September 13, 2013

The Honorable Ban Ki-moon, Secretary-General
The United Nations
c/o United National Non Government Liaison Service

Dear Secretary,

We write to you in urgency. The situation around the world at radioactively contaminated sites is not good, and it is clear that the situation at the Fukushima Daiichi reactor site is progressively deteriorating, not stabilizing. We write because of your personal interest in a sustainable future, but also because you are the Executive for global organizations charged with protection of the public's health, public safety and the common good when it comes to radioactivity, radiation and nuclear technology. Together we call upon you to act immediately to:

1. Prevail upon international organizations and Japan to replace TEPCO with a worldwide engineering group to take charge of the Fukushima nuclear disaster.

2. Appoint a group of experts independent from either TEPCO or IAEA to advise the new engineering group to establish a risk informed stabilization, containment and remediation plan for Fukushima.

3. Create a well-funded oversight panel of local citizens and local elected officials to ensure transparency and accountability of both of the above groups, as well as to facilitate well-informed self-determination and further recovery of the impacted populations.

4. Call upon the Japanese government to admit financial costs in excess of $500B USD. http://mobile.reuters.com/article/idUSBRE92417Y20130308?irpc=932; And Gundersen, Arnold, http://www.amazon.co.jp/福島第一原発-―真相と展望-集英社新書-アーニー・ガンダーセン/dp/4087206289/ref=sr_1_1?ie=UTF8&qid=1378938739&sr=8-1&keywords=gundersen

5. Call upon the Japanese government to assure adequate funding for decontamination of the prefecture and site.

6. Call upon the Japanese government to cease the massive incineration program underway in Japan which carts and burns rubble from the earthquake and tsunami, much of it toxic and some of it radioactive, in municipal incinerators.

In addition to the action plan outlined above, we have broader concerns about radiological accounting and regulation that United Nations agencies such as the World Health Organization (WHO), International Atomic Energy Agency (IAEA) and United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) have already engaged in. With regard to the Fukushima nuclear disaster other UN Agencies, like the High Commission on Human Rights, have recognized how this accounting is not serving humanity.

7. **Any projection of total cancers or deaths from the Fukushima disaster is premature; and any previous publications need to be viewed as "speculative" at best.** It is clear now that the Fukushima Daiichi nuclear disaster is far from over, and that there can be no credible estimate of total environmental or human health impacts because the radiological release has not ceased and

the outcomes from exposing large populations to low doses over long time frames is unclear. A final estimation of the radiological release from the Fukushima Daiichi site, of necessity lies in the future; perhaps the distant future. Therefore, it remains of utmost importance to monitor radioactivity and provide and increase protective measures to individuals and communities. *When* future updates to such studies are done, it must be incumbent upon the researchers to revise previous findings, not merely extend them, since it is known that key data from the past were not included--such as the World Health Organization omitting the radiation exposures to members of the public prior to being evacuated (the first 4 days of the disaster; Becker, Oda 2012: http://www.greenpeace.org/international/Global/international/briefings/nuclear/2013/2012_OdaBecker.pdf). In addition Japanese physicians and scientists in Japan must be allowed and supported to treat and report Fukushima related health consequences. Nuclear calamities to date result in institutional pressure to under report and even distort patient health data and other evidence (see, for example: The Advisory Committee on Human Radiation Experiments, Final Report http://archive.org/details/advisorycommitte00unit and Steven Wing et al. (1997). "A reevaluation of cancer incidence near the Three Mile Island nuclear plant: the collision of evidence and assumptions". *Environmental Health Perspectives* (Brogan & Partners) **105** (1): 52–57.) Such institutional pressure is now contributing to a downplaying of the true impact of the Fukushima accident. Further, slavish reliance on past exposure assumptions is not advisable, not only because these assumptions could have been subject to this type of pressure, but also because every nuclear catastrophe/exposure is different; according to the UN Special Rapporteur on Health, who references applicable research in his report: "Though experiences from the Three Mile Island and Chernobyl accidents provide invaluable guidance, a narrow appreciation of the accidents would not provide proper guidance." [Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Anand Grover, Mission to Japan (15 - 26 November 2012) p 9]

