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Dr. Per Bakken
Head, UNEP Chemicals Branch, DTIE
11-13 chemin des Anémones
CH 1219, Chatelaine – Geneva, Switzerland
Fax: (+41 22) 797 3460
Email: mercury@chemicals.unep.ch

Dear Dr. Bakken:

I am writing on behalf of Dartmouth College, Hanover, New Hampshire, United States to express my interest in joining the UNEP Global Mercury Partnership. Based on the stated goals of the Partnership, I believe that I will provide expertise and scientific knowledge that is directly relevant to the development, implementation, and monitoring of the international mercury treaty. Dartmouth College has also recently applied to be an accredited NGO observer to sessions of the international negotiating committee (INC) to prepare a global legally binding instrument on mercury. Dartmouth is a non-governmental academic institution with faculty members and collaborating academic researchers that have considerable expertise in the science of mercury.

Dartmouth advances mercury science through the Department of Biological Sciences and the Geisel School of Medicine where faculty members and researchers have been leaders in mercury research. Many of these scholars are collaborators in the Dartmouth Toxic Metals Superfund Research Program (<http://www.dartmouth.edu/~toxmetal/>). This program uses an interdisciplinary approach to investigate the ways mercury affects the environment and human health. Scientific findings are published in peer-reviewed journal publications. Research outcomes are communicated to local communities, grass roots organizations, and state and federal agencies through videos, fact sheets, presentations and workshops.

Within the Dartmouth Toxic Metals Superfund Research Program, Dartmouth leads a research program focused specifically on mercury in coastal and marine ecosystems: the Coastal and Marine Mercury Ecosystem Research Collaborative (C-MERC). C-MERC is an international collaborative of more than 50 scientists and policy stakeholders that is identifying and analyzing existing data to address critical gaps in knowledge about the fate, transport, and uptake of mercury in coastal and marine ecosystems. The scientists are at institutions in the US, Canada, Europe, and South America and the stakeholders are

from regional, national, and international government agencies and NGO's. CMERC participants have produced two human health related papers which were published in the June issue of *Environmental Health Perspectives*. Nine additional papers will be published in the November 2012 issue of the journal, *Environmental Research*. These are listed in Attachment 1 below. We anticipate that the CMERC papers will have direct relevance to the International Negotiating Committee and would like to formally submit them to the mercury negotiations secretariat prior to the INC-5 meeting in January 2013. The CMERC program also includes outreach and communication to stakeholders and journalists through printed publications for non-scientists, online materials, press releases, workshops, and briefings.

Dartmouth College is particularly interested in participating in the Air Transport and Fate Mercury Research Area because of the important links between atmospheric sources and ecological and human exposure. We believe that the expertise and information represented by C-MERC scientists and products will contribute to the partnerships efforts to include research on aquatic fate, particularly methylmercury fate in marine ecosystems and bioaccumulation in fish that humans consume.

I am fortunate enough to lead the CMERC program and will serve as Dartmouth's primary representative to the UNEP process. My background as an ecotoxicologist in mercury research spans more than 17 years and has focused on the fate and effects of metal contaminants in aquatic food webs both in freshwater and estuarine ecosystems.

Thank you for your thoughtful consideration of this application. If you have any questions, please do not hesitate to contact me. We look forward to the opportunity to provide scientific contributions to the UNEP-led international mercury treaty.

Sincerely,



Celia Y. Chen, Ph.D.
Research Professor

Attachment 1: Dartmouth College – Coastal and Marine Mercury Ecosystem Research Collaborative (CMERC)

List of Publications

Environmental Health Perspectives

Karagas MR, Choi AL, Oken E, Horvat M, Schoeny R, et al. 2012 Evidence on the Human Health Effects of Low-Level Methylmercury Exposure. *Environ Health Perspect* 120(6): doi:10.1289/ehp.1104494

Oken E, Choi AL, Karagas MR, Mariën K, Rheinberger CM, et al. 2012 Which Fish Should I Eat? Perspectives Influencing Fish Consumption Choices. *Environ Health Perspect* 120(6): doi:10.1289/ehp.1104500

Environmental Research

Costa, M., Landing, W., Kehrig, H., Barletta, Holmes, C., M., Barrocas, P., Evers, D., Buck, D., Vasconcellos, A., Hacon, S., Moreira, J., Malm, O., Are we changing mercury cycling patterns in tropical and sub-tropical coastal environments? *Environ. Res.* (2012)

Davis, J., Looker, R., Yee, D., Marvin-diPasquale, M., Grenier, L., Austin, C., McKee, L., Greenfield, B., Brodberg, R., Blum, J., 2012. Reducing methylmercury accumulation in the food webs of San Francisco Bay and its local watersheds. *Environ. Res.* In review.

Driscoll, C.T., et al., Nutrient supply and mercury dynamics in marine ecosystems: A conceptual model. *Environ. Res.* (2012), <http://dx.doi.org/10.1016/j.envres.2012.05.002>

Harris, R., Pollman, C., Landing, W., Evans, D., Axelrad, D., Hutchinson, D., Morey, S.L., Rumbold, D., Dukhovskoy, D., Adams, D., Vijayaraghavan, K., Holmes, C., Atkinson, R.D., Myers, T., Sunderland, E.M., 2012. Mercury in the Gulf of Mexico: sources to receptors. *Environ. Res.* In review.

Harris, R., Pollman, C., Hutchinson, D., Landing, W., Axelrad, D., Morey, S.L., Dukhovskoy, D., Vijayaraghavan, K., 2012. A screening model analysis of mercury sources, fate and bioaccumulation in the Gulf of Mexico. *Environ. Res.* In review.

Kirk, J., Lehnher, I., Andersson, M., Braune, B., Chan, L., Dastoor, A., Gleason, A.L., Loseto, L., Steffen, A., St. Louis, V., 2012. Mercury in Arctic marine ecosystems: sources, pathways and exposure. *Environ. Res.* (2012)

Lambert, K.F., et al., Integrating mercury science and policy in the marine context: Challenges and opportunities. *Environ. Res.* (2012), <http://dx.doi.org/10.1016/j.envres.2012.06.002>

Mason, R., Choi, A., Fitzgerald, W., Hammerschmidt, C., Lamborg, C., Sunderland, E.M. (2012) Mercury Biogeochemical Cycling in the Ocean and Policy Implications. *Environmental Research*, in press.

Sunderland, E.M., et al., Mercury sources and fate in the Gulf of Maine. *Environ. Res.* (2012), <http://dx.doi.org/10.1016/j.envres.2012.03.011>

UNEP GLOBAL MERCURY PARTNERSHIP REGISTRATION FORM*

PARTNERSHIP AREA

Please check partnership areas that your organization intends to contribute to:

- ☐ artisanal and small scale gold mining
- ☐ mercury cell chlor alkali production
- ☒ mercury air transport and fate research
- ☐ mercury in products
- ☐ mercury releases from coal combustion
- ☐ mercury waste management
- ☐ mercury supply and storage

Please indicate in your support letter how your organization intends to contribute to each of the indicated partnership areas.

ORGANIZATION NAME	Dartmouth College
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TYPE OF ORGANIZATION	☐ Government

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https://www.yunbaogao.cn/report/index/report?reportId=5_15077

