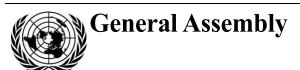
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## The environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia

Report of the Secretary-General

### Summary

The present report was prepared pursuant to paragraph 7 of General Assembly resolution 71/120, entitled "Question of French Polynesia", in which the Assembly requested the Secretary-General to provide continuous updates to his report on the environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia, with further details on the impacts of nuclear testing in the Territory, particularly on the consequences of exposure to atomic radiation.

\* A/72/50.





- 1. The report of the Secretary-General of 25 July 2014 on the environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia (A/69/189), prepared pursuant to paragraph 5 of General Assembly resolution 68/93 of 11 December 2013, was submitted to the General Assembly at its sixty-ninth session.
- 2. In its resolution 71/120 of 6 December 2016, entitled "Question of French Polynesia", the General Assembly requested the Secretary-General to provide continuous updates to his report on the environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia (A/69/189), with further details on the impacts of nuclear testing in the Territory, particularly on the consequences of exposure to atomic radiation.
- 3. In a letter dated 10 January 2017, the Secretary-General brought the resolution to the attention of the executive heads of the following specialized agencies and other international organizations and invited them to submit the information requested, for inclusion in the report:

Comprehensive Nuclear-Test-Ban Treaty Organization

Economic and Social Commission for Asia and the Pacific

Food and Agriculture Organization of the United Nations

International Atomic Energy Agency

International Court of Justice

International Maritime Organization

Office of the United Nations High Commissioner for Human Rights

United Nations Children's Fund

United Nations Development Programme

United Nations Educational, Scientific and Cultural Organization

United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women)

United Nations Environment Programme

United Nations Human Settlements Programme (UN-Habitat)

United Nations Industrial Development Organization

United Nations Institute for Disarmament Research

United Nations Population Fund

United Nations Scientific Committee on the Effects of Atomic Radiation

United Nations University

World Food Programme

World Health Organization

World Meteorological Organization

World Tourism Organization

4. Responses were received from 13 United Nations entities. Of those 13 entities, 7 indicated that they did not have any information to provide on the issue. Those 7 entities are the Economic and Social Commission for Asia and the Pacific, the Food and Agriculture Organization of the United Nations, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the United Nations Institute for Disarmament Research, the World Food Programme, the World Meteorological Organization and the World Tourism Organization. Information submitted by six United Nations entities, namely the International Atomic Energy Agency; the Office of the United Nations High Commissioner for Human Rights; the United Nations Educational, Scientific and Cultural Organization; the United Nations Environment Programme, jointly with the United Nations Scientific Committee on the Effects of Atomic Radiation; and the World Health Organization is set out below.

#### **International Atomic Energy Agency**

- 5. The International Atomic Energy Agency (IAEA) indicated that the elements related to its activities contained in the previous report of the Secretary-General on the environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia were still valid and that therefore its input had not changed since then. Thus, the contribution of IAEA remains as follows:
- 6. In April 1996, following a request from the Government of France, IAEA embarked on a study of the radiological situation at the atolls of Mururoa and Fangataufa, in French Polynesia. The study was designed to assess the residual radiological conditions at the atolls after the end of all of the weapon testing. The study focused on the radiological situation at that time and the potential long-term radiological situation. The study concluded that:
- (a) The radiation doses received after the end of the tests by populations in the South Pacific region, as a result of the residual radioactive materials remaining in Mururoa and Fangataufa, were negligible fractions of natural background levels and would continue to be so in the long term;
- (b) Based on the measured and predicted radionuclide activity levels, as well as the low dose levels estimated for the present and the future, no remedial actions at the Mururoa and Fangataufa atolls were needed on radiological protection grounds, either now or in the future.
- 7. Based on the assessment of radiation doses after the end of the tests, it was concluded that there would be no radiation health effects which could be either medically diagnosed in an individual or epidemiologically discerned in a group of people that would be attributable to the estimated radiation doses that were being received at the time of the study in 1998, or that would be received beyond this time by people as a result of the residual radioactive material at the Mururoa and Fangataufa atolls. The study emphasized that, at the very low levels of doses estimated in the study, there would be no changes in cancer incidence rates in the region attributable to radiation exposure caused by the residual radioactive material at the Mururoa and Fangataufa atolls.