8. **A new formulation of the radiological risk coefficient assigned to radiation exposure is needed, as well as a rigorous discussion of the option for more than one such coefficient.** Unfortunately, outdated assumptions are still being applied to what is happening to the people of Japan, and others being exposed to radioactivity from Fukushima (and elsewhere). More accurate understanding of the impact of ionizing radiation from both internalized radionuclides, and also across the life-cycle, has not yet been incorporated into risk estimates."Old" (inaccurate) assumptions do not account for disproportionate harm to females in general, and young children in particular (National Academy of Sciences, BEIR VII page 311, Tables 12D-1 and 12D-2 Lifetime Attributable Risk of Cancer Incidence and Mortality). Official estimates are beginning to acknowledge this reality [World Health Organization, 2013, Health risk assessment from the nuclear accident after the Great East Japan Earthquake... see page 54 section 5.2.2 Results of lifetime risk calculations. http://www.who.int/ionizing_radiation/pub_meet/fukushima_risk_assessment_2013/en/index.html ; UNSCEAR press release (http://www.unis.unvienna.org/unis/en/pressrels/2013/unisinf475.html) and video (http://www.youtube.com/watch?v=gyLDNq3VBMU&feature=youtu.be)] however, this impact is not yet incorporated in the regulation of radiation exposure worldwide. In addition, it is no longer valid to omit the impact of internal exposure; risk estimates can no longer assume different types of radiation outside the body have equivalent health impact once inside the body. (See: Yablokov, 2013, "A Review and Critical Analysis of the "Effective Dose of Radiation" Concept" Journal of Health & Pollution Vol. 3, No. 5 — pg 13--28.) Finally, it is not clear that exposures in utero, during the initial phases, or over time will be included in the estimate of health risk or consequences from Fukushima.

9. **The global organizations charged with radiological analysis and regulation should be generating a real base of monitoring data from Fukushima. Contamination levels in both humans and the environment need to be woven into any health assessments.** Reliance on dose reconstruction alone is insufficient and collection of biological data will help researchers observe, not just predict, health outcomes. It is incumbent upon these global organizations, given the amount of information now known about disproportionate impacts from internal exposure; and the disproportionate harm across the lifecycle (human and otherwise) to collect data and calculate exposures directly, not from extrapolations mired in outdated and incorrect assumptions. The UN Special Rapporteur supports collection of biological data to assess internal exposure: "Refrain from restricting examination for internal exposure to whole-body counters and provide it to all affected population [*sic*], including residents, evacuees, and to persons outside Fukushima prefecture;" (Grover 2013, p 23)

10. **In general, public health concerns need to drive public spending and health assessments; principles of biology need to drive health research not scientific investigation for science's sake.** People need proper medical treatment, not data-mining. Japanese People, especially parents, should be told the truth about the medical effects of radiation exposure and have full and open access to the tests that are being performed on them to detect health abnormalities, such as thyroid cancer. All investigations into health abnormalities should include all cancers and other diseases related to radiation exposure. The world must not re-commit the post-war crimes of Hiroshima and Nagasaki, where the radiation victims known as Hibakusha, were only studied by the West rather than helped to heal.

11. **Where biological mechanisms or results are unclear, precaution should be used and not be superseded by principles of physics alone because physics is only one of the forces acting to impact health.** Research finding negative health impacts of low doses should be accounted for, not disregarded. The UN Special Rapporteur, after reviewing such research, recognizes this**:** "…disregarding these findings diminishes the understanding of and increases vulnerability to health effects of long-term exposure to low-dose radiation." (Grover 2013, p 6) Unfortunately these concerns extend far beyond Japan today, and per new projections (shown graphically here), impacts are still expanding: http://iopscience.iop.org/1748-326/7/3/034004/article?v_showaffiliations=yes

12. **Those who are displaced from their homes due to radioactivity** need to have good options regarding how and where to live that are respectful of their culture and traditions. Consequently, the Special Rapporteur's report says any relief package should "(i)nclude cost of reconstruction and restoration of lives" (Grover 2013 p 24) This starts by providing them information about radiation in the context of other determinants to health, and this information should not be in the control of parties with financial interests in the nuclear industry.

