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Rapport de la Rapporteuse spéciale sur le droit à l'eau potable et à l'assainissement, Catarina de Albuquerque

Additif

Mission à Tuvalu (17-19 juillet 2012)*

Résumé

La Rapporteuse spéciale sur le droit à l'eau potable et à l'assainissement a effectué une visite officielle aux Tuvalu du 17 au 19 juillet 2012 afin d'examiner la situation du droit à l'eau potable et à l'assainissement dans le pays. Dans l'ensemble, les Tuvalu ont fait des progrès s'agissant d'améliorer la situation du droit à l'eau potable et à l'assainissement, avec une aide importante de la communauté internationale, compte tenu de l'environnement extrêmement difficile que constitue un petit pays composé d'atolls coralliens touché par les changements climatiques. La Rapporteuse spéciale a toutefois noté qu'il était difficile au quotidien pour les Tuvaluans d'avoir accès à l'eau potable et à l'assainissement. Si ces difficultés existent depuis longtemps, les effets des changements climatiques s'intensifient, ce qui accroîtra la vulnérabilité du pays et aggravera la pénurie d'eau, les intrusions d'eau salée, l'élévation du niveau des mers et la fréquence des événements climatiques extrêmes. Le Gouvernement et la population des Tuvalu doivent s'unir pour faire face à leur environnement complexe et faire du droit à l'eau et à l'assainissement une réalité concrète. Parallèlement, la communauté internationale ne devrait pas tourner le dos aux Tuvalu et devrait s'acquitter de son obligation juridique de prévenir les effets des changements climatiques sur les droits des personnes et des communautés à Tuvalu, ou d'y remédier.

* Le résumé du présent rapport est distribué dans toutes les langues officielles. Le rapport proprement dit figure en annexe au résumé et il est distribué dans la langue originale seulement.

Annexe

[*Anglais seulement*]

Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, on her mission to Tuvalu (17 to 19 July 2012)

Contents

I. Introduction

1. The Special Rapporteur on the human right to safe drinking water and sanitation conducted an official visit to Tuvalu from 17 to 19 July 2012 in order to examine the situation of the human rights to water and sanitation in the country. During the mission, she met with numerous interlocutors, including the Minister of Finance and Economic Development, the permanent secretaries for Transport, Communications and Public Utilities, Education, Youth and Sports, and Natural Resources as well as officials of the ministries of Foreign Affairs, Natural Resources, Home Affairs and the Government Office. She also met with civil society organizations and development partners; visited a settlement and a school on the outskirts of Funafuti and discussed people's access to water, sanitation and hygiene. She also met with representatives of AusAid and New Zealand Aid Programme , as well as with the United Nations Country Team and the Secretariat of the Pacific Community Applied Geoscience and Technology Division (SOPAC) in Suva, Fiji. The Special Rapporteur expresses her appreciation to the Government of Tuvalu for the cooperation extended in organizing and facilitating the visit. She is grateful to the individuals with whom she met, who very openly shared with her private, and often embarrassing, stories related to their difficulties in accessing water, sanitation and hygiene. The Special Rapporteur regrets that she had difficulties accessing relevant information and data regarding the situation of the human rights to water and sanitation in the country, partly because the relevant data is not collected nationally and partly because she did not receive copies of relevant laws and policies.

2. Tuvalu is the third smallest sovereign country by population (11,150 people), after the Vatican City and Nauru, and the fourth smallest country in terms of land area.[1] It is one of the most remote countries in the world. It is one of five countries (Tuvalu, Kiribati, Maldives, Marshall Islands, Tokelau) in the world comprised entirely of low-lying atolls.[2] With the highest elevation only 4.6 metres above sea level, Tuvalu is the second-lowest maximum elevation of any country after the Maldives. Of the five countries, Tuvalu, Kiribati and the Maldives are three of the 49 least developed countries (LDC) categorized as such by the United Nations.[3] Atoll countries have common factors that make them vulnerable to extreme weather events and climate change: high population densities along the coasts; thin freshwater lenses vulnerable to seawater intrusions, human activities and coastal erosion; and limited infrastructures and economic opportunities. Tuvalu experiences king tide events annually and these often lead to flooding and sea level rise.

3. There are no streams, rivers or potable groundwater in Tuvalu, and water resources rely almost solely on rainwater catchment with storage facilities. In the past years, people have moved from the outer islands to Funafuti, the country's main island, to seek economic, educational and other opportunities, including easier access to imported food on which the population has been relying increasingly due to limited agricultural opportunities with poor atoll soil.[4] This population drift has led to overcrowding and an increase in squatter settlements in Funafuti, which accommodates half of the country's population, with a very

[1] World Bank, Data - Land area, available at http://data.worldbank.org/indicator/AG.LND.TOTL.K2.

[2] Jon Barnett and W. Neil Adger, "Climate dangers and atoll countries", *Climatic Change*, vol. 61, Iss. 3 (2003), p. 322.

[3] Department of Economic and Social Affairs, list of least developed countries, available from www.un.org/en/development/desa/policy/cdp/ldc/ldc_list.pdf.

[4] Tuvalu, Ministry of Natural Resources, Environment, Agriculture and Lands, Tuvalu's National Adaptation Programme of Action (NAPA), May 2007, p. 16, available at http://unfccc.int/resource/docs/napa/tuv01.pdf.

high population density of 1,610 inhabitants per square kilometre.[5] This has put a stress on water resources and sanitation management. The population on Funafuti is expected to grow continuously, and water and sanitation management is equally or even more challenging on the outer islands particularly because of Tuvalu's remoteness from the rest of the world and the distances between Funafuti and Tuvalu's eight outer islands.

II. Human rights legal framework

4. At the international level, the human right to safe drinking water and sanitation derives from the right to an adequate standard of living as provided for in, 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 has also been explicitly recognized by the General Assembly (resolution 64/292), and reaffirmed by the Human Rights Council (resolutions 15/9 and 16/2) in 2010 and 2011. The Government of Tuvalu supported the adoption of the General Assembly resolution. The human right to safe drinking water and sanitation means that everyone is entitled to water and sanitation which is safe, available, accessible, affordable and acceptable. This right must be guaranteed in a non-discriminatory manner, and the State is obliged to take concrete and targeted steps towards ensuring universal access to water and sanitation to the maximum of available resources.

