent).

[22] D. Mora, op. cit., p. 5.

[23] D. Mora, op. cit., p. 16.

[24] *Décimo Cuarto Informe sobre el Estado de la Nación*, op. cit., p. 221.

[25] Y. Astorga, op. cit., p. 24.

44. The independent expert met with representatives of the communities of Guácimo and Siquirres to consider the alleged contamination of water sources caused by general use herbicides, such as Bromacil and Diurión, as well as other pesticides commonly used in pineapple plantations. These chemicals can easily leach through the soil and contaminate groundwater, and their consumption at high levels over a long period of time has been associated to several health problems, including various forms of cancer. Because of pesticide contamination, approximately 6,000 people in Siquirres were long unable to drink the water supplied by local aqueducts, and received water supplies on a daily basis from water carrier trucks.[26] At the time of the independent expert's visit, some communities still received daily supplies of potable water from water carrier trucks.

45. In May 2008, the Ministry of Health prepared two draft executive decrees to regulate the use of Bromacil and Diuron, establishing a maximum admissible dose of 5 micrograms per litre of potable water. The regulations are yet to be adopted, and some pineapple producers continue to use higher doses of the pesticides up to the limit of 90 micrograms per litre for Bromacil in drinking water established by the United States Environmental Protection Agency.[27] This situation is a source of great concern for local communities, and generates social conflicts between them and pineapple producers.

E. Inequalities in access to water and sanitation

46. Serious disparities continue to exist in some provinces and districts of Costa Rica with regard to access to safe drinking water. Approximately 40.2 per cent of the population living in rural areas still does not have access to potable water, as compared to 2.2 per cent of the population living in urban areas. San José is the province with the greatest coverage of potable water (90.7 per cent), followed by Heredia (88.6 per cent) and Guanacaste (79.2 per cent); Alajuela (69.9 per cent), Cartago (72.4 per cent) and Puntarenas (74.4 per cent) have the most limited coverage. A study on access to safe drinking water in the 81 districts of the country revealed an enormous degree of inequality with regard to access in 20 districts,[28] mainly owing to the different quality of services provided by the AyA and ESPH S.A., on the one hand, and ASADAS and the municipalities, on the other. Other studies indicate the existence of a direct relationship between poverty and limited access to potable water.[29]

47. Significant disparities also exist in access to sanitation, particularly with regard to wastewater treatment. San José is the province with the greatest proportion of households connected to the sewage system (51 per cent), followed by Heredia and Cartago (15 per cent). In the remaining regions, coverage is below 10 per cent.

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[26] L. Iglesias, *6,000 personas deben recibir agua en cisternas*, in *La Nación,* 2 October 2008.

[27] D. Mora, *Legislación es muy débil*, in *El País*, 2 October 2008.

[28] D. Mora, *Desigualdades por Cantones en el Acceso a Agua para Consumo Humano en Costa Rica*, 2006.

[29] Y. Astorga, op. cit., p. 29.

48. Indigenous peoples and people belonging to other marginalized and vulnerable groups, including Afro-descendants and migrant workers, often have limited or no access to potable water and adequate sanitation. The vast majority of indigenous peoples living in the 24 reserves in the country do not have access to safe drinking water or sanitation services. In its report submitted to the Committee on Economic, Social and Cultural Rights (E/C.12/CRI/4), Costa Rica acknowledged that indigenous peoples' access to safe drinking water was constrained, mainly by their geographical and cultural circumstances, and that, in some indigenous territories, minimal sanitary conditions were lacking, with the resulting problems of diarrhoea, parasites, malnutrition and other diseases, especially among children. Both the Committee on the Elimination of Racial Discrimination (CERD/C/CRI/CO/18) and the Committee on Economic, Social and Cultural Rights (E/C.12/CRI/CO/4) urged Costa Rica to take all appropriate measures to remove the obstacles that currently prevent indigenous peoples, Afro-descendants and migrant workers access to basic services, including safe drinking water and adequate sanitation.

