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**Promotion and protection of all human rights, civil,
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including the right to development**

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

Addendum

Mission to Jordan (11 – 16 March 2014) *

Summary

Jordan, as a country characterized by an extremely arid environment, faces enormous challenges in providing water and sanitation services to a growing population as well as to the millions of refugees that Jordan generously hosts. It has made considerable progress in the connection of water and sanitation networks and in the collection, treatment and reuse of wastewater. Several challenges, however, persist, such as the intermittency of the water supply, with grave consequences for its quality, availability and affordability. The large quantity of water lost also puts additional strain on water availability. Despite some measures being taken by the Government, the current water and sanitation tariff system and unregulated informal water and sanitation services put an unjust burden on the poor and marginalized, including those who live in informal settlements and remote areas, nomads and refugees. The heavy subsidization of water, in particular for agriculture, could pose a threat to sustainability. The Special Rapporteur makes several recommendations to address these challenges, and also calls on the Government of Jordan to take a holistic approach, linking pressing emergency needs for water and sanitation with a long-term, comprehensive development strategy that will ensure the human rights to water and sanitation of everyone in Jordan.

* The summary of the present report is circulated in all official languages. The report itself, which is annexed to the summary, is circulated in the language of submission and Arabic only.

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Annex

[Arabic and English only]

Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, on her mission to Jordan (11 – 16 March 2014)

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I. Introduction

1. The Special Rapporteur on the human right to water and sanitation undertook an official visit to Jordan from 11 to 16 March 2014, to examine the progress made and challenges to ensuring the full realization of the human rights to water and to sanitation in the country. During her mission, she met with different interlocutors, including the Minister for the Environment, the Secretaries General of the ministries of Foreign Affairs, Health, the Interior, Justice, and Water and Irrigation, the Governor of Mafrqa and other local authorities of the northern governorates. She also met with the Chairperson of the Advisory Board on Water and Sanitation, His Highness Prince El Hassan bin Talal. She had meetings with representatives of the National Centre for Human Rights, the Water Authority of Jordan, the Jordan Valley Authority, and the Water User Associations in the Jordan Valley, civil society organizations and donors. She visited Za'atari refugee camp and several communities, and talked to people in the outskirts of Amman and Mafrqa and in the Jordan Valley.

2. The Special Rapporteur expresses her appreciation to the Government of Jordan for the cooperation shown before and during the mission. She also thanks the United Nations country team, and in particular the United Nations Children's Fund (UNICEF) for the support and assistance provided. Lastly, the Special Rapporteur wishes to thank all the people, including anonymous persons, who took the time to meet with her and to help achieve a better understanding of the situation of access to water and sanitation in Jordan.

II. Context of extreme water scarcity

3. Jordan is considered to be the fourth-most water scarce country in the world. According to one study, since the most recent influx of Syrian refugees, it is now the world's third-most water insecure country.¹ In the past 60 years, the annual renewable freshwater resources available per capita has declined from 3,600 m³ per year to 110 m³ (in 2011),² which lies far below the "absolute water scarcity" line of 500 m³ per year.³ This severe water scarcity has serious implications for the availability of water for personal and domestic use, and can also have an impact on water quality, as groundwater resources are rendered more vulnerable to contamination.

4. Water scarcity has been exacerbated by drought, depletion of groundwater reserves, overuse by agriculture, population growth, inflow of migrant workers and climate change, combined with an influx of refugees resulting from several conflicts in the region, the latest being the conflict in the Syrian Arab Republic. Neighbouring politically volatile States, Jordan has experienced several migration and refugee waves since 1948. According to information provided by the Ministry of the Interior, Jordan plays host to a large number of migrants and refugees, who today account for as much as 45 per cent of the total

¹ See Maplecroft, Global Security Analytics, water security index, available from www.maplecroft.com/about/news/water_security.html.

² Water for Life: Jordan's Water Strategy for 2008-2022, February 2009 (available from www.irinnews.org/pdf/jordan_national_water_strategy.pdf), chap. 2-3. See also World Bank, Data: Renewable internal freshwater resources per capita (cubic metres), available from <http://data.worldbank.org/indicator/ER.H2O.INTR.PC>.

³ According to the Falkenmark Water Stress Indicator, when annual water supplies drop below 1,000 m³ per person, the population faces water scarcity; below 500 m³, they face "absolute scarcity". See also www.un.org/waterforlifedecade/scarcity.shtml.

population: 2 million Palestinians (including those who have been naturalized), 29,000 Iraqis and 1.3 million Syrians. In the National Water Strategy for the period 2008-2022, the Government set a plan for water management on the basis of an estimated population growth from 5.87 million to over 7.8 million by 2022; according to information received from the Ministry of the Interior, however, the recent influx of the Syrian refugees has lifted the current population to more than 7.3 million. The situation of water availability in the country is thus already dire and is likely to further deteriorate owing to ever increasing demands. As the Government itself recognized in its National Water Strategy, “every single drop from every resource in Jordan must be collected”. On the other hand, the human rights framework demands States to realize economic, social and cultural rights, including the right to water and sanitation, to the maximum of available resources. In the context of extreme water scarcity, it is therefore fundamental that available water sources are prioritized to realize this human right for all persons living in the country.

III. Legal, institutional and policy frameworks

A. Legal framework

5. The Government of Jordan has ratified the main international human rights instruments, and has legal obligations to take concrete and deliberate steps to ensure the progressive realization of the human right to water and sanitation. Safe drinking water and sanitation is a human right, derived from the right to an adequate standard of living, which is enshrined in, inter alia, article 11 of the International Covenant on Economic, Social and Cultural Rights. This right was explicitly recognized by the General Assembly in its resolution 64/292, which enjoyed the support of the Government of Jordan, and by the Human Rights Council in its resolution 15/9, which was adopted without a vote.

6. The human right to water and sanitation entitles everyone, without discrimination, to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses, and to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure and acceptable, and that provides privacy and ensures dignity. This content of the right was explicitly recognized by the Human Rights Council in its resolution 24/18. The realization of the human right to water and sanitation also requires ensuring access to adequate and affordable hygiene practices, including hand-washing and menstrual hygiene management, that ensure privacy and dignity. Furthermore, effective measures have to be taken to ensure an adequate disposal and treatment of human waste, including of wastewater. Even in cases of delegation of service delivery to third parties (private or public companies, for instance), the Government is required to regulate its activities to ensure that all aspects of the human right are guaranteed.