5. Tuvalu has a legal obligation to realize the human right to water and sanitation specifically under article 14 of the Convention on the Elimination of All Forms of Discrimination against Women and article 24 of the Convention on the Rights of the Child, treaties that Tuvalu has ratified. Tuvalu also became a Member State of the United Nations in September 2000 and as such is obligated to respect the Universal Declaration of Human Rights, a constitutional document of the United Nations and customary international law. The human right to safe drinking water and sanitation is essential to ensure the right to life and derives from the right to an adequate standard of living, both of which are guaranteed under the Universal Declaration of Human Rights. Tuvalu is not a party to the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights, nor the other core human rights treaties, and is strongly advised to accede thereto. In becoming a party to the international human rights treaties, which lay down States' obligations, Tuvalu will be legally bound to assume obligations and duties to respect, protect and fulfil human rights and the Government will be obligated to adopt domestic measures and legislation compatible with its treaty obligations and duties.

6. The human rights to water and sanitation are not explicitly stated in the provisions of the Constitution of Tuvalu. The Constitution, the supreme law of Tuvalu, provides for the fundamental human rights and freedoms under Chapter II, entitled the Bill of Rights. The Constitution does not explicitly refer to the recognition and protection of economic, social and cultural rights, such as the rights to education, health, food, social security, water, sanitation and housing, among others. The Special Rapporteur therefore calls on the Government to consider broadening the scope of the Constitution to explicitly consecrate not only the human rights to water and sanitation, but also the other economic, social and cultural rights contemplated in the Universal Declaration of the Human Rights and in the International Covenant on Economic, Social and Cultural Rights.

7. While there is no comprehensive water and sanitation legislation in Tuvalu, there are several laws that cover specific elements of water and sanitation, namely the Water Supply

[5] Secretariat of the Pacific Community (SOPAC), Tuvalu: 2002 Population and housing census, Volume 1, Analytical report (2005).

Act, the Public Health Act and the Falekaupule Act (Traditional Assembly of each island). Tuvalu has a draft building code but it needs to be finalized in order to strengthen regulations on water catchments, rain storage and sanitation systems attached to houses and buildings. Currently the only legislative reference to water resources management is a provision in the Constitution for Government and councils to acquire freshwater resources during drought emergency periods. In its efforts to apply an integrated approach, Tuvalu has a draft Water Resources Act as well as a draft Water Resources and Sanitation Management Act which have not yet been formalized. The Special Rapporteur welcomes these initiatives and encourages the Government to adopt these legal instruments as soon as possible in order to develop and put in place its water and sanitation management structure.

III. Institutional structure and policy framework for water and sanitation

8. The Sustainable and Integrated Water and Sanitation Policy (Te Panukua) 2012-2021, developed by the Ministry of Public Utilities and the National Water and Sanitation Steering Committee and approved by the Government, sets the vision, goals and strategies to, inter alia, achieve a safe, reliable, affordable and sustainable water supply, minimize waste and conserve scare water supplies. It adopts the human right to safe drinking water and sanitation as one of its guiding principles, which is a very important first step. Based on the policy, a specific plan of action needs to be developed to realize the human rights to water and sanitation. In this regard, the draft Integrated Water Resources Management Plan should be urgently revised, particularly in the absence of a clear legislative framework. The National Strategy for Sustainable Development (Te Kakeega) 2005-2015, a foundation strategy for development, does not address water and sanitation issues, although they are briefly mentioned under housing and outer island development. Greater pre-eminence should be given to water and sanitation in the next National Strategy for Sustainable Development.

9. In terms of an institutional water and sanitation structure, the Ministry of Public Utilities has the primary responsibility for the provision of water, including maintenance and repair of the water and septic systems of government facilities, provision of technical advice to the public and formulation and adoption of a building code that includes regulations on sanitation. The Ministry of Health is responsible for testing the quality of water from tanks and other reservoirs. The current lack of a clear legal and institutional framework leads to some challenges in the enjoyment of the human right to water and sanitation. Since freshwater supply mainly relies on rainwater, water resources management is not centralized; it is the responsibility of individuals and communities to collect and store rainwater and maintain rainwater tanks. It is also not very clear who is responsible for sanitation, and it is considered to be the responsibility of individuals to construct and maintain their septic tanks.

10. The forthcoming legislative framework will provide an excellent opportunity to establish a clear allocation of responsibilities and strengthen intergovernmental and intersectoral coordination in the water and sanitation sectors. The development of all such instruments must ensure the active and meaningful participation of civil society. It goes without saying that the new structures must be accompanied by the necessary budget allocations for its actual implementation.

11. With regard to finance, there is no national budget for water and sanitation, according to the Ministry of Finance. The water-related infrastructure and operations mostly rely on international funds. Aiming at a more integrated approach to water and sanitation, in 2001, the Ministry of Works and Energy established a Water and Sanitation Steering Committee to examine the management of water resources and enhance

collaboration in decision-making among stakeholders.[6] The Committee usually meets to decide the priorities for the water and sanitation programme which is funded by donor agencies. In addition to this initiative, Tuvalu receives 900 international missions every year according to one expert. The Special Rapporteur is of the view that donors should coordinate their efforts in accordance with the priorities identified by Tuvalu. While Tuvalu obviously relies heavily on international support, and the international community has been providing significant support, donor-driven sporadic assistance is nonetheless a huge burden for this small Government with limited human resources and capacity. The Government of Tuvalu is called on to analyse a large number of aid assessments and offers and guide donors. Donors should promote investments in operations, maintenance, capacity-building and awareness-raising, all of which would support the sustainability of progress towards realizing human rights. Furthermore donors should also encourage ownership by Tuvalu, including by providing on-budget funds rather than supporting off-budget individual projects.

IV. The human rights to water and sanitation in Tuvalu

12. As of 2011, 98 per cent of the population of Tuvalu had access to an improved source of water and 83 per cent had access to improved sanitation facilities.[7] These figures, however, do not portray an accurate picture of the situation regarding the enjoyment of these fundamental human rights in the country, and mask the severe challenges currently faced by its population. While certain measurable elements of progress have been assessed under the Millennium Development Goals, the Goals are silent on the quality and affordability of water and sanitation.

A. Water

Availability

13. Human rights law requires that water be available continuously and in a sufficient quantity to meet the requirements of personal and domestic use, including drinking, personal hygiene and sanitation, food preparation, washing of clothes and dishes and cleaning.[8] Furthermore, the supply needs to be continuous enough to allow for the collection of sufficient amounts to satisfy all needs, without compromising the quality of water.