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<sup>&</sup>lt;sup>1</sup> International Atomic Energy Agency, *The Radiological Situation at the Atolls of Mururoa and Fangataufa: Main Report* (Vienna, 1998).

- 8. During the investigation performed after the end of the tests, radiation dose rates to the native biota resulting from the residual radioactive material at the Mururoa and Fangataufa atolls were assessed. In the great majority of cases, dose rates to the biota were found to be similar to, or lower than, dose rates from natural radiation sources. Overall, the study concluded that the expected radiation dose rates and modes of exposure were such that no effects on biotic population groups could arise.
- 9. France carried out 41 atmospheric and 137 underground nuclear tests in French Polynesia. The radiation doses received after the end of the tests and still to be received by populations in the South Pacific region, as a result of the residual radioactive materials remaining in Mururoa and Fangataufa, are negligible fractions of natural background levels. Radiological impacts on the biota arising from residual radioactivity will not cause effects on biotic populations.

#### Office of the United Nations High Commissioner for Human Rights

- 10. In 2015, in its concluding observations on the fifth periodic report of France, which were adopted on 21 July 2015, the Human Rights Committee expressed concern that, as at 1 March 2015, the Nuclear Test Victims Compensation Committee had dismissed 98.3 per cent of claims. It recommended that the State party should take all the steps necessary to ensure the effective recognition and compensation of all the victims of French nuclear tests, especially the local population (CCPR/C/FRA/CO/5, para. 21). On 28 February 2017, the French Parliament adopted Act No. 2017-256 concerning real equality for overseas collectivities, which discards the notion of negligible risk and makes compensation automatic for all persons who have been affected by one of the 21 listed diseases and have lived in the area where the tests were conducted during that period. The Act provides that the cases which were rejected before the entry into force of the law can be re-examined, and that concerned parties, or their beneficiaries in the case of deceased persons, can file new cases until 12 months after the entry into force of the Act. A new commission is also mandated to recommend compensation for victims.
- 11. The Human Rights Committee, in its general comment No. 14 (1984) on the right to life, indicated that it was evident that the designing, testing, manufacture, possession and deployment of nuclear weapons were among the greatest threats to the right to life which confront mankind today. Furthermore, it recommended that the production, testing, possession, deployment and use of nuclear weapons should be prohibited and recognized as crimes against humanity (A/40/40, annex VI, paras. 4 and 6).
- 12. In its general comment No. 14 (2000) on the right to the highest attainable standard of health, the Committee on Economic, Social and Cultural Rights stressed that States should refrain from using or testing nuclear weapons if such testing resulted in the release of substances harmful to human health (E/C.12/2000/4, para. 34). In addition, transparency and accountability in governance, access to remedies and participation of the affected population in decision-making processes are necessary for the enjoyment of the right to health (E/C.12/2000/4, paras. 11, 34, 55 and 59).

#### United Nations Educational, Scientific and Cultural Organization

13. The action of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in French Polynesia is carried out mainly through its Natural Sciences Programme. UNESCO also undertakes some activities in French Polynesia within the framework of its Man and the Biosphere Programme, notably in the Commune de Fakarava Biosphere Reserve, which is located in the Tuamotu archipelago some 360 km north-east of Tahiti. Designated in 1997, the Biosphere Reserve was subsequently extended and finally renamed in 2006. It is made up of seven low-lying coral islands and atolls, namely Aratika, Fakarava, Kauehi, Niau, Raraka, Taiaro and Toau. The reserve offers a great diversity of landscapes, containing coral reefs and remarkable flora and fauna, including rare, protected and endemic species. The importance of the Biosphere Reserve and its impact on the economic and social activity of the atolls is undeniable. Nevertheless, as far as the activities of UNESCO are concerned, there is no information on the environmental, ecological, health or any other impact of the 30-year period of nuclear testing in the Tuamotu archipelago.