7. At the domestic level, the Constitution of Jordan provides for equality before the law and equality of rights for all citizens. It does not make any reference to the human right to water and sanitation. Water and sanitation are regulated mainly by Water Authority of Jordan Law No. 18 of 1988 and its amendments, Jordan Valley Authority Law No. 30 of 2001 and Ministry of Water and Irrigation Law No. 54 of 1992 and its amendments. Other relevant laws include Public Health Law No. 47 of 2008, Environmental Protection Law No. 85 of 2006 and Groundwater By-law No. 85 of 2002 and its amendments. Jordan does not yet have a comprehensive water law, although a draft law is being elaborated. The bill will define the structure and functions of the different ministries and other institutions managing the water and the sanitation sectors. Adopting a comprehensive water law is an important first step for the realization of the human rights to water and sanitation. The new law should recognize fully the human rights to water and to sanitation and their normative content. It should be also recalled that the human right to water and sanitation

should be guaranteed for all, including non-citizens. Furthermore, and especially in a water-scarce country like Jordan, it should clearly state that priority is given to the allocation of water for personal and domestic uses over other uses.⁴

B. Institutional and policy framework

8. In Jordan, the Ministry of Water and Irrigation has overall responsibility for all water issues, including policy and decision-making, water pricing, planning and water resources monitoring. Under the Ministry, the Water Authority of Jordan manages water and sanitation issues, constructs, operates and maintains domestic water supply and sewage systems, and manages the national water resources. The Jordan Valley Authority develops and manages water and land resources in the Jordan Valley. The same institutions are also responsible for sewer systems. Both bodies recommend water tariff changes and capital projects through the Ministry of Water and Irrigation, although the Cabinet has ultimate regulatory authority, in particular with regard to setting tariffs. Septic tanks are under the responsibility of the municipalities. The Ministry of Health has overall responsibility for monitoring the quality of drinking water to ensure compliance with national health standards. The Ministry has the authority to grant permits to water factories and desalination plants, and also to shut down any unsafe water resources.

9. The Government has been putting its focus on the decentralization of government as part of ongoing political and institutional reform. This includes the decentralization of the responsibility of water and sanitation service delivery through governorates and municipalities. The establishment in 2001 of the Northern Governorate Water Administration, responsible for the four northern governorates (Irbid, Jerash, Ajloun and Mafraq) is one such example.

10. The Government has also promoted the participation of the private sector in the water and sanitation sector in accordance with overall government policy aimed at promote this type of participation in various governmental functions. A project management unit under the Water Authority of Jordan was established in 1996 to monitor the participation of the private sector, manage projects and to foster it further. The Miyahuna and Aqaba water companies operate as limited liability enterprises, with retail distribution and other functions, such as water and wastewater treatment in Greater Amman and Aqaba, respectively. The Yarmouk Water Company began operations in 2011 to service four northern governorates, in one of the most challenging areas. The Water Authority of Jordan manages the contracts with the water companies through the project management unit.

11. To supplement formal water service provision by both public and private providers, an informal water supply is managed by private individuals who dig private wells authorized by the Ministry of Health and, with water tankers, sell and deliver water to households.

12. The Government has also adopted the Wastewater Management Policy, which includes resource development and management, wastewater collection and treatment, reuse of treated wastewater and sludge, and pricing. The Policy also promotes private sector participation in the management of wastewater treatment infrastructure and services. Reuse of treated wastewater is regulated by the Water Authority of Jordan Law, Reclaimed Domestic Wastewater Standard No. 893/2006, the Jordan Standard No. 202/2007 for

⁴ “We have to balance between drinking water needs and industrial and irrigation water requirements. Drinking water remains the most essential and the highest priority issue.” King Abdullah II, Water for Life: Jordan’s Water Strategy (see footnote 2).

Industrial Wastewater Discharges, and Jordanian Standard No. 1145/2006 regarding the use of sludge. They follow the guidelines of the World Health Organization (WHO) with regard to the safe use of treated effluent in irrigation, and all include monitoring duties and programmes.

IV. The human rights to water and sanitation

13. Despite the difficult context, the country has made considerable progress in the water and sanitation sectors. In 2012, 97 per cent of the population had access to an improved water source, and 83 per cent had access to improved sanitation.⁵

14. According to Government data, 98 per cent of all households are now connected to the water network, 68 per cent of them are connected to the sewerage network. All collected wastewater is treated, while 98 per cent of treated wastewater is reused. Jordan has indeed some of the highest indicators in the water and sanitation sectors in the Middle East and North Africa region.

A. Water availability

15. The human right to water requires that the water supply for each person be sufficient and continuous for personal and domestic uses.⁶ Owing to the severe scarcity of water in Jordan, the average per capita use is estimated to be only 80 litres per day. Households that are not connected to the formal networks or with limited storage capacity, including those living in informal settlements, nomadic communities, the poor, refugees and migrants, consume less. In informal settlements, per capita consumption is estimated at between 25 and 50 litres a day.⁷ In some areas of the North (for example, in Balqa), per capita consumption has dropped from over 88 to below 66 litres since Syrian refugees began to arrive in 2011.⁸ The implications for health are significant, given that between 50 and 100 litres of water per capita per day are recommended to ensure personal and food hygiene.⁹ Children and pregnant women are particularly vulnerable to illnesses, such as diarrhoea or cholera, when there is not sufficient water available.

1. Intermittent supply for personal and domestic uses

16. Water supply is intermittent in Jordan; people in Amman receive water once a week, while those in remote locations receive it once 12 days or even less frequently. Many people are therefore forced to shower and do their washing and cleaning on the water supply day, and store water to cope with the lack of the regular supply. Most households also supplement the limited water supply with bottled water and water from private tanker trucks. When water is delivered once every week (or every other week), water consumption

⁵ WHO and UNICEF, Progress on Drinking-Water and Sanitation: 2014 Update, Joint Monitoring Programme for Water Supply and Sanitation, available from www.wssinfo.org/fileadmin/user_upload/resources/JMP_report_2014_webEng.pdf.

⁶ Committee on Economic, Social and Cultural Rights general comment No. 15 on the right to water (E/C.12/2002/11), para. 12 (a).

⁷ Oxfam, Water Market System in Balqa, Zarqa and Informal Settlements of Amman and the Jordan Valley – Jordan: August – September 2013, p. 5.

⁸ *Ibid.*, p. 14.

⁹ Guy Howard and Jamie Bartram, Domestic Water Quantity, Service Level and Health, World Health Organization, 2003 (available from http://whqlibdoc.who.int/hq/2003/WHO_SDE_WSH_03.02.pdf), p. 22.

rises sharply on the supply day, putting strain on wastewater plants, sometimes leading to overflow. Furthermore, people install boosters to store as much water as possible on supply days; however, given that boosters also aspirate rust and dirt, water quality is poor.