F. Tourist and real estate developments

49. Massive tourist and real estate developments have created serious problems, such as water scarcity, and generated social conflicts between demand by local communities for water for human consumption and the economic interests of investors and real estate developers, especially in the northern coastal areas of the country.

50. During her visit to Manuel Antonio, in the district of Aguirre, the independent expert assessed the water crisis generated by tourist and real estate developments in the area, associated with the growing popularity of the Manuel Antonio National Park. As a result of these large-scale developments, existing water resources are no longer sufficient to respond adequately to the growing demand for water by the hotels and tourist infrastructures in the area. For more than a year, these establishments received water from AyA water carrier trucks.[30] Furthermore, the lack of wastewater treatment plants has led to the discharge of a growing quantity of human excreta and wastewater into river streams and, ultimately, the sea. According to AyA, however, faecal contamination no longer constitutes a problem in this area, as demonstrated by the awarding of "Blue Flag" status to all four beaches in the national park.[31]

51. Similar problems have been witnessed in other rapidly developing tourist areas, such as Playa Tamarindo, Playa Manzanillo and Golfo del Papagayo. Owing to faecal contamination, Tamarindo, one of the most popular beaches on the Pacific coast, lost its "Blue Flag" status in November 2007, while the Ministry of Health shut down 10 establishments and issued sanitary

[30] Y. Astorga, op. cit., p. 23.

[31] A. Ávalos, *Playas de Manuel Antonio recuperan Bandera Azul*, in *La Nación*, 25 March 2009. With regard to the Blue Flag Ecological Programme, see also paragraph 59.

orders against 70 other activities. At the beginning of 2008, the Ministry issued a sanitary order against the hotel Allegro Papagayo for the direct discharge of human excreta and wastewater into the Golfo de Papagayo in the region of Guanacaste.[32]

52. Another example of social conflicts over water between local communities and investors and real estate developers is that concerning the construction of a private aqueduct to supply water to a number of tourism and real estate projects in Playa del Coco and Playa Hermosa, which, according to the residents of Sardinal, would threaten the sustainable management of the aquifer and negatively affect the supply of water to their communities. In January 2009, the Constitutional Chamber upheld the position of the Ombudsman's Office, which had intervened on behalf of the affected communities, stating that the construction of a pipeline violated the constitutional rights of the residents of Sardinal because there was no technical certainty that sufficient water would remain for local needs. The Constitutional Chamber also stated the residents had a constitutional right to participate in decisions involving the pipeline.

53. In April 2009, a technical commission established by the Ministry of the Environment pursuant to the decision of the Constitutional Chamber issued its final report on the management of the Sardinal aquifer. The commission concluded that the exploitation of the Sardinal aquifer to supply water to the El Coco-Ocotal aqueduct did not pose any long-term risk to the supply of water to local communities. In its report, it concluded that a maximum of 371.75 litres per second (lt/s) could be extracted from the aquifer, but suggested that the exploitation should increase gradually, starting with a maximum of 70 lt/s for the period 2009-2010. The commission also suggested that, for the first two years, the affected communities, the Ministry of the Environment, AyA, the municipality and SENARA should closely monitor the aquifer to ensure its sustainable use.

IV. GOOD PRACTICES

54. The independent expert congratulates Costa Rica for its impressive achievements in the field of environmental protection. According to the Environmental Performance Index 2008, Costa Rica is ranked fifth in the world for protection of the environment. The expert notes that the progress made in the protection and management of natural resources, including the creation of national parks and reforestation of areas previously used for agricultural purposes, also have a positive impact on the protection of surface and groundwater sources.

55. Costa Rica has made significant progress in increasing access to water and improved sanitation. The results achieved place Costa Rica among the most advanced countries in the Latin American and Caribbean region. Thanks to such efforts, Costa Rica will be able to achieve the objectives of Millennium Development Goal 7, which aims at halving, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation.

