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

Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

Addendum

**Mission to the Marshall Islands: comments by the State on the report of
the Special Rapporteur***

* Reproduced in the annex as received.

Annex

[English only]

Comments by the Marshall Islands on the report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and waste (A/HRC/21/48/Add.1)

1. The people and the Government of the Republic of the Marshall Islands (RMI) are intimately aware of the numerous and extreme complexities involved in assessing the consequences of the nuclear weapons testing program conducted in its territory. It is not a task that can be completed within a period of less than one year and with a country visit of just four days to the capital atoll of Majuro. Accordingly, the RMI greatly appreciates the understandings and insights regarding those consequences and their various impacts human rights, as contained in the report of the Special Rapporteur.

Comments regarding paragraph 12

2. The discussion of relocations and evacuations of people as a result of the nuclear weapons testing program is incomplete. For example, there is no mention of Kili in the discussion of the people of Bikini. After spending approximately two years at Rongerik Atoll, the people who had been removed from Bikini were indeed relocated to Kwajalein in March 1948. However, they stayed there only until November of that year before being relocated again to Kili Island, an isolated single land mass and not an atoll with a lagoon. Three families returned to Bikini in 1972 following a partial cleanup of the atoll conducted by U.S. agencies but a radiological survey of Bikini in June 1975 determined that food plants grown at the atoll contained too much radiation and residents were cautioned not to eat locally grown food. In August 1975, the U.S. announced postponement of the planned return of 150 additional Bikinians pending further analysis and evaluation of the results of the June survey. In October 1975, the Bikinians filed a lawsuit in U.S. District Court in Hawaii demanding a complete scientific survey of the atoll. In April 1977, Bikini Island residents were found to have a ten-fold increase in body burdens of Cesium-137 compared to a 1974 survey and the elevated dose rates were attributed to use of foods grown on Bikini. Another survey of Bikini residents in April 1978 showed a 75 percent increase in Cesium-137 body burdens compared to the previous year and evacuation of those people from Bikini began in August of that year with most being relocated to Ejit Island in Majuro Atoll. In October 1978, the Bikinians' lawsuit was dismissed on condition that the U.S. conduct a more comprehensive radiological survey of Bikini and several other northern Marshall Islands atolls. [NOTE: For reference, see the History webpage at <http://www.bikiniatoll.com/> and relevant entries in the Marshall Islands Chronology at <http://www.hss.doe.gov/Healthsafety/IHS/marshall/collection/ihp/chron/>]

3. It should also be noted that while the inhabitants of Rongelap were indeed evacuated in 1946, that was done as a precaution prior to the commencement of the nuclear weapons testing program and the detonation of the world's fourth and fifth atomic bombs during Operation Crossroads that year at Bikini. In preparation for those tests, U.S. military authorities moved the residents of Rongelap, and those of Wotho Atoll as well, to a tent camp on Lae Atoll where they stayed for approximately three months before being returned to their home atolls in August 1946.

4. The people who were living at Rongelap, Ailinginae, and Utrik Atolls at the time of the Bravo thermonuclear test on March 1, 1954, were evacuated to Kwajalein Atoll a few

days afterward so that they could undergo emergency medical care after being exposed to high levels of radioactive fallout from that test. After approximately three months on Kwajalein, and with no cleanup or efforts to reduce radiation levels at the atoll, the Utrik people were returned to their home atoll. Radioactive contamination of Rongelap was deemed too high for human habitation at that time and the people who had been evacuated from that atoll and from Ailinginae were moved from Kwajalein to Ejit Island in Majuro Atoll in June 1954. After approximately three years at Ejit, and with no cleanup or efforts to reduce radiation levels at the atoll, those people were returned to Rongelap in 1957.

5. In addition, it should be noted that while the 1985 move from Rongelap to Mejjatto Island in Kwajalein Atoll may have been done voluntarily, the concerns of the people at the time regarding the health risk to themselves and their children and grandchildren from continuing to live at the atoll were proven to be valid. A 1992 Memorandum of Understanding (MOU) between the U.S. government, the RMI Government, and the Rongelap Atoll Local Government provided that resettlement of the atoll will occur only if *no person* returning to Rongelap and subsisting on a diet of local foods only will receive an annual whole-body radiation dose equivalent of more than 100 mrem above background. Environmental studies conducted pursuant to that MOU demonstrated that radiological conditions at Rongelap Island and the neighboring islands in the atoll were out of compliance with the specified limit and that cleanup and remedial action was necessary in order to make those islands safe for human habitation. Subsequently, the U.S. Congress appropriated \$45 million to establish a Rongelap resettlement trust fund which has enabled a partial cleanup and construction of infrastructure to take place at the main island of the atoll to support the return of those who wish to do so. [See http://www.nap.edu/openbook.php?record_id=2352&page=97 and <http://www.hss.doe.gov/HealthSafety/ohp/nonsecure/O970000NF.PDF>]