17. The Special Rapporteur was impressed by the capacity of people to cope with the intermittent supply of water, including by reusing used water. She also observed, however, that this situation had a heavy impact on marginalized persons, who did not have the means to cope with scarcity and intermittency. According to Oxfam, poor, refugee and migrant households are most affected by the intermittent supply of water because they do not have large storage capacity or they do not have community networks.¹¹

18. According to the Committee on Economic, Social and Cultural Rights, for the water supply to be “continuous”, one of the requirements of the right to water is that the regularity of the water supply must be sufficient for personal and domestic uses.¹⁰ From this standpoint, a connection to the water network does not itself automatically fulfil the right to water unless supply is regular enough to be sufficient for drinking, personal sanitation, the washing of clothes, food preparation, and personal and household hygiene.

19. In a water-scarce country like Jordan, a water supply that is intermittent might be considered a necessity to ensure sustainability, as long as the periods without water are not excessively prolonged, people are informed about the days and time they have access to water, water for human consumption is prioritized over other uses (such as farming) and the system does not cause or exacerbate inequalities in access to water. While the Government has made various efforts to reduce the percentage of water allocated to agriculture and to address certain deficiencies in the current system, water is provided in a more continuous manner for agriculture than for personal and domestic uses. An intermittent supply of water does not meet the human right standards if it does not ensure sufficient quantity, in particular for the poorest and most marginalized. The Special Rapporteur is therefore of the view that the Government has the legal obligation to take further steps to ensure that the intermittent supply of water satisfies the needs of everybody; it should tailor solutions to those who do not have enough storage capacity to cope with a weekly or bi-weekly supply of water. Solutions could include reducing leakages so as to increase the volume of water available, and also assistance in the installation and maintenance of storage capacity and the regulation of alternative water provisions, such as tanker trucks (see paras. 21-25 below). At the same time, the Government should continue its efforts to increase the availability of water for personal and domestic uses by reallocating water sources.

2. Non-revenue water

20. High levels of non-revenue water are an acute concern, especially in a water-scarce country. The amount of water lost owing to illegal connections, leakage and other technical losses reaches 50 per cent in the majority of the country. According to a recent study, the amount of physical leakage is estimated at 76 billion litres per year, an amount that could meet the needs of 2.6 million people (or more than a third of the population).¹¹ Leakages also affect water pressure and quality. Stolen water is used for irrigation or sold through water tankers, which reduces the amount available for official water supply and increases its price. The Government, in its National Water Strategy, aims at reducing non-revenue water to 25 per cent by 2022, and technical losses to below 15 per cent. The Strategy includes strengthening the criminalization of water theft and illegal wells. Under the Water Authority Law, those who have constructed illegal wells face a fine of up to 5,000 dinars and up to two years of imprisonment; enforcement has, however, been a challenge for the

¹⁰ E/C.12/2002/11, para. 12.

¹¹ Mercy Corps, *Tapped Out: Water Scarcity and Refugee Pressures in Jordan*, March 2014, p. 17.

authorities. At the time of the Special Rapporteur's visit, the law was under review to increase fines and prison terms for water theft and to grant the Water Authority of Jordan the authority to enforce the law without having to seek intervention by the police when violations were detected. The Special Rapporteur encourages the Government to accelerate its efforts to reduce water loss and to meet its targets. Encouragingly, a recent project by the Japan International Cooperation Agency demonstrated that non-revenue water could be reduced by as much as 40 to 60 per cent with relatively simple measures, such as leak identification and repair. The Special Rapporteur calls on donors to prioritize their cooperation in tackling non-revenue water through small-scale, effective interventions. At the same time, the criminalization of water theft should not be used to punish the poor or the most marginalized.

3. Recycling and reusing water

21. In its efforts to address water scarcity, Jordan has progressed in recycling and reusing water. In Jordan, there are currently 28 wastewater treatment plants treating 98 per cent of collected water. Treated wastewater is mainly used for irrigation in the Jordan Valley. An assessment conducted in 2009 showed that the use of treated wastewater meets the health standards recommended by WHO guidelines for the safe use of wastewater, excreta and grey water.¹² The reuse of treated wastewater, however, also raises challenges in the case of industrial effluent, owing to the capacity of existing municipal treatment plants. As the Government pledged in its Wastewater Management Policy and Water Strategy, the safe reuse of treated wastewater in agriculture is encouraged in order to achieve a more balanced distribution of the country's extremely limited water resources. To that end, proper monitoring and accountability mechanisms should be put in place by strengthening legislation and regulations. At the same time, further efforts should be made to raise awareness of the benefits of wastewater reuse among farmers and the general public based on the national plan for risk monitoring and management system for the use of treated wastewater in irrigation, adopted by the Government in 2011.

B. Affordability of water and sanitation

22. To realize the human rights to water and sanitation, the price of water and sanitation and the direct and indirect costs and charges associated with them must be affordable, and not compromise or threaten a person's capacity to satisfy other human needs, such as food or medicine. According to international recommendations, expenditures related to water and sanitation should not exceed 3 to 5 per cent of household income.

23. In Jordan, the water tariff system for domestic use is the so-called "increasing block system". In the areas covered by the Water Authority of Jordan, people pay 4.5 dinars (\$6.40) per three months for the consumption of 0 to 18 m³ per month, 6 dinars for 19 to 36 cubic metres, 10.5 dinars for 37 to 54 m³ and 16.5 dinars for more than 55 m³. Most households in Jordan pay less than 2 dinars for piped water per month. Even when bills for sewerage are included, this sum amounts on average to less than 1 per cent of total household expenditure. This seems an affordable tariff for the majority of the population connected to the network, though most households have to supplement piped water with water from tankers or bottled water, particularly during summer.

24. One problem posed by the increasing block tariff system often observed by the Special Rapporteur during her missions is that the poor are often charged a higher tariff

¹² Sustainable Sanitation Alliance, Use of treated wastewater in agriculture Jordan Valley, Jordan, November 2009, p. 4.

because of their larger families and shared water meters. In fact, 20 per cent of households in Jordan (and as much as 39 per cent of households in Zarqa) share the same meter.¹³ During her visit, the Special Rapporteur encountered such examples in a suburb of Amman. Three low-income families (15 people in all) living together were charged the highest domestic tariff when each family's consumption level should entitle them to the lowest tariff. They told the Special Rapporteur that they preferred to pay a higher tariff every month rather than have three separate water meters, given that they could not afford a permit and the costs of installing another meter. The Government has taken measures to facilitate the instalment of water meters, by for example waiving instalment costs or, in the case of poor households, occupation permits to instal a meter. The Special Rapporteur encourages the Government to strengthen the application of these measures.