14. In Tuvalu, the primary freshwater source is stored household and communal rainwater. The available water resources are only partly known, and in most of the outer islands the available groundwater and its quality are largely unknown.[9] Traditionally, the country has relied on fresh groundwater lenses, consisting of a layer of rainwater floating

[6] SOPAC, Draft Miscellaneous Report 647 (see footnote 8), p. 38. The Water and Sanitation Committee consists of the Director of Tuvalu Association of NGOs (TANGO), Director of the Ministry of Health, Secretary for the Kaupule, Director of Environment (Acting), Private Secretary to the Prime Minister, Secretary of the Ministry of Works and Energy and Chairperson of the National Water and Sanitation Committee, Director of Public Works Department (Acting), Waste Management Coordinator (Acting), Director of Meteorology Department (Acting).

[7] World Health Organization (WHO) and United Nations Children's Fund (UNICEF), *Progress on drinking water and sanitation: 2013 Update* (Geneva, 2013), pp. 32-33.

[8] See Committee on Economic, Social and Cultural Rights, general comment No. 15 (2002) on the right to water, para. 12 (a).

[9] SOPAC, Draft Miscellaneous Report 647 (see footnote 8), p. 5.

above more saline seawater. Thin freshwater lenses are vulnerable to rainfall variability and over-extraction, and the salinity level of the lenses could increase quickly to the non-potable level. This precious water source has recently been compromised by changes in rainfall, sea level rise and increased evapotranspiration. In Tuvalu, groundwater was historically a non-potable secondary water source used for washing dishes and clothes, bathing, food preparation and cleaning where salinity levels were not prohibitive. However its use as a secondary source has been severely compromised by pollution from inadequate sanitation systems in Funafuti, such as leaking septic tanks, and reportedly further aggravated by saltwater intrusions due to climate change.[10]

15. Population drift to Funafuti, the country's main island, from the outer islands has led to overcrowding and an increase in squatter settlements. This has put stress on water resources and sanitation management.[11] Water availability on outer islands could not be accurately captured due to unknown groundwater resources, but people on the outer islands also face similar challenges, particularly because of the low capacity of rainwater harvesting and storage and the growing salinity levels of groundwater resources, particularly during the dry season. Some of the precious groundwater sources on the outer islands are also threatened by contamination due to poor sanitation management. The population on Funafuti and on the outer islands depends on rainwater for consumption and other uses. This heavy reliance on rainwater makes sustainable and continuous provision of water a further challenge, due to variations in the rainfall regime in the country.

16. The international community provides extensive support to improve people's access to drinking water in Tuvalu. The European Commission, for instance, provided rainwater tanks to individual households under its European Development Fund projects,[12] following a similar initiative to provide water tanks to households and schools by the AusAid in 2007. Now every household on Funafuti has at least one 10,000-litre capacity rainwater tank. These projects reportedly included the provision of all installation and plumbing material, including guttering, piping, valves, water taps, etc. The provision of rainwater tanks contributed to increasing the amount of stored rainwater, which is the primary freshwater source in Tuvalu. Despite such efforts, the Special Rapporteur observed that people on Funafuti are still not fully enjoying the human right to safe drinking water, in particular in terms of availability of water in sufficient quantities on a continuous basis, quality of water and water affordability. The capacity to harvest water is based on the size of the house – because the pipes and gutters are installed on the roof. Therefore a big house has a greater capacity to harvest water than a small one. The paradoxical situation resides in the fact that poorer people often live in small houses with their extended family, so that, as witnessed by the Special Rapporteur, a large family living in a small house in an informal settlement, for instance, has much less capacity to harvest water due to the size of the roof. On the other hand, the way in which international donors designed the project aimed at providing water tanks to each household, seems to have sidelined the particular circumstance of very limited space on the island; currently there is no extra space on Funafuti to install more water tanks. During the mission, the Special Rapporteur was told that a system of water tanks installed on towers or the creation of water reservoirs under existing houses, would have provided better and more adequate solutions for the country. Furthermore, at the time of the Special Rapporteur's visit, some gutters and water collection mechanisms were not in place or had not been maintained.

17. According to some of the experts interviewed, the materials and design of the current system are not appropriate for a tropical country, which periodically experiences

[10] Tuvalu, NAPA (see footnote 4), p. 27.

[11] Ibid., p. 16.

[12] European Commission, 9th and 10th European Development Fund (EDF) for Tuvalu.

heavy rains and winds. The Special Rapporteur observed that some of the water tanks were already disconnected due to missing or broken parts. She was told that when something breaks, many people on the island simply lacked the economic capacity to replace and/or to adequately install them. While it is supposedly the individuals' responsibility to maintain installed water storage systems, there appears to be a gap in awareness and knowledge of the population regarding their responsibilities, as well as lack of financial resources for the maintenance. For these reasons, as well as the very vivid memory of the drought in 2011, several people stated that they had little confidence in the sustainability of the water supply and feared the consequences of a future drought. This is particularly serious since the availability of sufficient quantities of water seems to have the biggest impact on the reduction of water-borne diseases. A WHO report states that the findings of a review suggest that "median reductions in diarrhoeal disease from water availability were higher than those recorded for water quality improvements", though combined improvements both in quality and quantity "led to greater median reductions in disease incidence"[13].

18. Currently, international donors are focusing on expanding access to water in the outer islands and improving the quality of water under new projects, under the 10th European Development Fund for Tuvalu (2008-2013).

Quality

19. The other concern regarding the realization of the human right to water in Tuvalu relates to the safety of water stored in rainwater tanks. The human right to water requires that water be safe, that is, of a quality that does not pose a threat to human health. In Tuvalu, it is clear that people cannot drink the water directly from the water storage tanks; they have to boil it beforehand. It is also clear that the tanks have to be regularly maintained and cleaned. One of the ways to promote water quality is through chlorination, which is encouraged by the Government as being effective against many bacteria and viruses, but it does not prevent all kinds of contamination. Moreover, the effect of chlorine lasts only for a short time and acts on the water in the tank at the time of treatment. The safety of drinking water also depends on how treated water is kept and used. If a child puts his or her hand in the water in a tank after using the toilet, for instance, it could contaminate the entire tank. The Special Rapporteur was informed that, thanks to awareness-raising efforts by the Government, people were gradually being educated to boil or treat water before drinking it. However, despite these efforts, the provision of rainwater tanks and increased awareness of the necessity of boiling water has not made a significant impact on the number of diarrhoea cases. Water-borne diseases such as diarrhoea are still common, particularly among children, but they are not reported unless they become very serious. Further increases in water- and vector-borne diseases is one of the concerns in relation to sea level and temperature rise due to climate change.