56. The independent expert notes with appreciation that, according to the jurisprudence of the Constitutional Chamber, access to safe drinking water constitutes an inalienable human right that

[32] Y. Astorga, op. cit., p. 34.

may be enforced in national courts. She also welcomes the fact that, in accordance with national legislation, the use of water for human consumption prevails over any other use, especially in times of water scarcity. The expert further notes the important role played by the Ombudsman's Office in protecting and promoting access to safe drinking water and sanitation.

57. The independent expert welcomes the adoption of legislative decree No. 8559 of November 2006, by which the Legislative Assembly approved the loan contract between the Government of Costa Rica and the Japanese Bank for International Cooperation for the realization of the project for the improvement of the environmental situation in the metropolitan areas of San José. The implementation of this project, which was started in 2007, will increase the percentage of the population connected to the public sewerage system and to a wastewater treatment plant from 3.5 per cent in 2007 to 26.8 per cent by 2015.

58. Costa Rica has made significant efforts to improve the quality of water for human consumption. They include the adoption of the national programme for potable water improvement and quality sustainability of potable water services for the period 2007-2015, and the creation, in 2002, of the Seal of Quality Public Health Programme, awarded by the National Water Laboratory as an incentive for water providers to improve the quality of water they supply.

59. The independent expert welcomes the steps taken by the Government to promote better hygiene and sanitation conditions. In this regard, she notes the success of the Blue Flag Ecological Programme, which provides an incentive to hoteliers, coastal associations and communities, schools and colleges to protect the natural resources of Costa Rica, including its beaches, protected natural areas and small water basins, and to promote measures aimed at combating the negative effects of climate change. She also welcomes the recent adoption of the national programme for the adequate management of wastewater in Costa Rica for the period 2009-2015.

60. Lastly, the independent expert notes with satisfaction the adoption of the new regulation creating an environmental tax for dumping polluting substances in water, thereby establishing the first economic instrument for the regulation of the use of water resources. The regulation, which is based on the "polluter pays" principle, applies to any person or legal entity of public or private nature who uses water, which is a public asset, as a means to introduce, transport or dispose of liquid wastes liable to provoke modifications in the physical, chemical or biological quality of water.

V. ISSUES OF CONCERN

61. The legal framework created by the 1946 Water Law for the management and use of water resources no longer corresponds to the social and economic situation of the country, and needs to be urgently revised and updated.[33] The complexity of the existing normative framework on water

[33] In 1946, when the current Water Law was adopted, the population of Costa Rica was 500,000, mainly concentrated in San José and other major cities in the Central Valley. The centralized system for the management of water resources was thus conceived to address the needs of a scarce, mainly urban, population.

and sanitation negatively affects its application. Furthermore, the involvement of a large number of institutions and organizations in its application raises serious doubts about their role and responsibilities, the duplication of responsibilities, the lack of inter-agency coordination and, at times, negative or positive conflicting competencies concerning the planning and the development of water and sanitation policies.[34]

62. To date, progress in the institutional reform of the water sector under the direction of the Ministry of the Environment has been limited, although the adoption of decree No. 30480-MINAE and the elaboration of the strategy for the integrated management of water resources are positive steps towards the strengthening of the water sector and the creation of national integrated management of water resources.

63. A number of institutions have, in addition to responsibilities concerning the development of legislation and policies on water and sanitation, responsibilities for the actual supply of water and sanitation services. AyA, for example, is the main Government agency responsible for the development and implementation of legislation and policies concerning water supply and sanitation, but also the principal operator of aqueducts and sanitary sewerage system. In the expert's view, this situation creates a potential conflict of interests that could lead to inefficient public utility management and negatively affect the quality of services provided.