25. Marginalized groups of people, including the poor, people living in informal settlements, migrant workers and refugees, who are either not connected to the network or have a smaller water storage capacity have no choice but to buy bottled or tanked water, which is 20 to 46 times more expensive. Authorities do not regulate the operation of private tankers, which charge 2 to 7 dinars per cubic metre, depending on the demand and distance of delivery.¹⁴ In addition, for households not connected to the sewer network, the cost of emptying a septic tank rose in some places from 25 to 30 dinars in the past year.¹⁵ Prices for desludging are not regulated by the Government. The price depends on the distance travelled; the emptying of tanks is more costly for people living in remote areas. In addition, smaller tankers sometimes have to be used in order to pass through narrow alleys in informal settlements, which makes services even more expensive. Given that the collection, transport, disposal or reuse of human excreta is one of the elements of the human right to sanitation, as affirmed by the Committee on Economic, Social and Cultural Rights,¹⁶ it is the obligation of the State to also ensure that this component is affordable to all, in particular in the case of the most marginalized, vulnerable and poor segments of the population. The delegation of the pricing of this service to private operators could lead to violations of the human right to sanitation.

26. A situation whereby an unjustified burden is placed on lower income families who have no other choice must be urgently changed. Such situations reflect a pattern of exclusion where people living in poverty ultimately pay more for water and sanitation than the average population, which benefits from a subsidized supply of piped water and sanitation network. The State does not necessarily have to provide a piped water connection or sewage network to every household; it does however have a human rights obligation to ensure affordable water and sanitation to everyone. This includes providing the services directly when people are unable to realize the right themselves simply because they cannot afford to.

C. Water quality

27. The drinking water quality standard in Jordan (No. 286:2001) is based on WHO drinking water guidelines. The Ministry of Health is the governmental agency mainly responsible for monitoring the quality of drinking water. The Labs and Quality Affairs Department of the Water Authority of Jordan monitors the quality of water by sampling. An

¹³ USAID, *Jordan Fiscal Reform Project II: Water Public Expenditure Perspectives Working Paper*, October 2011, p. 31.

¹⁴ Oxfam, *Water Market System* (see footnote 7), p. 17.

¹⁵ Oxfam GB, Jordan, *Integrated Assessment of Syrian Refugees in Host Communities*, March 2013, p. 12.

¹⁶ E/C.12/2010/1, para. 8.

assessment made by WHO and UNICEF in 2010 confirmed that “drinking-water quality was generally high in the distribution network”.¹⁷ They also found that, while household water was safe to drink, nitrate levels in household water samples indicated a degree of contamination occurring between the pipes and household taps. The authorities explained that people did not maintain their water tanks well, or water pipes inside houses were old and damaged. Supply interruption and boosters installed to increase water pressure have a negative impact on the quality of water when it reaches households. Given that all households are required to store water owing to its intermittent supply, the Government should raise awareness of how to ensure safe storage in a more systematic manner.

28. Despite the above-mentioned positive assessment, a socioeconomic survey conducted by the authorities found that approximately 60 per cent of people were dissatisfied with water quality, and bought bottled water despite its high price. People apparently do not trust the quality of tap water, partly the aftermath of a widespread contamination incident in 1998.

29. During her mission, the Special Rapporteur heard many different accounts about the quality of water from the Disi aquifer from different stakeholders. In 2012, before the launch of a large-scale project to convey water from the aquifer, located on the border between Jordan and Saudi Arabia, to Amman, concerns over water quality spread when some media reported that water pumped from the aquifer contained a radiation level higher than WHO recommendations. The national standard for drinking water is set at 0.5 millisieverts (mSv) per year, while WHO recommends an individual dose criterion of 0.1 mSv per year.¹⁸ The WHO guidelines suggest that this level is very conservative, and that the national authorities have room to determine their standards, considering also the possible intake of radionuclides from other sources (given that a dose of radiation may differ significantly, depending on the place of living and lifestyle choices). The authorities of Jordan explained to the Special Rapporteur that water pumped from the Disi aquifer contained a higher level of radioactive substances than their national standard; the level was, however, reduced to below 0.5 mSv before delivery when it was mixed with water from other sources with lower or no radiation, in accordance with one of the remedial measures recommended in the WHO guidelines for cases where water sources contain higher concentrations of radionuclides.¹⁹ Some interlocutors, however, expressed their concerns over where and how to secure water from other sources with lower or no radiation to blend with water drawn from the Disi aquifer. Another remedial measure recommended by WHO is frequent monitoring. The Special Rapporteur therefore encourages the authorities of Jordan to continue to monitor and report on the quality of water not only to ensure its safety, but also to raise public confidence in it. Monitoring water quality in a constant manner is also a human rights obligation. It is particularly critical in this context, because water quality can change as it is being drawn and other water sources are depleted. While the Government stated that it distributes all monthly reports to all stakeholders concerned, it is important that it inform the public in a plain manner and make the results of water sampling more readily available and accessible. Reliance on bottled water as the main source of drinking water raises affordability concerns, particularly for vulnerable groups. It also raises a sustainability concern in a water-scarce country; it is in fact estimated that three litres of water are needed to produce one litre of bottled water.²⁰

¹⁷ WHO and UNICEF, *Rapid Assessment of Drinking-Water Quality in The Hashemite Kingdom of Jordan*, Country Report (2010), p. 28.

¹⁸ WHO, *Guidelines for drinking-water quality*, fourth edition, 2011, chap. 9.

¹⁹ *Ibid.*, p. 214.

²⁰ Catherine Ferrier, “Bottled water: understanding a social phenomenon”, discussion paper, commissioned by the World Wildlife Fund, April 2001.

D. Sustainability of water and sanitation services

30. Sustainability is a fundamental human rights principle essential for realizing the human rights to water and to sanitation. Services must be available for present and future generations, and the provision of services today should not compromise the ability of future generations to realize those rights.²¹ This is a critical principle that should be integrated into the development of water and sanitation legislation, policy and systems in Jordan, where water scarcity is a major concern. First of all, once services and facilities have been put in place, positive changes must be maintained and backsliding prevented. Sustainability is, however, more than mere reliability or functionality, and can only be achieved by striking a balance between economic, social and environmental considerations.

1. Operation and maintenance

31. In Jordan, the majority of the State budget for the water and sanitation sectors is allocated to the expansion of infrastructure, while only 20 per cent of the budget is allocated to operation and maintenance. This proportion should be significantly increased; according to UN Water, in order to maintain the existing systems, 75 per cent of the water and sanitation budgets worldwide should be devoted to operation and maintenance.²² Investments that take into account the life cycle cost of a water or sanitation improvement or that are specifically directed at the maintenance and operation of new and existing services are essential to avoid backsliding, and even violations of the rights to water and to sanitation. Operation and maintenance should also include investment in human resources, including better incentives and capacity-building of officials and technicians. According to the authorities, Jordan has lost many qualified persons through migration; today, the country largely relies on revenue generated from remittances and international aid.²³ In countries whose development relies heavily on foreign aid, a common problem encountered is that expensive and high technology services provided by donors end up being left unused or breaking down, mainly due to the lack of human and financial resources. Even if a State's acts or omissions (such as, in this case, a failure to ensure operation and maintenance) are not deliberate, the human rights framework requires States to exercise due diligence to assess the impact of their actions and omissions on the realization of human rights, and to adjust their policies and measures as soon as they become aware that current policies could lead to unsustainable results.²⁴ Where States fail to meet this obligation, human rights violations may occur. In terms of efficiency, it is also vastly more cost-effective to invest in operation and maintenance than to rehabilitate a system after it has collapsed.