20. Water is fundamental to ensuring hygiene; and water, sanitation and hygiene are crucial in all spheres of people's lives. WHO estimates that 88 per cent of diarrhoeal disease is caused by unsafe water and sanitation.[14] Lack of access to water and sanitation can also have serious negative impacts on the enjoyment to education. Women and girls are traditionally responsible for domestic water supply and sanitation, and for maintaining a hygienic home environment; they often miss school and or employment opportunities in order to accomplish those indispensable tasks. Furthermore, where schools do not have separate and private sanitation and washing facilities, children's exposure to disease is exacerbated, and they may not attend school. In the school that the Special Rapporteur

[13] WHO, "Domestic Water Quantity, Service Level and Health," 2003 (WHO/SDE/WSH/03.02), p. 11.
[14] See the WHO, Water, sanitation and hygiene links to health: facts and figures, updated March 2004.

visited in Funafuti, children had to bring their own water during the severe drought in 2011. Teachers often have to buy toilet paper and soap for the school with their own money because the allocated budget is not sufficient.

Affordability

21. The normative content of the human rights to water and sanitation requires that sanitation and water facilities and services be affordable to all. The direct and indirect costs and charges associated with securing water must be affordable, and must not compromise or limit people's capacity to acquire other basic goods and services guaranteed under the human rights framework, such as food, housing, health care and education. Affordability does not necessarily require services to be provided free of charge. When people are unable to gain access to sanitation and water through their own means, for reasons beyond their control, the State is obliged to find solutions to ensure such access.

22. In Tuvalu, it seems that the burden of maintaining the water tank system installed by the international community falls on some individuals who cannot afford it. Some families also cannot afford to pay for fuel or wood to boil the water. While people should be empowered to be able to maintain such system by themselves, additional costs should be factored into the project for those who cannot afford the maintenance costs.

23. The Ministry of Public Utilities sells desalinated water at US$15 for 10,000 litres, including transportation (i.e. US$1 for water, US$14 for transportation). The Ministry of Agriculture also buys desalinated water for agricultural purposes and this contributes to the high prices of food products in Tuvalu. The existing tariff in Funafuti recovers less than half of the ongoing operation and maintenance cost.[15] The Special Rapporteur was informed that it rained enough in Tuvalu to accommodate people's needs; but the rain harvesting and storage system is not at its full potential capacity. For example, the Government building has an underground storage tank with a 360,000-gallon capacity. It has often been refilled with water from a desalination plant provided by the Japan International Cooperation Agency (JICA), whose operational cost is $A7.9 per cubic metre, even with a solar power system.[16] It seems that is still possible to increase the storage capacity in government or public buildings. The Government must consider sustainable water supply measures that ensure the affordability of water.

24. It is important to bear in mind that investment in more expensive technologies does not necessarily lead to significant improvements in service. Investing in low-cost, high-efficiency technologies, meanwhile, can dramatically reduce the amount of funding required to achieve the rights. Moreover, investments that take the life-cycle cost of a water or sanitation improvement into account, or that are specifically directed towards the maintenance and operation of new and existing services, are essential in order to avoid any sort of retrogression or slippage in ensuring the human rights to water and sanitation.

[15] SOPAC, "Desalination in Pacific Island Countries: A preliminary overview", SOPAC Technical Report 437 (n.d., c. 2011).

[16] SOPAC, Draft Miscellaneous Report 647 (see footnote 8), p. 39 (according to the Public Works Division).

B. Sanitation

Availability and quality

25. With regard to sanitation, 86 per cent of the urban population and 80 per cent of the rural population have access to improved sanitation facilities.[17] The definition of "improved sanitation"[18] under the current Millennium Development Goals framework, however, disregards the normative content of the human right to sanitation, such as quality, affordability and accessibility. The human rights to sanitation requires that (a) there are a sufficient number of sanitation facilities (without associated services) within, or in the immediate vicinity of, each household, health or educational institution, public institution, public place and the workplace (availability); (b) sanitation facilities are hygienically safe to use, which means that they must effectively prevent human, animal and insect contact with human excreta (quality); and (c) sanitation facilities must be physically accessible by everyone within, or in the immediate vicinity of, each household, health or educational institution, public institution, public place and the workplace (accessibility).

26. In Tuvalu, poor wastewater management in the absence of a wastewater policy is a critical challenge. For example, houses are built very close to each other for lack of space on the island that hosts the capital. Septic tanks leak into the ground in such crowded areas. The increase in informal housing within the capital city and the emergence of peri-urban settlements and the absence of an adequate sewerage system has led to unsanitary conditions in some areas.[19] The sanitary conditions around the "borrow pits" are of particular concern. The borrow pits are large holes that were excavated by the United States of America during World War II to build an airstrip. Informal housing has been built around the borrow pits. With all the dumped waste, leaked septage and sea water, the borrow pits have reportedly affected the water aquifer. According to doctors with whom the Special Rapporteur met, children living in the area around the borrow pits develop a certain skin disease due to the polluted water in the pits.

27. Even though the draft national building code contains specifications for the proper construction of septic systems and the minimum distance from buildings and groundwater wells, in reality, there is no space or resources available to construct toilets and tanks for each household. There is reportedly no mechanism to enforce the draft building code. The Ministry of Public Utilities assumed responsibility for the construction of a wastewater treatment system for government facilities, but the implementation of the building code needs to be ensured for each individual house. Moreover, according to information that the Special Rapporteur received, due to poor construction, the majority of the septic tanks have leaked into the ground, thus contaminating the already scarce groundwater. According to a septic tank audit undertaken in Funafuti in 2001, 96 per cent of septic tanks on the island were not constructed to proper design specifications.[20] Even the septic tanks that are properly constructed and functioning, are not the best option for the atoll environment, because sand, unlike soil, does not play the role of filter to allow the biological processing of wastewater.

28. In addition, another study found that water pollution was chronic and *E. coli* pathogenic indicator was detected with high concentration at the lagoon near the Fongafale

[17] WHO and UNICEF, "Progress on drinking water and sanitation" (see footnote 9), p. 32.

[18] Improved sanitation includes flush toilet, piped sewer system, septic tank, flush/pour flush to pit latrine, ventilated improved pit latrine, pit latrine with slab, composting toilet and special case.

[19] See SOPAC, Draft Miscellaneous Report 647 (see footnote 8), p. 34; UN-Habitat, *Global Report on Human Settlements 2011: Cities and climate change*, (2011), chap. 6.

[20] Conducted under the AusAID Waste Management Project in 2001.

