Mercury’s Global Threat: Officials Agree to Curb its Use
Ministers and high level officials from 140 countries agreed at a United Nations conference recently in Kenya to pursue voluntary measures to reduce environmental and health risks from mercury, a heavy metal which can cause a wide range of medical problems such as harm to the nervous system, cardiovascular system, digestive tract, kidneys, and cause birth defects and affect the development of children.

Participants of the conference, a United Nations Environment Program Governing Council meeting, endorsed the idea of creating partnerships between governments, international organizations, non-governmental organizations and the private sector to reduce mercury pollution with the first pilot projects to be in place by September of this year.

The partnership mechanism will focus on mercury wastes and surplus stockpiles as well as promote research to improve understanding on how mercury moves around the planet. The conferees also agreed to promote "best available techniques" for reducing mercury emissions from chemical factories and other industrial sites. Officials also asked the UNEP to conduct a study on the amounts of mercury being traded and supplied around the world.

Consumption of fish and marine mammals is the single most important source of human exposure to methyl mercury, the most toxic form of mercury. Higher predatory fish such as swordfish and sharks have the most significant form of methyl mercury. This trend is particularly troubling in developing countries, which account for the majority of the world's fish consumption.

Despite the risks, mercury continues to be used in a variety of products and processes all over the world including small-scale mining of gold and silver; chlorine and caustic soda production; manometers for measurement and control; thermometers; electrical switches; fluorescent lamps; and dental amalgam fillings.

"Because mercury is a metal, it does not fall under the chemical family which is regulated under the Stockholm Convention on persistent organic pollutants (POPs). This meeting was critical for the international community to come to agreement on how to curb the use of mercury to protect human health and we're pleased to see that the international community is moving forward," said Warren Evans, Director of Environment Department, World Bank, who attended the meeting.

In Kazakhstan, the Bank is cleaning up mercury contamination in and around the Nura River which is the water supply for several hundred thousand people. The project includes cleaning up an abandoned synthetic rubber plant that is the main source of the contamination.

In Azerbaijan the Bank is working with the local government to decontaminate a heavily polluted area from an old factory site. It involves testing pilot-scale sludge treatment; developing and applying a low-technology method for mercury recovery; waste transportation; construction of a new facility.

UNEP’s “Global Mercury Assessment” (2002) found that mercury is now found all over the world at levels that adversely affect humans and wildlife. The problem has become global as regions with no significant mercury releases of their own, such as the artic, are still affected due to transcontinental transport of mercury.
The report says that coal-fired power stations and waste incinerators now account for around 1,500 tons or 70 percent of new, quantified manmade mercury pollution, releasing an estimated 400-500 tons of mercury annually to the air, soil, and waterways.

An estimated 2,000 tons of new mercury is released to the environment annually, mainly from coal-fired power stations, waste incinerators, and as a result of artisinal mining of gold and silver.

Manmade sources of mercury come in the form of airborne particles released when coal, oil or natural gas is burned as fuel, or waste containing mercury is burned. The airborne mercury can then fall to the ground through rain and snow contaminating soil or bodies of water. Lakes and rivers can also be contaminated through industrial waste or municipal sewage containing mercury which accumulates in fish.

In the United States, the US Environmental Protection Agency estimates that that as many as 7-8 percent of women between reproductive ages of 15-44 may exceed doses as a result of diets which include 100 grams of fish and shellfish per day. And, according to the National Academy of Sciences, approximately 60,000 newborns are at risk in the US alone because of mercury absorbed during pregnancy.

The UNEP report also shows levels in fish exceeding a risk-based threshold (based upon Japan's and U.S. recommendations) in quite a few developing countries, including Cote d'Ivoire, Ghana, India, Mauritius, Philippines, Slovak Republic, and Thailand as well as Japan, Korea, Sweden.

The World Bank is supporting at least three mercury pollution clean-up projects in Azerbaijan, Kazakhstan, and China.

Governments who attended the UNEP’s meeting in Nairobi agreed to review the success of this new program in two years time to assess whether further action is needed. If so, they will review a wide range of options including the possibility of a legally binding treaty.