2. Environmental sustainability

32. Water and sanitation must be provided in a way that respects the natural environment; finite resources must be protected and overexploitation must be prevented.

33. Jordan relies mainly on ground and surface water for its supply (54 and 37 per cent respectively). The authorities have been meeting increasing demands by overexploiting groundwater. According to the National Water Strategy, of the 12 existing groundwater basins, 10 are overpumped, twice the recharge rate, while the other two are overexploited to

²¹ See A/HRC/24/44.

²² UN Water and WHO, *Global Analysis and Assessment of Sanitation and Drinking-Water*, 2012, p. 29.

²³ See United Nations Development Assistance Framework 2013-2017: Jordan.

²⁴ A/HRC/24/44, para. 16.

a degree that threatens their future use. They are also threatened by various types of pollution.

34. Of all yearly rainfall (already low) in Jordan, as much as 94 per cent of it evaporates. There is therefore still room to utilize this precious water source by increasing rainwater harvesting. The Government has included a provision in the national building code to make rainfall collection compulsory in new buildings. Greater efforts should, however, be made to ensure that this and other regulations are fully implemented, particularly through the intensification of monitoring.

35. The Government is working to shift from traditional to alternative water sources, including desalinated water and treated wastewater. It is also turning to large-scale projects, such as the Disi water project and the Red Sea – Dead Sea canal project, which was approved by Jordan, Israel and the State of Palestine in December 2013. Although these projects will certainly increase the water supply available, they are time and money consuming. The former project will not solve the problem for a long time, particularly because the Disi aquifer is non-renewable.²⁵ The latter project, which will entail the construction of a pipeline between the Red Sea and the Dead Sea, and associates hydroelectric power and desalination plants, will provide water to Jordan, Israel and the State of Palestine and will, theoretically, provide an unlimited water supply. The costs of construction and operation will, however, be a worrying burden on Jordan, a middle-income country without energy resources. According to initial estimates, the bulk cost of desalinated water is between \$1 and \$1.50 per cubic metre, and between \$1.70 and \$2.70 with delivery costs included.²⁶ This is significantly higher than the current estimated bulk cost of 0.21 dinars (approximately \$0.3) per cubic metre of domestic water²⁷ – a situation that, if not properly addressed at the policy level, could, with its implicitly affordability and sustainability concerns, threaten the human right to water.

36. While the Special Rapporteur fully acknowledges the severe lack of natural resources in Jordan, she recalls the fact that the water actually required for the realization of the human rights to water and to sanitation represents only a small fraction of total water use – usually less than 5 per cent. The human rights to water and to sanitation require the clear prioritization of water for personal and domestic uses. Since 2007, water for irrigation has accounted for 64 per cent of the total water supply, a proportion smaller than the world average of 70 per cent, but too high for such a water-scarce country.²⁸ The Government has made efforts to enhance domestic water allocation by increasing the efficiency of agriculture, ensuring efficient water use in agriculture and gradually substituting the water previously allocated to agriculture with treated wastewater and rainwater. According to the Ministry of Water and Irrigation, in 2013, water consumption by agriculture had been reduced to 56 per cent. The Special Rapporteur was also encouraged by the frequent usage of treated wastewater for non-domestic applications in Jordan. Although wastewater treatment leads to the production of a large quantity of sludge, its proper treatment will help to reduce pollution. Sludge can also be utilized as a renewable source of energy.

²⁵ According to the Ministry of Water and Irrigation, the expected duration of the Disi aquifer, which helps to cover the national water requirements, had been revised down from until 2022 to 2016; see Mercy Corps, *Tapped Out* (see footnote 11), p. 14.

²⁶ World Bank, Red Sea – Dead Sea Water Conveyance Project, Feasibility Study: Draft Final Report, Feasibility Study Report Summary, July 2012, p. 71.

²⁷ USAID, *Jordan Fiscal Reform Project II* (see footnote 13), p. 20.

²⁸ Water for Life: Jordan's Water Strategy (see footnote 2), p. 2-1.

3. Transboundary water sources

37. The main source of surface water in Jordan is the Jordan River, which has two major tributaries: the Yarmouk River and the Zarqa River. The Jordan runs along the border separating Jordan, Israel and the State of Palestine, while the Yarmouk runs between Jordan and Israel. On 3 September 1987, Jordan and the Syrian Arab Republic concluded an agreement on the utilization of the waters of the Yarmouk. Government officials in Jordan claim that the Syrian has not observed the agreement and overexploits the water by building dams. The Government reportedly addressed a letter to the Syrian Arab Republic, in which it drew its attention to this circumstance; Jordan still awaits a response. In 1994, Jordan and Israel signed a peace treaty that also addressed the allocation and storage of the waters of the Jordan and the Yarmouk. The Jordan was once a rich, vast river flowing from Lake Tiberias to the Dead Sea; its flow has, however, drastically decreased since the 1960s – from 1.3 billion cubic metres a year to 70-100 million m³ – owing to the construction of dams, overexploitation, pollution and a lack of regional water resources management.²⁹ Although it was decided, as part of the 1994 peace agreement, that the river would be restored through the activities of a joint water committee, there has been not much coordination between the riparian countries, until recently. According to the Ministry of Water and Irrigation, negotiations with Israel opened in 2011; an agreement was subsequently reached, and Israel recently started preparing works for the rehabilitation of the river. Regional and international cooperation on transboundary water is certainly a useful political instrument for stabilizing the region. The Special Rapporteur, at the same time, considers such cooperation to be a human rights obligation for the Governments of Jordan and of neighbouring countries. Given in particular that Jordan has exhausted almost all other available water resources, the restoration of surface water sources is an important foundation for the sustainable realization of the human rights to water and to sanitation of all in Jordan. A study conducted by the World Bank concluded that the full restoration of water flow would be feasible in the long term; furthermore, partial restoration of the lower Jordan River “should be seriously considered as a priority for water resources and environmental management in combination with partial restoration of the Dead Sea or increased supply of potable water to Amman and other areas”.³⁰ The Lower Jordan River Rehabilitation Project is supported by the European Union and other donors.