Islet, the largest and densely populated islet of Funatuti. The study concluded that domestic wastewater was the primary source of pollution and that it leaks into the ground from bottomless septic tanks and pit toilets and seeps into the lagoonal coast with the ebb tide. Contamination has caused a mass mortality of the corals that form a natural breakwater, and of foraminifera that form the island sediment. It is also affecting the number and variety of fish in the lagoon.[21]

Open defecation

29. Lack of space and resources to build septic tanks, as well as the fact that existing septic tanks do not have the capacity to absorb enormous amounts of faeces and urine, leave a significant amount of the population with no other option but to bathe and defecate in the sea. In addition, existing toilets are reportedly not utilized as frequently as expected, partially because of behavioural issues and partially because toilet paper is not always available or affordable, particularly on the outer islands.[22] Driving along the shore at different times of the day, the Special Rapporteur noted a number of people sitting in the water, talking with each other. She was told that they were urinating and/or defecating. During droughts, 80-90 per cent of households in Funafuti go to the beach to bathe and defecate.[23] Although open defecation in the ocean is reportedly a common and culturally accepted practice, the Special Rapporteur is of the view that such practice not only infringes on a person's dignity and privacy, but also poses serious health risks to the population. Women and girls, particularly during menstruation, and people with physical impairment face serious obstacles when they need to go to the ocean to relief themselves. A woman in Funafuti told the Special Rapporteur that she carried her old mother down to the beach each time she needed to urinate or defecate, and that she was often harassed by youths when she went to bathe in the sea. According to a cost-benefit analysis conducted in 2005-2006, poor sanitation costs the national economy almost half a million Australian dollars, of which 80 per cent is attributable to public health costs associated with waterborne disease.[24]

Composting toilets

30. There have been initiatives to introduce composting toilets as a sustainable solution for an atoll island country with scarce water resources. A composting toilet is a dry toilet system in which the decomposition of organic, solid waste under controlled aerobic conditions produces a humus. Funded by the Global Environment Facility, the Implementing Sustainable Water Resources and Wastewater Management (IWRM) in Pacific Island Countries project launched a small-scale pilot project consisting of the installation of composting toilets in Funafuti; an additional 30 toilets were scheduled to be installed at the time of the mission. A project to introduce composting toilets on the outer islands has been approved by the European Commission, under the European Union Millennium Development Goals Initiatives in December 2011. According to an IWRM estimate, composting toilets reduce water demand by 30 per cent on average in most households. The dry toilet technology contributes to protecting precious water sources from contamination by wastewater management, and the compost will benefit agriculture on the

[21] Masafumi Fujita and others, "Anthropogenic impacts on water quality of the lagoonal coast of Fongafale Islet, Funafuti Atoll, Tuvalu", *Sustainability Science* (March 2013) (doi: 10.1007/s11625-013-0204-x).

[22] SOPAC/GEF,,Mid-Term Report of the Tuvalu GEF Pacific IWRM Demonstration Project: "Eco-Sanitation Demonstration IWRM Project", January 2012, p. 6.

[23] Padma Lal, Kalesoma Saloa and Falealili Uili, *Economics of liquid waste management in Funafuti, Tuvalu*, IWP-Pacific technical report (International Waters Project), no. 36 (2006), p. 11.

[24] Ibid., p. 2.

atoll islands, where the sandy soil is very poor. Initially, the composting toilets were not welcomed by the general public, due to misconceptions that dry toilets were unclean, unhygienic and a step backwards. In meetings with the Special Rapporteur, civil society representatives also shared their views that people were not used to using a toilet in a closed space, and that talking about human waste was a taboo. However, she was pleased to hear that people were beginning to be positive and open to using composting toilets as a sustainable solution, after enormous efforts by IWRM's community engagement initiatives, redesigning of the toilets and awareness-raising activities under the European Commission project, among others.[25] Another challenge is the high cost of composting toilets. Construction and installation of one composting toilet currently costs $A5,000. While half of the cost is for labour, imported materials are also expensive. The Special Rapporteur encourages initiatives to learn lessons and draw on the experiences of other countries which have managed to introduce composting toilets at a much lower cost, and to explore ways to produce composting toilets from available domestic materials.

Affordability, equality and non-discrimination

31. There are poverty and socio-economic inequalities between Funafuti and the outer islands and among peri-urban settlements. While just over half of the country's population lives on the outer islands, this includes 76 per cent of households at the bottom fifth of the income scale. The other 24 per cent of the poorest households live on Funafuti.[26] Low-income households on Funafuti are often worse off than those on the outer islands as they often have no access to land on which to produce food, less access to water, electricity, sanitation or waste management services, insecure tenure, and are more likely to live in substandard housing.[27]

32. In one peri-urban informal settlement that the Special Rapporteur visited, most of the households did not have a toilet and people usually go to the beach and sea to urinate or defecate; they also bathed in the sea. In addition, a woman in one of the informal settlements informed the Special Rapporteur that it is common practice for adolescent girls to skip school during their menstruation because they could not afford to buy sanitary napkins. She said that her family sometimes compromised on daily commodities in order to provide their daughters with sanitary napkins. Some girls have to go home to clean themselves during menstruation because there are no facilities in schools. Although primary school curricula includes hygiene education, one primary school that the Special Rapporteur visited in Funafuti, did not have sufficient soap and toilet paper and teachers often paid for soap from their own pocket. The attainment of equality between women and men requires that women's needs are considered in the delivery of water and sanitation services, as well as in the design of policies and budget allocations.

33. Non-discrimination and equality are fundamental human rights principles. Discrimination is defined as any distinction, exclusion or restriction which has the purpose or the effect of impairing or nullifying the recognition, enjoyment or exercise, on an equal basis with others, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.[28] However, "equal" does not mean "same". Equality is about "leveling up" or progressively working to improve the quality and levels of service for groups that lag behind. In relation to water, sanitation and hygiene, equality presumes,

[25] See SOPAC/GEF, Mid-Term Report of the Tuvalu GEF Pacific IWRM Project (see footnote 22).

[26] SOPAC, Draft Miscellaneous Report 647 (see footnote 8), p. 17.

[27] Ibid.

[28] See, for example, International Convention on the Elimination of All Forms of Racial Discrimination, art. 1, para. 1; Convention on the Elimination of All Forms of Discrimination Against Women, art. 1; Convention on the Rights of Persons with Disabilities, art. 2.

for example, gradual improvements to close gaps in unequal coverage rates for women, children and elderly people in informal settlements and people with disabilities on the outer islands.