Comments on paragraph 13

6. The relocation of the people of Enewetak to Ujelang occurred in 1947 so that their atoll could be used as the test site the following year for the world's sixth, seventh, and eighth atomic bombs during Operation Sandstone. U.S. officials represented to the people that the relocation would be temporary, in the likely time frame of three to five years, but it was not until 1980 that they were returned to live at Enewetak. The detonation of the world's first hydrogen bomb vaporized one of the islands in the atoll but other islands were also vaporized, in part or in whole, by other tests. At the time of their removal, the acreage of the atoll was 1,919.49 acres but when the people returned to Enewetak after a 33-year forced exile, only 815.33 acres were available for their use. Another 949.8 acres were too radioactive for use, and a total of 154.36 acres at six different islands had been vaporized. [See <http://nuclearclaimstribunal.com/enewetak.htm>]

7. It may also be noted that three islands at Bikini, comprising 69.67 acres, were vaporized as a result of the nuclear tests there. [See <http://nuclearclaimstribunal.com/bikinifin.htm>]

8. As noted in paragraph 4 above, Rongelap Atoll and Utrik Atoll, as well as Ailinginae Atoll, were all inhabited at the time of the Bravo thermonuclear weapon test on 1 March 1954.

Comments on paragraph 15

9. The basis is unclear for the statement that the detonations in the Marshall Islands accounted for "80 per cent of all atmospheric tests conducted by the United States." In fact, more such above ground open air tests were conducted at the Nevada Test Site in the continental United States than the total of 67 in the Marshall Islands. However, because the more powerful atomic and nuclear weapons were brought to the Marshall Islands for

testing, the combined explosive yield of the tests at Bikini and Enewetak was approximately 108 megatons, nearly 100 times the 1.1 megaton total of the atmospheric tests carried out in Nevada.

10. The statement in footnote 9 should be corrected to say that there were 43 nuclear explosive tests at Enewetak and to note that “An additional weapon was detonated at an altitude of 86,000 feet from a balloon that was launched from an aircraft carrier located approximately 85 miles northeast of Enewetak.”

Comments on paragraph 23

11. For clarification, it may be noted that the original estimate of 530 “excess” (i.e. radiation-related) cancers by the U.S. National Cancer Institute (NCI) was contained in a report prepared in 2004 for the Senate committee, as noted in footnote 15. The title of that paper was “Estimation of the Baseline Number of Cancers Among Marshallese and the Number of Cancers Attributable to Exposure to Fallout from Nuclear Weapons Testing Conducted in the Marshall Islands.” That paper stated, “These findings indicate that we expect the exposure to fallout to result in about a 9% increase in the total number of cancers.” [This 2004 report is available online at <http://www.yokwe.net/ydownloads/NCI-report.pdf>]

12. The 1.6% “might be attributable to the radiation exposure” figure resulted from a comprehensive effort to revise the 9% estimate. The later and lower estimate was contained in a paper entitled “Projected Lifetime Cancer Risks from Exposure to Regional Radioactive Fallout in the Marshall Islands,” one of several papers published in the August 2010 special issue of the journal *Health Physics*, which was dedicated to the subject “Radiation Doses and Cancer risks in the Marshall Islands from U.S. Nuclear Weapons Tests.” Those papers are not in the public domain due to copyright restrictions but a summary is available at <http://dceg.cancer.gov/reb/research/dosimetry/1/marshallislands/bg>.

13. It is not known for certain what prompted the decision to revise/reduce the estimate of radiation-related cancers. At U.S. Congressional hearings held in 2005, NCI researchers stated that “there are a large number of uncertainties associated with our estimates, only some of which could be reduced in the framework of a comprehensive study. In the long run, this would require a large, multidisciplinary effort undertaken over several years at considerable cost. The decision whether to move forward with such a study must be made with the understanding that the likelihood of reducing significantly the uncertainty regarding the total number of excess cancers is quite small. The incremental information thus gained would be of little practical significance in terms of public health management in the Marshall Islands. The NCI, therefore, does not believe that a comprehensive study should be conducted.” [See <http://legislative.cancer.gov/files/testimony-2005-07-19.pdf>]

14. An additional observation may be made about the NCI's use of data from soil sampling and *in situ* measurement surveys by the RMI Nationwide Radiological Study (NWRS). That study was conducted during the period 1990-1994 using funds provided to the Republic under the Section 177 Agreement specifically for medical surveillance and radiological monitoring activities. The NWRS survey data was presumably made available to the NCI by one of its own researchers who was a co-author on all eight of the papers published in 2010 and who directed the RMI Nationwide Radiological Study in the capacity of Resident Scientist. When that individual was requested in 1999 to provide the NWRS radiological data to the Nuclear Claims Tribunal, he refused to do so unless he was paid \$25,000 and provided written proof that the RMI national government formally accepts the findings of the NWRS.