4. Economic and social sustainability

38. The economic and social dimensions of sustainability must be balanced: while sufficient revenues need to be raised to ensure sustainability in service provision, this must be achieved in such a way that ensures affordability for all social groups, including those living in poverty.³¹

39. Water is expensive in Jordan partly because of the high costs of pumping to deliver water over long distances and at different altitudes. For instance, pumping water from the Jordan Valley to Amman and other areas accounts for 15 per cent of all electricity generated in Jordan.³² The cost of water has also increased in concomitance with the already high energy costs in Jordan, which relies on imported energy. Despite the scarcity of water and the high energy costs, however, public expenditure on water remains at a

²⁹ See Stockholm International Water Institute, *Getting Transboundary Water Right: Theory and Practice for Effective Cooperation*, 2009, p. 27.

³⁰ John A. Allan, Abdallah I. Husein Malkawi and Yacov Tsur, Red Sea – Dead Sea Water Conveyance Study Program, Study of Alternatives, Preliminary Draft Report, 28 September 2012, World Bank, p. xxii.

³¹ See A/HRC/24/44.

³² United Nations country assessment, 2011, p. 57.

reasonable level. What sets Jordan off from other countries in a similar situation is, however, the significant gap between expenditures and revenues.³³ Revenues only partially cover operation, maintenance and capital costs, a situation mainly due to the substantial subsidies in the water and sanitation sector, in particular with regard to water for agriculture (the tariff is only \$0.2 – 0.30 per cubic metre). Although the Jordan Valley Authority manages to attain a 20 per cent rate of cost recovery for water for agricultural and industrial uses, cost recovery for agricultural uses alone is much lower, because revenue from industry is about 40 times higher than for agriculture.³⁴ Low revenues are also due to water losses. According to the International Monetary Fund, losses in the water sector in 2012 accounted for more than 1 per cent of GDP.³⁵ The gap between expenditure and revenue is covered by the Government, a situation that is becoming unsustainable. In 2013, for example, the Government was unexpectedly required to intervene to take over the debt repayments of the Water Authority of Jordan, mainly because of the increasing electricity tariffs and rising demand; meanwhile, the Authority's debt continues to increase. In the area of sanitation, the total investment required to implement the Wastewater Management Policy is estimated at 1,2 billion dinars, of which 19 per cent covered by the Government and 56 per cent by international donors.³⁶

40. Even though the heavy untargeted subsidies on water and sanitation services are an issue of economic sustainability, the current system also creates injustices. USAID assesses the subsidy system of Jordan as one where “very little of benefit is transferred to the poor, either in domestic water... or in agricultural water”.³⁷ The human rights framework does not require water and sanitation services to be provided free of charge or for a very low tariff for all, but rather an affordable system and a safety net for those who cannot afford to pay the full cost. The current system of underpricing and subsidies, particularly for agriculture, does not encourage water conservation and has contributed to the unsustainability in the sectors. It also does not benefit the poor and marginalized groups, given that they are seldom connected to the network, and also because the costs for subsidies and an economically inefficient supply have to be eventually covered by tax payers.

41. The Government is considering a revision of water tariffs, which has as its aim to ensure that operation and maintenance costs of municipal water and wastewater services and the full cost of operation and maintenance for irrigation water are covered by around 2020. The Government has decided to double the tariff for the agriculture sector. It is thought that, 40 per cent of the financial deficit caused by the water sector would have to be covered by increases in tariffs.³⁸

42. Furthermore, the State budget must be designed to fulfil human rights. Available resources must be allocated in such a way that individuals and groups who do not have adequate access, are disadvantaged or are poorest benefit from funding. The approach consisting in heavily subsidizing the service does not translate into better services for poor and disadvantaged individuals and groups, but rather for the non-poor, who are likely to

³³ USAID, *Jordan Fiscal Reform Project II* (see footnote 13), p. 8.

³⁴ *Ibid.*, p. 18.

³⁵ Jordan: Second Review under the Stand-by Arrangement, Request for Waivers of Nonobservance of Performance Criteria, and Modification of Performance Criteria, IMF Country Report No. 13/368, December 2013.

³⁶ United Nations Development Programme (UNDP), *Adaptation to Climate Change in the Zarqa River Basin: Development of Policy Options for Adaptation to Climate Change and Integrated Water Resources Management*, December 2012, p. 26.

³⁷ USAID, *Jordan Fiscal Reform Project II* (see footnote 13), p. 19.

³⁸ UNDP, *Adaptation to Climate Change in the Zarqa River Basin* (see footnote 36), p. 11.

have access to formal service provision and who are better placed to receive free or subsidized services, such as higher education, health and indeed water and sanitation.³⁹ From a human rights point of view, therefore, giving water or sanitation services free of charge or highly subsidized for all could well lead to an improper use of available resources, as they would not support those most in need, contrary to the very principles of human rights law. Jordan should therefore reconsider its funding allocations to prioritize those services that the poor and disadvantaged will actually use, such as water-points used by those living in informal settlements (bearing in mind that this should only be an interim solution). Tariffs must be set carefully to ensure affordability for all individual users; if, however, tariffs are too low, insufficient resources will be raised for the service to be sustainable. In such a situation, without an injection of funds from general revenue, the progressive realization of the rights will be in jeopardy. Hence, in Jordan, fair and equitable tariffs should be established throughout the country, regardless of the identity of the service provider. A new tariff system should require more comfortable households to pay higher tariffs, while poorer ones should be guaranteed, through more transparent and fair safeguards, a lower and thus affordable price.

E. Right to information and accountability

43. Article 15 of the Constitution guarantees freedom of expression, while article 17 states that Jordanians are “entitled to address the public authorities on any personal matter affecting them or on any matter relative to public affairs”.

44. Jordan was the first Arab country to adopt a law on access to information (in 2007), which stipulates that every Jordanian has the right to obtain information, requires officials to facilitate access to information and guarantees the disclosure thereof. In practice, however, it is very difficult to exercise this right because of many conditions, including the need to prove “a lawful interest or a legitimate reason” in order to obtain information.⁴⁰ In the event that the competent department refuses to supply a citizen with the information requested, the citizen is entitled to submit a complaint against the respective official to the Information Council, which is almost exclusively composed of members of the executive. This aspect raises doubts about the Council’s independence. Non-citizens should also be given the right to seek information about, for example, the quality of water.

45. In the water and sanitation sectors, the Ministry of Water and Irrigation and the Water Authorities are encouraged to make more information accessible, including online, and to create a system of public information through various media channels. Such measures are crucial to gain public confidence in water quality and in the reliability of water and sanitation services. Such confidence will also encourage people to better accept tariff reform.

46. The National Centre for Human Rights is an independent national institution established in 2002 and operative since June 2003. It is mandated by the Law on the National Centre for Human Rights of 2006 to monitor, protect and promote human rights and enhance the democratic process in Jordan. The Centre monitors and reports on the implementation of the human rights to water and to sanitation, although its sources of information are mainly the media reporting complaints from people. It is important for the Centre, as an independent human rights institution, to establish a mechanism to receive

³⁹ See Shanta Devarajan, “Rights and Welfare Economics”, World Bank, 5 May 2014, available from <http://blogs.worldbank.org/futuredevelopment/rights-and-welfare-economics>.