13. The Fukushima disaster has inflicted suffering from family, social and economic disruption and loss of cultural traditions including food sources and family shrines. These losses are causing visible impacts on the mental and physical health of children, parents, grandparents, and whole communities. While it is radioactivity that will prevent their return to that life, there are many dimensions in which harm has been done. Those responsible for constructing and operating the reactors, and accumulating irradiated fuel, should be accountable to the people impacted. The Special Rapporteur's report says legal structures should "(e)nsure that TEPCO and other third parties are held accountable for the nuclear accident and that their liability to pay compensation or reconstruction efforts is not shifted to taxpayers."

14. **The Uranium that was in the reactors at Fukushima Daiichi originated from Aboriginal Lands in Australia, where the traditional people opposed the uranium ever being removed from the ground.** It is time for the decision structure of our United Nations to honor and include the wisdom of those who truly, if heard, could have prevented this disaster.

15. **The Memorandum of Understanding between the World Health Organization and International Atomic Energy Agency should be dissolved permanently.** The charge of the IAEA is to spread "peaceful" uses of nuclear technology. This official mandate prevents IAEA from being independent assessors of health impacts of the same technology.

Secretary, it is your job to ensure that these reasonable concerns are addressed by action.

Thank you,

Helen Caldicott, M.D.
Founding President of Physicians for Social Responsibility

Alexey Yablokov, Dr. Biology
Chair, Programme for Nuclear and Radiation Safety
International Socio-Ecological Union, Moscow

Yuri Scherbak
Ambassador of Ukraine
Member of the World Academy of Art and Science
Author of "Chernobyl: a documentary story" and report on Fukushima

Dr. Sebastian Pflugbeil
President, German Society for Radiation Protection

Arnie Gundersen
Chief Engineer, Fairewinds
Burlington, Vermont

S. David Freeman
Consultant; Formerly Chairman Tennessee Valley Authority, and General Manager
Los Angeles Department of Water and Power, New York Power Authority and
Sacramento Municipal Utility District

Steve Wing, Ph.D.
Department of Epidemiology
University of North Carolina, Chapel Hill

Steven Starr
Senior Scientist, Physicians for Social Responsibility
Clinical Laboratory Science Program Director
University of Missouri

Dr. Natalia Mironova
President of the Movement for Nuclear Safety

Natalia Preobrazhenskaya, D. Ph Biology
Chair, The Save Children of Ukraine from Chernobyl Catastrophe Charitable Fund
Member, The Public Councill of the Ministry of Health, Ukraine, and Peace Ambassador

Benjamin K. Sovacool, Ph.D
Professor of Business and Social Sciences
Director of the Center for Energiteknologier Danmark
Associate Professor of Law, Institute for Energy and the Environment
Vermont Law School

Jeffrey J. Patterson, DO
Professor Emeritus, UW School of Medicine and Public Health
President, Physicians for Social Responsibility

Alfred C. Meyer, Board Member
Physicians for Social Responsibility
Friends of Chernobyl Centers U.S.

Dr. Alfred Koerblein
Senior Scientist, Umweltinstitut Muenchen, retired
Germany

Lynn Howard Ehrle, M. Ed,
Chair—International Science Oversight Board
Plymouth Michigan

Wolfgang Koehnlein
Retired, University of Muenster
Professor of Radiation Biology and Biophysics

D. M. Grodzinsky, DrSci.
Full Member and Councillor of the Presidium of the National Academy of Sciences of Ukraine, Professor, and Head of the Department of biophysica and radiobiology of Institute of cell biology and genetic engineering of the National Academy of Sciences of Ukraine and Ex-Head of the National Commission on Radiological Protection of Ukraine