64. The implementation of legislation and policies on water and sanitation is also hindered by a lack of sufficient human, technical and financial resources. For example, the lack of sufficient personnel, the limited financial resources and the lack of laboratories to analyse water samples prevent the Ministry of Health and AyA from systematically monitoring the quality of water for human consumption. The Water Department of the Ministry of the Environment can only count on three geologists and one hydrologist to combat illegal water connections and drilling of wells throughout the whole country. Personnel shortage also affects the capacity of the Constitutional Chamber of the Supreme Court of Justice and the Environmental Administrative Tribunal to provide an effective remedy in cases of violation of obligations relating to access to safe drinking water and sanitation.[35]

65. The independent expert notes with concern that Costa Rica has not elaborated a national water balance. To date, this has not prevented the concession of new water permits or licences for the drilling of new wells, a policy that is inconsistent with the precautionary principle,

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[34] In this regard, the Office of the Comptroller-General noted that although decree No. 30480-MINAE recognized the leading role of the Ministry of the Environment in the water sector, it failed to identify the other institutions belonging to it and their responsibilities with regard to water management and sanitation. See *Contraloría General de la República*, op. cit., pp. 9-12.

[35] The seven judges in the Constitutional Chamber, with the assistance of a number of lawyers, decide on around 22,000 cases every year. The Environmental Administrative Tribunal, comprising three judges, deals with some 900 cases a year.

which constitutes one of the guiding principles of Government action in the field of water management.[36] The absence of a national water balance also fuels social conflicts over water use, some of which were witnessed by the independent expert during her mission.

66. The independent expert is concerned about the serious disparities still existing in some provinces and districts of Costa Rica with regard to access to safe drinking water, and notes that an estimated 18 per cent of the national population still does not have access to safe drinking water owing to the lack of maintenance of existing infrastructures, inefficient management and operation of the aqueducts, and the absence of programmes to monitor water quality. The independent expert notes with concern that the number of people without access to potable water has increased over the last four years.

67. With regard to water providers, the independent expert notes that 23.7 per cent of the population supplied by municipalities and 40.2 per cent of the population supplied by ASADAS still do not have access to potable water. She also notes that the operation and management of rural aqueducts rests largely with community members, who carry out these functions *ad honorem*, often in addition to their full-time jobs, and do not have specialized knowledge on water provision services. AyA, which is responsible for overseeing the management and operation of rural aqueducts and for the direct management and operation of rural aqueducts when ASADAS cannot ensure the regularity and quality of services provided, has not been able to exercise effective control over the management and operation of rural aqueducts.

68. The inadequate management and operation of aqueducts also affects economic efficiency. Non-revenue water ("water losses") in Costa Rica is high, as most water providers operate with losses amounting to over 50 per cent. This figure reflects a high level of inefficiency, compromises continuity of service and leads to an increased need to use groundwater sources.

69. The independent expert is concerned about the existing inequity of water prices, given that they are fixed by different entities, and about the fact that ARESEP has not yet established any mechanism to facilitate economic access (affordability) to safe drinking water for poor households.

70. With regard to indigenous peoples, the independent expert, while acknowledging the efforts made by Costa Rica to improve their access to safe drinking water and adequate sanitation, remains concerned that the majority of indigenous peoples living in traditional communities continue to have no access to potable water and adequate forms of sanitation. The expert also notes that indigenous communities have not systematically been involved, as provided by the Convention concerning Indigenous and Tribal Peoples in Independent Countries (Convention No. 169) of the International Labour Organization, in the development of strategic plans aimed at improving their access to water and sanitation.

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[36] Executive decree No. 30480-MINAE, art. 1.8.

71. The independent expert wishes to express her concern with regard to the use of Bromacil, Diurón and other pesticides in agricultural plantations, in particular in pineapple plantations, which have been associated with various forms of cancer if consumed in large amounts over a long period of time.

72. While recognizing that economic development constitutes both a legitimate aspiration and a tool to achieve a higher quality of life for all people in the country, the independent expert notes with concern that the current rate of tourist and real estate development of the country is unsustainable, and risks having long-lasting negative effects on the water resources of Costa Rica and on its natural environment. She also expresses her concern at the social conflict originated by the construction of a pipeline to supply water to a number of tourism and real estate projects in Playa del Coco and Playa Hermosa, which, according to the residents of Sardinal, would threaten the sustainable management of the aquifer and negatively affect the supply of water to their communities.