⁴⁰ National Centre for Human Rights, “Right to Access to Information in the Hashemite Kingdom of Jordan”, May 2008.

complaints directly about the rights to water and to sanitation, and to address them, particularly in a country where there is no independent regulator.

47. In addition, the Special Rapporteur strongly recommends the creation of an adequately funded independent regulator capable of independently monitoring the water and sanitation authorities, companies, industries and the agricultural sector, ensuring meaningful public participation and imposing penalties for non-compliance. The regulator should be also given competence to set tariffs to balance sustainability and affordability. A transparent and comprehensive regulatory framework would help to reduce the potential for abuse and corruption, and ensure appropriate monitoring and regulation of behaviour of all water and sanitation providers and their compliance with human rights.

F. Northern governorates

48. The Special Rapporteur visited Mafraq, where she met with the local authorities of the northern governorates, in which, according to the Government, more than 80 per cent of Syrian refugees are hosted (80 per cent of whom residing outside refugee camps). In Mafraq city, for instance, the influx of refugees has swollen the population from 90,000 to 210,000. In communities most affected by the influx of Syrian refugees in Mafraq city, the average water supply per person has dropped from 80 litres to less than 30,⁴¹ below the absolute minimum standard of 50 litres required to assure basic personal and food hygiene during a crisis. The Health Director of Hoshia (a district of Mafraq) explained that each hospital needed 100 m³ of water per day and used to have 600 m³ of reserves; however, following the spike in water consumption caused by the mass influx of Syrian refugees, all storage tanks are now empty. Furthermore, a recent joint interagency assessment of the situation of both Jordanian and Syrian households conducted in the northern governorates found that 44 per cent of households in rural areas and 33 per cent of households in urban ones ran out of water more than twice a month.⁴² According to information provided by UNICEF, in 2014, approximately 350,000 refugees and 180,000 host community members will require assistance in water, sanitation and hygiene services.

49. Even before the arrival of Syrian refugees, the northern governorates were affected by high water losses, also due to an inefficient water network and sewage system; for instance, in Mafraq water losses reach 78 per cent of total supply. With the majority of refugees living in urban areas, the aging sewage systems are put under increasing strain. In 2013, complaints about broken or blocked wastewater pipes reportedly doubled in Amman and Zarqa, and tripled in Mafraq.⁴³ An interagency assessment found that about one third of Syrian and Jordanian households had experienced an overflow of their septic tank at least once in the previous three months.⁴⁴ Local government officials were also concerned about the poor management of septic tanks inside refugee camps. This is a serious public health concern that cannot be addressed by the northern governorates alone.

50. The water and sanitation supply in the four northern governorates is under the responsibility of a private company, Yarmouk Water Company, which is reportedly affected by “an astonishing lack of capacity”.⁴⁵ The company, which caters for an area with a population of 1.5 million and an additional half a million Syrian refugees, only has six engineers. It receives only part of the subsidy provided by the central government through

⁴¹ Mercy Corps, *Tapped Out* (see footnote 11), p. 18.

⁴² WASH in Host Communities in Jordan, an interagency assessment, September-October 2013.

⁴³ Mercy Corps, *Tapped Out* (see footnote 11), p. 29.

⁴⁴ WASH in Host Communities in Jordan (see footnote 42).

⁴⁵ Mercy Corps, *Tapped Out* (see footnote 11), p. 29.

the northern governorates owing to the complicated subsidy transfer system, while poor labour management reportedly leads to constant disputes and strikes. Although the human rights to water and to sanitation are not prescriptive with regard to the party providing water and sanitation services, the Special Rapporteur would like to recall that the State remains the primary duty-bearer for ensuring these human rights. The State has not only the duty to prevent private companies from compromising the human rights to water and to sanitation, but also to establish an effective regulatory framework that includes independent monitoring, genuine public participation and imposition of penalties for non-compliance with human rights. Furthermore, private companies have human rights responsibilities to protect, respect and remedy.

51. The Special Rapporteur urges Jordan to provide greater support for the northern governorates, which are struggling to provide water and sanitation services to refugees, besides the broader Jordanian population. The local communities should not have to bear an unfair burden in their access to water and sanitation. Greater support is crucial also to prevent a possible public health crisis due to lack of water and wastewater treatment and inappropriate management of septic tanks.

V. Refugees

52. The conflict in the Syrian Arab Republic marked its third anniversary during the mission of the Special Rapporteur to Jordan. The situation of refugees that she witnessed both inside and outside refugee camps was striking. Jordan has been given asylum to more than 600,000 Syrian refugees since March 2011 (besides the refugees from other neighbouring States, including Iraq), and the number is expected to reach 800,000 by the end of 2014.⁴⁶ The Special Rapporteur was moved by the generosity and hospitality of the Government and people of Jordan in accommodating successive waves of refugees in their country, despite the challenges they themselves face.

53. The Special Rapporteur visited the Za'atari refugee camp in Mafraq, where she talked with the refugees and the representatives of the international community providing assistance to help to satisfy the refugees' basic needs. The refugees residing in the camp are provided with a minimum of 35 litres of water per day. There were public toilets and washing spaces. International organizations were making efforts to improve the hygiene situation of the sanitation facilities through community management. Menstrual hygiene management, as is the case at the global or national levels, tends to be an issue that receives the least attention; for example, UNICEF staff, noting the inappropriate and inadequate quality of the sanitary napkins supplied, had been required to raise this issue and have the type of napkins included in hygiene kits changed.

54. Refugees living outside the camps struggle to secure basic living standards. While the vast majority of refugees live in apartments and have access to toilets, a joint assessment found that more than half of refugee shelters had damaged septic tanks, and 39 per cent had sewage pipes that leaked.⁴⁷ Overall, 7 per cent of refugees live in informal temporary shelters, such as tents, prefabricated houses and basements.⁴⁸ Access to housing is worse in Mafraq and Balqa, where, in 2013, 13 and 17 per cent of refugees lived in tents. Three quarters of informal tented settlements do not have latrines; people therefore often

⁴⁶ UNHCR, UNICEF, WFP, *Joint Assessment Review of the Syrian Refugee Response in Jordan*, January 2014, p. 6.

⁴⁷ *Ibid.*, p. 19.

⁴⁸ UNHCR, International Relief and Development, *Syrian Refugees Living Outside of Camps: Home Visit Data Findings*, 2013, p. 40.

have no choice but to defecate in the open.⁴⁹ According to UNICEF, additional strain has been put on sanitation systems in schools too, and the poor quality of sanitation facilities discourages the attendance girls in schools, particularly adolescent girls.