Comments on paragraph 25

15. In reference to the statement “no known independent assessment exists on radiation levels in other areas of the Marshall Islands,” it may be noted the RMI Nationwide Radiological Survey mentioned in paragraph 14 above was intended to be independent of the U.S. Government and its agencies, which had conducted and controlled the results of all previous assessments. The Section 177 Agreement between the RMI and U.S., intended to provide a full settlement of all claims for damage from the nuclear testing program, specifically provided that \$3 million in annual proceeds from the Nuclear Claims Fund be used for conducting medical surveillance and radiological monitoring activities. In February 1988, the Marshall Islands Nitijelā (national parliament) adopted a resolution requesting the RMI Cabinet to contract with qualified scientists from countries other than the United States in order to investigate the levels of radiation on all islands within the Marshall Islands. From 1990 to 1994, the NWRS took *in situ* gamma spectrometry measurements and collected and analyzed soil, plant, and other food item samples from every inhabited island and from many of the larger uninhabited islands. At least one measurement or sample was taken at each of 432 of the more than 1,200 islands in the RMI, making the NWRS the most comprehensive radiological survey ever in the Marshall Islands. Unfortunately, certain incidents and circumstances relating to the conduct of the NWRS raised questions about the completeness, accuracy, and credibility of its December 1994 Summary Report and at least some of the individuals involved in authoring it and another resolution was adopted by the Nitijelā in September 1995 "To declare formally that the Republic does not accept as valid or accurate the findings of the Nationwide Radiological Study."

16. A relatively limited assessment of radiological conditions at Ailuk Atoll was conducted in 2001 in order to determine if any cleanup or remedial action might be necessary to avoid a dose exceeding the 15 mrem per year annual limit to the reasonably maximally exposed individual, as defined by the U.S. Environmental Protection Agency and adopted by the Nuclear Claims Tribunal. Aerial monitoring shortly after the Bravo test on 1 March 1954 had shown that radioactive fallout at that atoll was approximately equivalent to that at Utrik and consideration was given at the time to evacuating the people from Ailuk. Ultimately, it was decided not to do so both for a lack of ships, aircraft, and other resources and also because the fallout intensities at Ailuk declined compared to those at Utrik. The 2001 survey of the atoll was conducted by independent scientists and funded by the Nuclear Claims Tribunal. It focused on six large islands where people live and/or collect significant amounts of food and the results indicated the persistent presence of small but measurable quantities of Cesium-137 in soil and various food crop samples. The data collected generally supported the conclusion that residual contamination levels at Ailuk at that time satisfied the 15 mrem per year limit without remediation. However, one evaluation procedure identified a small area near the center of the main island where the reasonably maximally exposed individual could receive a dose greater than the 15 mrem per year criterion. A lack of resources have precluded any subsequent independent assessment of radiation levels in the RMI.

Comment on paragraph 28

17. In addition to the items mentioned, the traditional Marshallese diet includes numerous other seafood items as well as food crops such as breadfruit, banana, papaya, etc. While some imported food was provided to the people of Utrik and of Rongelap when they returned to their contaminated atolls following their exposures to fallout from the Bravo test, there was no program to resupply such a dietary supplement on a regular basis. Also, with regard to the statement in footnote 22, the evidence that plants take up radioactive Cesium-137 from the soil is quite extensive and shows that such uptake continues to occur at many islands to this day.

Comment on paragraph 30

18. Discussion of reproductive problems may have taken place during the site visit of the Special Rapporteur and his team to Ejit Island in Majuro Atoll but it should be noted that the community presently residing at that island is comprised primarily of the people of Bikini, who were moved there when they were evacuated from Bikini in 1978 (see discussion in foregoing comments on paragraph 12). Such problems are known to have occurred particularly among women who returned to Rongelap in 1957 and several of those women have been living in Majuro since leaving that atoll in 1985. For the record, it is suggested that discussions of their reproductive problems likely took place at a location in Majuro other than Ejit Island.

Comment on paragraph 40

19. Regarding the final sentence, the Nuclear Claims Fund has been effectively exhausted as its present balance is less than \$50,000, an amount slightly less than the total owed on award payment checks that remain uncollected due to death of the awardee or other reason(s). The Nuclear Claims Tribunal made its last compensation award and initial partial payment in late 2008 and suspended awards and payment shortly thereafter. It remains in operation at a very basic level with two part-time staff supported by funding from the RMI Government.