34. According to information that the Special Rapporteur received, there was general concern during the recent drought (2011) that the water saving systems on Funafuti did not adequately consider the needs of vulnerable individuals and households. The assistance provided by the Government was reportedly not targeted to the most vulnerable individuals either. The Government provided a flat amount of water for each family, except for families with babies. While distribution points were established to distribute water, some people with limited mobility told the Special Rapporteur that they needed to seek assistance from their neighbours to collect water. As this case of the drought illustrates, inequality could be aggravated in emergencies, because such events have uneven impacts on people and a small government has limited capacity to mitigate them. The issue of inequality is of particular concern with regard to the adverse effects of climate change because the impact of climate change, and the resources for addressing these impacts, are unevenly distributed".[29]

C. Emergency preparedness

35. Tuvalu periodically experiences drought conditions mainly of the La Niña type. The second half of 2011 was a particularly long dry period without normal rainfall for six months.[30] Funafuti and several outer islands were affected by drought. In September 2011, the Government of Tuvalu declared a state of emergency due to severe water shortages in the capital, Funafuti. Some interlocutors expressed their concern that there was no prior indication of the severity of the situation and that the declaration of a state of emergency took them by surprise. At the time, Tuvalu did not have a definition of drought and it apparently took some time before the Government could agree to issue the declaration.

36. In response to the declaration of the state of emergency, the New Zealand Defence Forces flew two desalination plants and containers of freshwater into Funafuti. The existing desalination plant in Tuvalu was reportedly not well-maintained and was not functional at the time of the state of emergency. In the Pacific region, most of the countries which invested in desalination plants use them only during the dry season due to operational problems and high maintenance costs.[31] In response to the 2011 drought, Japan again funded the installation of a desalination plant. Although the desalination plants provided by Japan are often used on a 24-hour basis to refill the Government building's underground water storage system, the sustainability of the plants remains in question because of the high operational costs and lack of expertise to run and maintain the plants.

37. In addition, during the drought, the European Union and Australia provided additional water tanks to increase storage capacity on the outer islands. Although in theory, the rainfall over the preceding months would have been sufficient to accommodate people's needs in Tuvalu, the Special Rapporteur was informed that the water harvesting systems were not utilized to their maximum potential. Furthermore, the Special Rapporteur is of the view that the total water storage capacity in the country could and should be expanded,

[29] Neil Adger and others, "Justice and equity in adaptation", *Tiempo*, No. 52 (July 2004), pp. 19-22.

[30] Tuvalu Red Cross Society, Summary of the drought response review, July 2012.

[31] N. Mimura and others, "Small islands", *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*, M.L. Parry and others (eds.), (Cambridge University Press, 2007), chap. 16, p. 697.

more specifically by installing large storage reservoirs or improving water harvesting for reserve purposes.

V. Impacts of climate variability and change on the rights to water and sanitation

38. One of the objectives of the Special Rapporteur's mission was to examine the impacts of climate change on the enjoyment of the human rights to water and sanitation, further to encouragement by the Human Rights Council to consider the issue of climate change within her mandate.[32]

39. Many of the challenges regarding access to water and sanitation and discussed in the previous sections pre-existed the effects of climate change in Tuvalu. However, climate change is increasing and will further increase vulnerability to climatic events such as cyclones and drought[33] and hence exacerbate water scarcity, saltwater intrusions, sea level rise and frequency of extreme weather events. According to the Environmental Vulnerability Index (EVI) developed by SOPAC and United Nations Environment Programme (UNEP), Tuvalu is rated as "extremely vulnerable".[34] This means that the environmental conditions to which Tuvalu is exposed can have a severely negative influence on sustainable development in the country. However, SOPAC also suggests that in addition to climate change, environmental issues, including population growth and poor coastal management, affect the sustainable development of the country. Furthermore, some vulnerability studies show that the overall cost of infrastructure and settlement protection will represent a significant proportion of Tuvalu's gross domestic product (GDP), and is way beyond the financial means of most small island countries.[35] Thus, not only physical vulnerability to climate change, but also extremely limited financial and human resources make the Tuvalu's adaptation to the impacts of climate change a great challenge.

40. It is difficult to assess and predict the impacts of climate change on weather, sea level and other physical elements.[36] Regardless of the uncertainty from a scientific point of view, climate change is already an everyday reality for people in Tuvalu. Tuvalu is made up of narrow strip islands and human settlements and infrastructure lie along the shoreline of Funafuti as well as the outer islands. Some families have lost land due to coastal erosion and some have lost pulaka pits – one of the main sources of nutrition – due to saltwater intrusion.[37] Increase in temperature and shortage of freshwater, among other effects, could lead to increased risk of many infectious diseases, particularly water- , food- and vector-borne diseases such as severe diarrhoea.[38] Indeed, climate change is slowly but steadily impacting Tuvaluans' human rights to water and sanitation. As discussed above, the freshwater lenses have been compromised by changes in rainfall, sea level rise and

[32] Human Rights Council resolution 10/4, para. 3.

[33] SOPAC, Draft Miscellaneous Report 647 (see footnote 8), pp. 22-23.

[34] The Environmental Vulnerability Index was developed by SOPAC and UNEP in consultation and collaboration with countries, institutions and experts across the globe. The index is designed to be used with economic and social vulnerability indices to provide insights into the processes that can negatively influence the sustainable development of countries.

[35] N. Mimura and others, "Small islands" (see footnote 34), chap. 16.2.4.

[36] See International Organization for Migration (IOM), "Migration and Climate Change", IOM Migration Research Series, No. 31 (2008).

[37] According to Tuvalu's NAPA (see footnote 4, p. 28), more than 60 per cent of pulaka pit plantations in Tuvalu have been destroyed by saltwater intrusion and the remaining 40 per cent remain highly sensitive to saltwater intrusion.

[38] WHO, *Climate Change and Human Health: risks and responses* (Geneva, 2003), p. 11.

increased evapotranspiration. Use of groundwater as a secondary source has been severely compromised by pollution from inadequate sanitation systems on Funafuti, and reportedly further aggravated by saltwater intrusions due to climate change.[39]

A. Adaptation

41. Adaptation in a small atoll island country is indeed a technical and financial challenge. Uncertainty of the impact of global climate change, lack of capacity and resources that are already stretched to address other pressing challenges tend to delay a definitive adaptation strategy and actions. Tuvalu signed the United Nations Framework Convention on Climate Change (UNFCCC) in June 1992. It received assistance from the UNFCCC Least Developed Countries Fund – which was established to support a work programme to assist LDC parties carry out, inter alia, the preparation and implementation of NAPAs –, and developed a National Adaptation Programme of Action (NAPA)[40] in 2007. The Special Rapporteur learned during her mission that the country could still take other adaptation measures to address the adverse effects of climate change, including by protecting at least some parts of the islands from the rising sea level. Donors with whom she had met have also undertaken various efforts to assist Tuvalu in its struggle to adapt to climate change, including supporting a more sustainable way of harvesting and preserving rainwater. Adaptation should not be limited to technical adaptation, but should also include social and economic aspects focusing on people's needs. For example, groundwater used to function as the secondary source of drinking water for Tuvaluans, but it has been compromised by saltwater intrusion and poor wastewater management. The entire population now relies solely on rainwater. Therefore, as part of the adaptation strategy, it is particularly important not to leave harvesting and storage of rainwater up to individuals, but rather to manage the distribution of rainwater resources in order to meet everybody's needs, especially in the context of climate change.