# United Nations Environment Programme and the United Nations Scientific Committee on the Effects of Atomic Radiation

- 14. Since its creation in 1955, the United Nations Scientific Committee on the Effects of Atomic Radiation has reported regularly to the General Assembly on the levels and effects of ionizing radiation, including on those associated with nuclear-weapon testing. It should be noted that the Committee's remit covers only the impact of radiation exposure and not the environmental, ecological, health and other impacts related to factors such as the explosive force and heat of the detonations, any chemical residues or the facilities in situ.
- 15. There are two aspects relevant to this topic: (a) the levels of exposure incurred by people exposed to radiation during the weapon testing period; and (b) the levels of exposure from residual radioactive material after the end of the weapon testing period.
- 16. With regard to the period of tests conducted at Mururoa and Fangataufa, French Polynesia, the United Nations Scientific Committee on the Effects of Atomic Radiation reviewed the levels of exposure in its 2000 report<sup>2</sup> and its 2008 report.<sup>3</sup> It reported that French scientists had identified five tests, following which regional population groups were directly exposed. A single rain-out event caused exposures in Tahiti after the test of 17 July 1974. Exposures resulted mainly from external irradiation from deposited radionuclides. Milk production on Tahiti was sufficient for only 20 per cent of local needs, and consumption was low in any case, which limited exposures due to ingestion. Effective doses to maximally exposed individuals after all five events were estimated to be in the range 1-5 millisieverts in

<sup>2</sup> Sources and Effects of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2000 Report to the General Assembly, with Scientific Annexes, vol. I: Sources, annex C (United Nations publication, Sales No. E.00.IX.3).

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<sup>&</sup>lt;sup>3</sup> Sources and Effects of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2008 Report to the General Assembly with Scientific Annexes, vol. I: Sources, annex B (United Nations publication, Sales No. E.10.XI.3).

the year following the test for perspective, it can be noted that the annual average background exposure to natural sources of radiation is 2.4 millisieverts.

- 17. Regarding the levels of exposure from residual radioactive material, the Committee noted the in-depth study conducted by the International Atomic Energy Agency in 1996-1998, which is summarized in the previous report of the Secretary-General on the environmental, ecological, health and other impacts of the 30-year period of nuclear testing in French Polynesia. The Committee is not aware of any significant developments since that report, in which the Agency had concluded that the doses received after the end of the tests were negligible fractions of natural background levels and would continue to be so in the long term, and that no remedial actions were needed on radiological protection grounds, either then or in the future.
- 18. On the basis of the reported exposures, the Committee did not expect to see any radiation health effects that could be either medically diagnosed in an individual or epidemiologically discerned in a group of people, attributable to the radiation doses received at the time of the IAEA study. Moreover, the expected radiation dose rates were such that no effects on flora and fauna at the population level would be likely. Nevertheless detailed information on the exposure of individuals during the conducted tests themselves could possibly contribute to a better understanding of the distribution of the presumably small risks to health presented by the initial tests.

#### **World Health Organization**

19. The World Health Organization (WHO) has a mandate to promote a healthy human environment by engaging in primary prevention and influencing public policies in all sectors in order to address the root causes of environmental and social threats to health. In this area, WHO develops and promotes preventive policies and interventions based on in-depth scientific analysis of the evidence base for, and understanding of, environmental and social determinants of human health. In addressing risk factors, WHO looks into the assessment and management of health risks due to ionizing and non-ionizing radiation, including those resulting from past human activities and accidents.