73. The independent expert is deeply concerned that 63 per cent of human excreta and domestic wastewater is discharged directly into rivers and other water streams, and that only 3.5 per cent of wastewater is actually treated before being discharged into the environment. The expert also notes that illicit connections to the sewage system or storm drains and the excessive use of septic tanks also contribute to the contamination of surface and groundwater sources.

VI. RECOMMENDATIONS

74. **The independent expert recommends that Costa Rica move as expeditiously as possible towards the adoption of a new water law. Such a law should rationalize the existing legal framework for the management and use of water resources, currently dispersed throughout a large number of laws and regulations, and adapt it to the present economic and social situation of the country. The law should also better define the roles and competencies of the different institutions working in the water sector, as recommended below. Civil society organizations with expertise in human rights, environmental protection and water-related issues should be involved in the design, future implementation and monitoring of the law.**

75. **The new water law should:**

(a) Expressly recognize, in the light of the jurisprudence of the Constitutional Chamber, and taking into account general comment No. 15 (2002) on the right to water of the Committee on Economic, Social and Cultural Rights, that access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses constitutes a fundamental human right and a prerequisite for the realization of other rights enshrined in the International Bill of Rights, especially the right to life and the right to health;

(b) Recognize that water is a limited natural resource and that its management and use should be based on the principles of sustainable development, equity and inter-generational solidarity;[37]

(c) Restate that water for personal and domestic uses should be accorded the highest priority over other possible uses, in particular during times of water scarcity;[38]

(d) Include appropriate mechanisms to ensure that water and water facilities/services are accessible to all, including the most vulnerable or marginalized sections of the population, in law and in fact, without discrimination on any of the prohibited grounds;[39]

(e) Incorporate measures to improve and monitor the quality of potable water;

(f) Introduce appropriate instruments to prevent and monitor the contamination of surface and groundwater sources, such as economic instruments, charges and taxes aimed at creating an incentive for polluters to limit activities that are harmful to the environment;

(g) Elaborate, in the light of principle 10 of the Rio Declaration, mechanisms to raise awareness among the general public about the importance of sustainable management and use of water, and to facilitate the effective participation of concerned communities in decision-making processes that may affect them.

76. **The independent expert also recommends that the legal regime applicable to ASADAS be reviewed so as to strengthen their adequate management and operation.**

77. **The independent expert recommends that Costa Rica undertake a comprehensive review of its normative framework on sanitation, as envisaged in the national programme for the adequate management of wastewater in Costa Rica for the period 2009-2015, with a view to ensuring the establishment of a coherent and comprehensive system for the collection, management, treatment and disposal of human excreta and wastewater. Such legislation should expressly recognize that access to sanitation constitutes a *condicio sine qua non* for the effective exercise of other rights included in international human rights treaties to which Costa Rica is a party, including the right to an adequate standard of living and the right to health.**

78. **The independent expert recommends that the Government of Costa Rica clarify the roles and responsibilities of the various institutions working in the water sector, with a view to ensuring the effective implementation of the legislation and policies relating to water and sanitation and avoiding duplication of responsibilities and conflicting competencies. The**

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[37] See general comment No. 15, paras. 1 and 11, and principles 1, 8, 9, 10, 12 and 15 of the Rio Declaration.

[38] Water Law No. 276 of 1946, arts. 140-142. See also general comment No. 15, para. 6.

[39] General comment No. 15, paras. 12-16.

elaboration and implementation of a national plan for the comprehensive management of water resources would be an important step towards the rationalization and simplification of the water sector.