42. Tuvalu has attracted international attention as one of the states most vulnerable to potential "disappearance" due to climate change. The Intergovernmental Panel on Climate Change (IPCC) stated that the sea-level-rise impacts on the low-lying Pacific island atoll states of Kiribati, Tuvalu, Tokelau and the Marshall Islands may, at some threshold, pose risks to their sovereignty or existence.[41] According to the IPCC, Tuvalu could "disappear" in the next 50 years. Some experts shared their views that Tuvalu could rapidly become uninhabitable due to multiple factors, including lack of drinking water, scarcity of agricultural products and fisheries caused by frequent flooding, saltwater intrusion and other extreme weather events. Potential resettlement would depend on several factors, including (i) reduction in greenhouse gas emissions globally; (ii) rate of population growth; (iii) meteorological evolution of climate change; and (iv) the undertaking and effectiveness of adaptation strategies.[42]

43. There have been discussions on whether resettlement and migration should be considered an adaptation option. Unlike some other island countries, Tuvalu does not have any high land to accommodate the affected population. Following the 2009 Copenhagen Climate Change Conference, the Minister of Foreign Affairs of Fiji, for instance, reportedly

[39] Tuvalu NAPA (see footnote 4), p. 27.

[40] Ibid.

[41] Neil Adger and others, "Assessment of adaptation practices, options, constraints and capacity" *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*, M.L. Parry and others (eds.), (Cambridge University Press, 2007), chap. 17.4.2.5.

[42] IOM, "Migration and Climate Change" (see footnote 36), p. 27.

expressed his country's intention to consider accepting "climate change refugees" from Tuvalu and Kiribati in the future. International migration itself is nothing new to Tuvalu as people regularly migrate to other countries in the region, such as Australia, Fiji and New Zealand, to seek economic and other opportunities. New Zealand, for instance, accepts and grants residency to 75 Tuvalu citizens every year, although it denies that this policy is linked to climate change.[43] A potential relocation of the entire Tuvalu population, however, assumes other proportions and gives rise to many concerns from sovereignty of the State to people's attachment to the land as part of their culture, their rights to a nationality, language, education, employment, among others. One of the most acute questions is of potential statelessness caused by displacement if the State loses its sovereign territory. The Office of the United Nations High Commissioner for Refugees (UNHCR) published a policy research paper in which it warns that the situation of a low-lying island State such as Tuvalu "raises a serious risk of forced, permanent displacement of entire populations and their respective governments," and notes that there is a substantial risk of "large-scale *de facto* stateless."[44] Although, with no obvious precedents, the exact legal status of such a displaced population is unclear, what is clear is that displacement would jeopardize the ability of the affected persons to enjoy the fundamental human rights, not least because the loss of a sovereign territory could make it difficult or impossible for their government to fulfil its human rights obligations. This also means that displaced populations may lose the authorities that have the legal obligations to protect their human rights.

44. During the mission, the Special Rapporteur became deeply aware of the disconnection between the national reality and the international debate on the adverse impacts of climate change on people in Tuvalu. She saw little evidence that affected populations, including women and children, were informed of or given opportunities to participate in discussions on the impacts of climate change and policy-making related to them. One woman who runs a small shop on the Funafuti main road told the Special Rapporteur that she had heard about climate change but she did not believe that it would actually happen. When asked about her plans, should the effects of climate change on Tuvalu become serious, she laughed and said that she would join her son who was studying in Australia if she needed to evacuate. Civil society organizations shared the general perception that the older people were conservative and did not want to leave the country, but the young people did not want to be "under water" and envisioned the possibility of moving elsewhere.

45. This disconnection is the first element that should be addressed in order for Tuvaluans to adapt to climate change and tackle its adverse effects in ways that would enable them to make their own decisions. Access to information and participation in political processes are relevant human rights in case of such emergencies. As the Committee on the Elimination of Discrimination against Women pointed out, it is critical to ensure the participation of women, including women on the outer islands, in developing disaster management and mitigation plans in response to the potential displacement and/or statelessness arising from environmental and climatic change.[45] In addition, article 6 of the United Nations Framework Convention on Climate Change, to which Tuvalu is party, obligates States parties to promote, inter alia, public access to information and public participation in addressing climate change and its effects and developing adequate

[43] New Zealand, Ministry of Foreign Affairs and Trade, "New Zealand's Immigration Relationship with Tuvalu", available at http://www.mfat.govt.nz/Foreign-Relations/Pacific/NZ-Tuvalu-immigration.php. The Government of New Zealand grants residency to a limited number of people from Pacific Access Countries (PAC quota countries: Fiji, Samoa, Tonga, Kiribati and Tuvalu).

[44] Susin Park, "Climate change and the risk of statelessness: the situation of low-lying island states", Legal and Protection Policy Research Series (UNHCR, May 2011) (PPLA/2011/04).

[45] See recommendation in CEDAW/C/TUV/CO/2, para. 56.

responses. While the Special Rapporteur was encouraged to see that children and young people's access to information and participation in discussions was growing in the course of public consultations under the NAPA, participation, particularly on the outer islands and in rural areas, was still relying on civil society organizations, schools and churches rather than being led by the Government.

B. International responsibility

46. Several studies have indicated that the adverse effects of climate change "threaten" the enjoyment of many human rights, and many United Nations Member States recognize this.[46] But not all of the effects of climate change on human rights are potential; vulnerable individuals and communities worldwide are already experiencing the effects of climate change now.[47] Indeed, the Special Rapporteur observed that the effects of climate change are not a future threat in Tuvalu, but a present reality for Tuvaluans; for many in Tuvalu, under those circumstances, the deprivation of access to safe and sustainable water and sanitation, which constitutes a violation of human rights, is part of everyday life.

47. The Government of Tuvalu has an obligation to ensure its people's enjoyment of the human rights to water and sanitation, as discussed above. However, Tuvalu is not responsible for climate change. Scientific studies have established that global greenhouse gas emissions are the primary cause of climate change. With a population of only 10,000, Tuvalu has contributed the least to global greenhouse gas emissions, but is affected the hardest by climate change. The Special Rapporteur was struck by an overwhelming feeling of injustice – "climate injustice" – during the mission. Tuvalu – a small developing atoll island country – has very limited human, financial and technical resources to tackle a violation of the human rights to water and sanitation, aggravated by the adverse effects of climate change.