Action by World Health Organization governing bodies on nuclear weapons and all-hazard health emergencies

- 20. The WHO governing bodies, namely the World Health Assembly and the Executive Board, have over the years adopted several resolutions on the issue of nuclear weapons:
  - (a) EB 33.R35 (1964) entitled "Nuclear Test Ban";
- (b) WHA26.57 (1973) on the urgent need for suspension of testing of nuclear weapons;
- (c) WHA34.38 (1981) entitled "Health for all by the year 2000: the contribution of health to socioeconomic development and peace: implementation of resolution 34/58 of the United Nations General Assembly and of resolutions WHA32.24 and WHA33.24. The role of physicians and other health workers in the preservation and promotion of peace as the most significant factor for the attainment of health for all";

- (d) WHA36.28 (1983) on the role of physicians and other health workers in the preservation and promotion of peace as the most significant factor for the attainment of health for all. In response to this resolution and the request for WHO to collect, analyse and publish accounts of activities and studies on the effects of nuclear war on health and health services, WHO published reports on that subject in 1984 and 1987;
- (e) WHA46.40 (1993) on health and environmental effects of nuclear weapons. In relation to the issue, in his statement at the forty-sixth session of the World Health Organization Regional Committee for the Western Pacific held in Manila in 1995, the then Director General, Hiroshi Nakajima, stated that WHO was firmly opposed to the production, testing, stockpiling, transport or use of nuclear weapons, a position that was implicit in the Constitution of WHO, which opposed any common danger or risk to the attainment of health for all He also said that besides the immediate catastrophic effects, the use of nuclear weapons would cause long-term human suffering and environmental disturbance beyond our capacity to accurately predict; the only approach to the treatment of the health effects of nuclear explosions was primary prevention of such explosions, in other words, the prevention of atomic war.
- 21. Other resolutions of the World Health Assembly that address all-hazard health emergencies in general include:
  - (a) WHA48.2 (1995) on emergency and humanitarian action;
  - (b) WHA46.6 (1993) on emergency and humanitarian relief operations;
- (c) WHA55.16 (2002) on global public health response to natural occurrence, accidental release or deliberate use of biological and chemical agents or radionuclear material that affect health;
  - (d) WHA59.22 (2006) on emergency preparedness and response;
  - (e) WHA60.22 (2007) on health systems: emergency-care systems;
- (f) WHA61.2 (2008) on implementation of the International Health Regulations (2005);
- (g) WHA64.10 (2011) on strengthening national health emergency and disaster management capacities and resilience of health systems.

#### Addressing the situation in French Polynesia

- 22. The Regional Committee for the Western Pacific adopted resolution WPR/RC46.R1 (1995) on the health and environmental effects of nuclear weapons. In the resolution, the Regional Committee recognized the potential threat to human health and ecosystems of any increased exposure to man-made radioactive material, recognized also the large quantities of long-lasting hazardous materials generated by the testing of nuclear weapons, deplored the testing of nuclear weapons anywhere in the world and particularly in the region, and called upon those Governments intending to test such weapons to desist from doing so immediately.
- 23. The Institut de radioprotection et de sureté nucléaire, one of the WHO collaborating centres, carries out environmental radioactivity monitoring which is relevant to the current radiological situation in French Polynesia. In its most recent

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report on the results of radiological monitoring of the environment of French Polynesia in 2015,<sup>4</sup> the Institut indicated that, following regular declines in levels of radioactivity since the end of the atmospheric weapon testing in 1974, the radiological situation was stable and continued to remain at a very low level, similar to previous years. The annual effective dose added by artificial and residual radioactivity, mainly due to caesium 137, is less than 5 microsieverts per year, which is less than 0.5 per cent of the dose associated with natural radiation in French Polynesia (approximately 1 millisievert per year). Those levels were lower than those currently measured in the northern hemisphere. Measurements performed throughout the year on both seawater and fish confirmed that there has been no impact from the Fukushima accident on the marine environment, water or food chain of French Polynesia.

24. The Institut's laboratory in French Polynesia has established relationships with regional scientific centres and public authorities. One of the outcomes of this collaboration is that information is provided to the general population in the Tahitian language, thereby contributing to public awareness on that issue, and, according to WHO, that has been well received by local authorities and the media.

<sup>4</sup> Available from www.irsn.fr/FR/expertise/rapports\_expertise/Documents/environnement/ IRSN\_Surveillance-Polynesie-2015.pdf (in French). All previous reports available from www.irsn.fr/fr/connaissances/environnement/surveillance-environnement/resultats/bilans-polynesie/pages/surveillance-polynesie-fran%c3%a7aise.aspx (in French).