55. Refugees living outside camps tend to spend a substantial portion of their meagre income on water because they are either not connected to the water network or have a small water storage capacity (see para. 24 above). For example, refugees living in the urban areas of Balqa and Zarqa without a piped water connection pay up to 73 dinars per month for water during the summer months, an unaffordable amount for most refugees, given that 60 per cent of them earn 200 dinars or less per month.⁵⁰

56. One family of refugees encountered outside a refugee camp informed the Special Rapporteur that although the land owner gave them water for drinking and cooking, they had to use unsafe canal water for washing and cleaning.

57. One third of refugee families are headed by women.⁵¹ Households headed by women face a daily struggle to secure drinking water, particularly during the hot and dry season. They are particularly vulnerable owing to cultural and social factors. Women often have to send their young male children to the mosque (sometimes located kilometres away) in the hope of finding water. Procuring precious water from tanker trucks depends largely on one's social influence. Truck drivers often prioritize water deliveries to their friends, most of whom are men. The plight of a household headed by a widow is easily overlooked.⁵²

58. The above-mentioned situations cannot be addressed by the Government of Jordan or the international community alone. While Jordan is not a party to the Convention relating to the Status of Refugees, it has human rights obligations to ensure the human rights to water and to sanitation for all, including refugees on its territory. The international community also has human rights obligations with regard to cooperation. The direct costs of hosting Syrian refugees are enormous.⁵³ While the international community covers most expenses, the fiscal costs for the State budget are thought to account for 1.8 per cent of GDP, mainly for education, health care, security and implicit subsidies of utilities.⁵⁴ This figure is expected to reach 2.4 per cent of GDP in 2014.

59. The issue is obviously not only about the direct fiscal costs. Syrian refugees, who are now dispersed throughout the country, increasingly compete with Jordanians in the housing and labour markets, as well as for scarce water resources and water and sanitation services. Such a burden should not be borne by Jordan alone.

60. The representatives of the international organizations with whom the Special Rapporteur met during her mission are working tirelessly to support Jordan in this emergency situation. They are, however, underfunded in general and in water and sanitation operations in particular. Although donors pledged almost \$1 billion for Jordan within the framework of a United Nations joint humanitarian appeal, approximately only half of that amount has been disbursed. To date, the water, sanitation and hygiene sectors have received only 13 per cent of the funds necessary. The representatives of international organizations and civil society explained to the Special Rapporteur that the delay and unpredictability of

⁴⁹ UNHCR, UNICEF, WFP, *Joint Assessment Review* (see footnote 46), p. 19.

⁵⁰ *Ibid.*, p. 18.

⁵¹ UNHCR, International Relief and Development (see footnote 48), p. 35.

⁵² Mercy Corps, *Tapped Out* (see footnote 11), p. 19.

⁵³ International Monetary Fund, *Jordan: Second Review Under The Stand-By Arrangement, Request for Waivers of Nonobservance of Performance Criteria, and Modification of Performance Criteria* (October 2013), p. 33

⁵⁴ *Ibid.* and USAID, *The Fiscal Impact of the Syrian Refugee Crisis on Jordan*, January 2014, p. xi.

the disbursement of funds made their work even more complicated. In addition, the international community does not have power to address any security or rule of law issues inside the refugee camps; the Special Rapporteur herself observed stolen taps or water stolen from public bathrooms by means of improvised connections. A coordination mechanism already exists between the international community and the Government to address such issues in the camps. Nonetheless, both sides should work more closely to identify what needs to be done to ensure the stable management of refugee camps.

VI. Conclusions and recommendations

61. **Jordan suffers from extreme water scarcity, and has been coping with it by providing intermittent supply for domestic uses and exploring non-traditional water resources. Already limited availability for personal and domestic uses, exacerbated by severe water losses, has been further strained by waves of refugees from neighbouring countries, including recently those from the Syrian Arab Republic. The greater demand for water has also put enormous strain on sanitation facilities, which is a particularly acute public health concern in the northern governorates. The Government, with the assistance of international cooperation, has been tackling the water crisis as an emergency issue, although the measures taken to date have been neither sufficient nor sustainable.**

62. **Water and sanitation services can be made sustainable if personal and domestic uses are clearly prioritized, water losses are addressed and the tariff system is revised to ensure that subsidies actually benefit the poor. The Special Rapporteur urges the Government to take a holistic approach to the situation by combining attention to emergency needs for water and sanitation with a long-term, comprehensive development strategy that will ensure the human rights to water and to sanitation of all people in Jordan in the long term. She also calls on the donor community to increase their targeted financial and technical support for such efforts.**

63. **In this regard, the Special Rapporteur recommends that the Government of Jordan:**

(a) **Adopt a comprehensive water law that recognizes the human rights to water and to sanitation for all, both citizens and non-citizens, without discrimination, and prioritize explicitly the allocation of water for personal and domestic uses over other uses;**

(b) **Regulate informal water and sanitation service providers to ensure the quality and affordability of water and sanitation, particularly for the poor and the most marginalized;**

(c) **Take a holistic approach to responding to emergency needs for water and sanitation while promoting the long-term realization of the human rights to water and to sanitation;**

(d) **Accelerate efforts to implement regional and international cooperation with regard to transboundary waters while fully integrating the human rights to water and to sanitation and prioritizing water for personal and domestic uses;**

(e) **Adopt a comprehensive policy of water and sanitation tariffs for both domestic and non-domestic uses that balances economic, social and environmental sustainability. A new tariff system for domestic uses should require more affluent households to pay higher tariffs, while poorer households should be guaranteed, through more transparent and fair safeguards, a lower, affordable price. A new tariff**

system for non-domestic uses should promote efficient water usage, in particular in agriculture, and ensure the sustainability of water resources;

(f) Invest in the maintenance and operation of new and existing services, including human resources, in order to avoid deterioration in the services currently provided;

(g) Establish strong, independent accountability mechanisms to ensure full compliance by all – including the private sector – with the human rights to safe drinking water and to sanitation in all aspects of safety, affordability, availability, accessibility, adaptability, equality, non-discrimination and sustainability;

(h) Establish an independent regulator to undertake independent monitoring, including water and sanitation quality and affordability, and to ensure meaningful public participation;

(i) Strengthen the right of access to information for all, including information relating to water and sanitation, communicate that information to the public in a plain manner, and make the results of water sampling available and accessible;

(j) Coordinate with the international community to ensure the implementation of the rule of law in refugee camps.

64. The Special Rapporteur also recommends that the international community:

(a) Increase funds and accelerate the process of their disbursement to support the Government in hosting refugees, in particular in ensuring the realization of the human rights to water and to sanitation;

(b) Strengthen support, together with the central Government, to the northern governorates in realizing in a sustainable manner the human rights to water and to sanitation of refugees, as well as of the broader Jordanian population;

(c) Coordinate among donors and increase targeted funds and technical support to help the Government to implement its strategies and plans to ensure sustainability of water and sanitation services.