48. In order to comply with their international obligations relating to the rights to water and sanitation, State parties must also respect the enjoyment of those rights in other counties.[48] Establishing an accountability mechanism for the effects of climate change is a challenge because it can be difficult to attribute a violation of the human rights of specific population to specific actions.[49]

49. Still, whether or not a causal chain can be established between particular emissions of greenhouse gases and particular effects of climate change, States have obligations to address the harm climate change causes to human rights.[50] In particular, States have legal obligations to provide international assistance and cooperation towards the full realization of human rights, regardless of the establishment of human rights violations. International cooperation requires State parties to refrain from actions that interfere, directly or indirectly, with the enjoyment of the rights to water and sanitation in other countries. Any activities undertaken within the State party's jurisdiction should not deprive people in

[46] See Human Rights Council resolution 10/4; also Human Rights Council, "Panel Discussion on the relationship between climate change and human rights" (Geneva, 15 June 2009) available at: http://www.ohchr.org/Documents/Issues/ClimateChange/Panel_SummaryDiscussions.doc.

[47] A/HRC/10/61, para. 93.

[48] Committee on Economic, Social and Cultural Rights, general comment No. 15 (2002) on the right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights.

[49] A/HRC/10/61, para. 96.

[50] Ibid.

another country of the ability to realize the rights to water and sanitation.[51] This obligation has obvious implications for greenhouse gas emissions that in the aggregate deny the Tuvaluans these human rights.

50. In the case of the human rights to water and sanitation in Tuvalu, the Special Rapporteur is of the opinion that industrialized countries that have historically contributed most to global warming, and that are also United Nations Member States and parties to many international human rights treaties, have heightened responsibilities. They should provide assistance with a view to providing remedies for the deprivation of Tuvaluans' human rights and strengthening the capacity of the State in fulfilling their obligations. This means that assistance should aim at restoring and protecting people's access to sustainable safe, affordable and accessible water – in sufficient quantities – and sanitation, without discrimination. In this respect, it is also important consider the obligations set out in the Convention on Climate Change, in particular the commitment under article 4, paragraph 1 (e) which call on States Parties to "cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of [certain] areas…"

VI. Conclusion and recommendations

51. **The Special Rapporteur witnessed the harsh reality that Tuvaluans faced every day. She also appreciated the strong determination of the Government and people of Tuvalu to confront and respond to the many challenges based on their long experience with climate variability, including their capacity to make access to water and sanitation a more tangible reality. Hence the Special Rapporteur calls on the Government, individuals and all relevant stakeholders to fully embrace, with determination and perseverance, the realization of these fundamental human rights in this complex environment. To be able to do so, it is critical that a comprehensive and integrated approach be adopted, including capacity-building of human resources, institutional development, technology and infrastructure, public awareness and education.**[52]

52. **Furthermore, it is important to recall that investment in more expensive technologies does not necessarily lead to significant improvements in service, while investing in low-cost, high-efficiency technologies can dramatically reduce the amount of funding required to achieve the rights. Moreover, investments that take the life-cycle cost of water or sanitation improvement into account, or that are specifically directed towards the maintenance and operation of new and existing services, are essential so as to avoid any sort of retrogression or slippage in ensuring the human rights to water and sanitation.**

53. **At the same time, those countries most responsible for the current climate change situation should not turn their backs on Tuvalu, but rather they should comply with their legal obligations to prevent or remedy the impacts of climate change on the human rights of individuals and communities. Furthermore, in the same way that Tuvalu is obliged to take steps to ensure that international aid allocations for its water and sanitation sectors are sustainable and support progressive realization, international donors have a corresponding obligation to facilitate this process.**

[51] See Committee on Economic, Social and Cultural Rights, general comment No. 15 (2002) on the right to water.

[52] N. Mimura and others, "Small islands" (see footnote 31), p. 706.

International aid should adhere to the principles articulated in the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action, and ensure that aid agreements are consistent with international human rights law and that aid priorities are aligned with the national policy frameworks.

54. **In this regard, the Special Rapporteur recommends that:**

(a) The Government of Tuvalu, which bears the main responsibility for the realization of the human rights to water and sanitation, takes concrete and targeted steps within the maximum of available resources, including by seeking international cooperation aid and assistance, to make these rights a reality for all;

(b) The Government take the lead in determining the priorities for the water, sanitation and hygiene sectors and integrate donors' initiatives and funds into the Government's activities in order to ensure greater sustainability of interventions and impact on the lives of Tuvaluans;

(c) The international community positively consider the provision of on-budget instead of off-budget assistance in order for Tuvalu to take greater ownership of measures adopted to provide water and sanitation services;

(d) Access to water and sanitation be affordable to all, in particular to those individuals who have a lower income. The cost of water, sanitation and hygiene must not compromise access to other human rights, such as food, housing or education. The Government should bear this in mind when discussing and adopting new water tariffs or when advancing the use of composting toilets. Innovative mechanisms, such as the creation of a revolving fund, saving on financial resources by harvesting more water from the government buildings, as well as the provision of targeted subsidies could help to support families who lack the necessary resources to provide for these solutions;

(e) The establishment of a trust fund for water and sanitation supply be considered. The Special Rapporteur supports the initiative by the International Conference on Water and Wastewater Management to set up a trust fund by increasing the airport tax by US$1;

(f) The Government of Tuvalu, the international community, civil society and communities continue to promote the introduction of composting toilets, which will not only enable water savings, but will also avoid many problems, including health risks and pollution of water resources caused by inadequate wastewater management;

(g) "Hardware" provided by donors in the form of project funding be accompanied by equally relevant "software" measures, namely information and awareness-raising regarding the maintenance of water tanks, pipes and gutters, and the importance of hygiene practices, which should be ensured even after the completion of the project;

(h) Tuvalu ratify the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights, as well as the Optional Protocols thereto, and other core international human rights treaties to which Tuvalu is not yet a party;

(i) The Government of Tuvalu establish a solid legal and institutional framework to implement the human rights to water and sanitation taking into consideration changing climate patterns and their impacts on water and sanitation. Legislation should contain clear standards specifying that when new buildings are

constructed either by the Government or by donors, water harvesting systems are installed;

(j) The Government of Tuvalu continue to identify the actual needs of its people, including women and children, by holding participatory discussions and seek targeted international assistance for the identified needs in the context of the complex environment;

(k) The international community take immediate action to assist Tuvalu with possible adaptation measures as well as planning for potential scenarios in the very near future. The Special Rapporteur believes that placing the rights to water and sanitation at the centre of discussions and planning will promote an adaptation process that place people in the centre.