79. **The independent expert recommends that Costa Rica take all appropriate steps to ensure the effective implementation of legislation on water and sanitation, in particular the laws and regulations concerning access to safe drinking water and the adequate collection, management, treatment and disposal of human excreta and wastewater. She recommends, in particular, that the capacity of national and local institutions responsible for monitoring and ensuring compliance with the legislation on water management and sanitation be strengthened through, inter alia, the allocation of appropriate human, technical and financial resources to those institutions. The expert also calls for the allocation of sufficient human and financial resources to the Constitutional Chamber of the Supreme Court of Justice and the Environmental Administrative Tribunal, in order to ensure that any person whose rights or freedoms are violated have access to an effective remedy, as provided by article 2, paragraph 3, of the International Covenant on Civil and Political Rights.**

80. **The independent expert urges Costa Rica to strengthen the implementation of its national legislation and policies on the collection, management, treatment and disposal of human excreta and wastewater in order to prevent the contamination of rivers and other water streams. The national programme for the adequate management of wastewater in Costa Rica for the period 2009-2015 and the regulation creating the environmental tax for dumping polluting substances represent, in the expert's view, important steps towards the achievement of this goal.**

81. **The independent expert recommends that Costa Rica prepare a national water balance, as well as water balances for the different water basins of the country, in order to assess the present and future availability of water for human consumption. The expert stresses that such an evaluation constitutes a necessary precondition for the sustainable management and use of the country's water resources.**

82. **The independent expert urges the Government to take all appropriate measures to reduce the serious disparities still existing in some provinces and districts of Costa Rica with regard to access to safe drinking water. Such measures should include the effective implementation of the national programme of potable water improvement and quality sustainability of potable water services for the period 2007-2015 (decree No. 33953-S-MINAE of 2007) and the allocation of adequate financial and technical resources to ensure the maintenance or improvement of existing infrastructures and more efficient management and operation of rural and municipal aqueducts.**

83. **The independent expert recommends that Costa Rica take appropriate measures to ensure that water is affordable for all.[40] Such measures could include the integration of a pro-poor component in the pricing system and the provision of targeted subsidies to low-income users.**

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[40] See general comment No. 15, para. 12.

84. **The independent expert urges Costa Rica to take immediate steps to develop, in close consultation with the communities concerned, strategic plans aimed at providing access to safe drinking water and adequate sanitation to indigenous peoples living in traditional reserves. Such plans should take into account the customs and traditions of the communities concerned and specifically include capacity-building measures aimed at ensuring the participation of community members in the development, management and maintenance of aqueducts and sanitation systems.**

85. **The independent expert recommends that Costa Rica adopt, as a matter of priority, the draft executive decrees regulating the use of Bromacil and Diurón in agricultural production.**

86. **The independent expert recommends that Costa Rica develop and implement appropriate policies to ensure the sustainable development of tourist and real estate activities, especially in coastal areas. In order to avoid the depletion of water sources currently used by local communities, the concession of new water permits or licences for the drilling of new wells should be made conditional upon the realization of an environmental impact assessment to evaluate the long-term effects that the new development may have on the availability and quality of water resources and, more in general, on the natural environment. In the light of principles 10 and 17 of the Rio Declaration, this assessment should be carried out by an independent authority, with the participation of concerned individuals and communities.**

87. **With regard to the construction of a new pipeline in Sardinal to supply water to tourism and real estate projects in the nearby Playa del Coco and Playa Hermosa, the independent expert reminds all parties involved that, according to the Costa Rican legislation, water for domestic consumption is accorded the highest priority over other possible uses, especially in situations of water scarcity (articles 140-142 of the Water Law). As requested by the Constitutional Chamber, the expert calls on the Government to take all appropriate measures to ensure the meaningful participation of affected communities in monitoring the implementation of the project, with a view to ensuring the sustainable management and use of the Sardinal aquifer.**

88. **Lastly, the independent expert considers that Costa Rica should develop, in addition to the existing programmes on environmental protection, such as the Blue Flag Ecological Programme, specific educational programmes and awareness-raising initiatives for the public in general aimed at promoting the preservation and sustainable use of water resources and the adequate management and disposal of human excreta and wastewater.**

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