Comment on paragraph 42

20. In addition to the information about the extent of radioactive fallout and the advances in science and knowledge of the effects of exposure, the assessment of the full impact of nuclear testing on people and the environment necessarily depends on the quantification of actual damages by the Nuclear Claims Tribunal. The amount of the “full settlement” provided under the Section 177 Agreement was a figure that had no basis in any prior effort to assess such actual damages. In addition, it is inaccurate to say that the RMI’s Changed Circumstances petition “was rejected in 2004.” A report dated November of that year presented the U.S. Administration’s evaluation of the RMI’s request, concluding that it did not meet the criteria of “changed circumstances” as required by Article IX of the Section 177 Settlement Agreement and that there was no legal basis under the Settlement Agreement for considering additional payments. The U.S. Congress, to which the RMI petition and the Administration’s evaluation of it were submitted and which has the authority to appropriate funds, has yet to take any action or make any formal determination which can be construed as final in response to the petition.

Comments on paragraph 50

21. The “work-force” at the primary medical care centers on Ebeye and Majuro is “mainly expatriate” but includes no American doctors or nurses. In addition, RMI Ministry of Health officials advise that there are 45 beds at the medical center on Ebeye Island and 90 beds at the hospital in Majuro.

Comments on paragraph 52

22. The \$600 million figure cited by the U.S. as having been “spent in various technical programmes” also includes various ex gratia payments, resettlement trust funds, and compensation paid from annual proceeds of the Nuclear Claims Fund under the Section 177 Agreement.

Comments on paragraph 53

23. The 177 Health Care Program is managed by Trinity Health International, a U.S.-based organization specifically contracted by the RMI Ministry of Health for that purpose. Funding of the program is provided by the U.S. on an annual basis through the Department of the Interior. The Section 177 Agreement states that the program shall provide health care related to the consequences of the nuclear testing program, as contemplated in U.S. Public Law 96-205. That law directs that medical care and treatment be provided for the people of Bikini, Enewetak, Rongelap, and Utrik “and for the people of such other atolls as may be found to be or to have been exposed to radiation from the nuclear weapons testing program.” Accordingly, individuals to whom the Nuclear Claims Tribunal awarded compensation for a medical condition deemed to have resulted from the testing program are also enrolled in the 177 Health Care Program for treatment of that particular condition. In addition, the RMI is unaware of any determination to “exclude people from Rongelap who were returned in 1957 until 1985” from either the Department of Energy or the 177 health care programs. To the contrary, the people who were evacuated on an emergency basis from either Rongelap or Utrik following the Bravo test in 1954 are eligible for medical care and treatment from both of those programs.

Comments on paragraph 58

24. The statement that “about one-third” of the island has been remediated refers only to the main island of Rongelap which is less than 600 acres in size. The traditional homelands of the people of Rongelap include the other 60 islands in that atoll as well as the 41 islands in the neighboring atolls of Rongerik and Ailinginae, comprising more than 2,500 additional acres. Accordingly, it should be acknowledged that far less than 10% of the total acreage in the three atolls has been remediated.

Comments on paragraphs 62-65

25. In March 2004, the U.S. House of Representatives adopted by a 408-0 vote a resolution to commemorate the 50th anniversary of the Bravo test and to “recognize more than 5 decades of strategic partnership between the United States and the people of the Marshall Islands in the pursuit of international peace and security.” That Concurrent Resolution, H. Con. Res. 364, states that “the Bravo test and the 12-year nuclear testing program has been the defining experience of the modern era for the people of the Marshall Islands.” The people and the Government of the Republic of the Marshall Islands look forward to a time when their experiences will no longer be defined by the nuclear testing program but rather by those aspirations memorialized in the Preamble to their Constitution: pride in our forefathers and their noble quest to build their own distinctive society; the right to live in peace and harmony, subscribing to the principles of democracy; and the desire to seek from other peoples the same friendship, mutual understanding, and respect for our individual idealism and common humanity that we extend to them. The Preamble also says, “All we have and are today as a people we have received as a sacred heritage which we pledge ourselves to maintain, valuing nothing more dearly than our rightful home on these islands.”

26. The RMI acknowledges that the Recommendations in the report of the Special Rapporteur will require considerable effort to implement but views those recommendations as a detailed way forward to redefining the modern era for the people of the Marshall Islands. Achieving those recommendations is a most worthy goal and the RMI commits itself to doing its part and to working cooperatively with the Government of the United States and with the international community toward that end.