



## UN Environment's Work on Technology

Some Success Stories as of 10 October 2017

## 1. Waste to Value: Using waste to fuel cement factories in Mozambique



Mozambique faces a national challenge to tackle waste. The country generates around 2.5 million tons of municipal solid waste per year. Climate Technology Centre & Network (CTCN), addressed this serious problem by providing technical assistance to two cities, Maputo and Matola for transforming waste to energy for the cement sector.

As a result of this technology transfer, Mozambique's national priority to improve energy use and waste management is advanced, several health problems are eliminated, water pollution is reduced and several jobs have been created. Based on the analysis, the technology provided has the potential to reduce **22,979 tCO<sub>2</sub>e/year by 2040**. Source: [CTCN](#).

## 2. Plastic Zero: Turning the tide on plastic in Samoa

Marine litter is an environmental, economic, health and aesthetic problem especially for the Pacific Island Countries and Territories. GPA provided support through Global Partnership on Marine Litter (GPML), for a waste minimization demonstration project in Samoa to demonstrate best practice measures for effective waste management and minimization of marine debris.

As a result of this good practice, awareness of sound waste management practices is raised and income is provided to many communities from

the sale of items created from the waste materials. Due to this project's success, projects have spin-off in Solomon Islands as well. Source: [GPML Marine Debris Demonstration Project](#).

## 3. Shine On: Transforming and Strengthening the Global Solar Water Heating Market



Solar water heating (SWH) is a clean, reliable and cost-effective technology that reduces dependence on fossil fuels for thousands of homes, businesses and countries. GSWH Initiative was set up to promote SWH in countries that have not yet profited from this technology by accelerating global commercialization and ensuring sustainable market transformation of SWH. [Solarthermalworld](#), a web portal for solar thermal professionals and stakeholder was set up and a network of international and regional institutions was established to serve as knowledge hubs to develop/disseminate knowledge products and services.



As a result of this project, nearly **5.8 million m<sup>2</sup>** of solar water collectors have been installed in the five project countries (*Albania, Chile, India, Lebanon and Mexico*). Hot water is available to consumers throughout the year with reduced energy bills and lower carbon footprint. Source: [Global Solar Water Heating Initiative](#).

#### 4. Improved Gold Recovery: Mitigating Mercury Emissions from Artisanal Gold Mining in Indonesia

Artisanal and small-scale gold mining is a complex global development issue since it is the largest global demand sector for mercury (1400 tonne/year). In Indonesia, around 300,000 small scale miners depend on this profession irrespective of suffering permanent health damage. This project aims to reduce mercury use in Artisanal and Small-scale gold mining in Indonesia and introduce better mercury recovery practices by building capacity for mercury-free ASGM methods and raising awareness on the risks of mercury use at the national, regional, and local level.

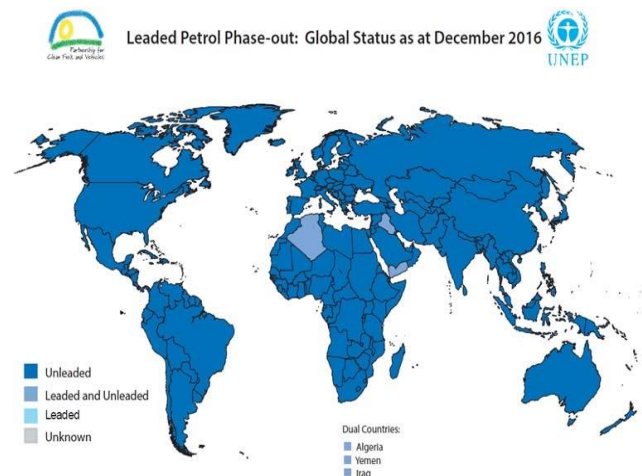


As a result, mercury releases to the environment were reduced by an estimated **3,000 kg in a single year** by training small-scale gold miners to use improved processing techniques. This solution has

dramatically reduced the impact of mercury on human health and the environment. Source: [Global Mercury Partnership](#).

#### 5. Moving Ahead - Phasing out lead from Gasoline worldwide

Leaded petrol is responsible for more than 90% of human lead exposure. The World Health Organization estimates that **15-18 million children** in developing countries suffer from permanent brain damage due to lead poisoning. PCFV launched its global campaign to eliminate leaded petrol. The campaign has been successful and around **99.9%** of the petrol produced for vehicles worldwide is now unleaded. In 2011, only 6 countries (*Myanmar, Iraq, Afghanistan, Algeria,*



*Yemen, North Korea*) used small amounts compared to the 82 countries that were leaded in 2002 when the PCFV was formed

As a result of this initiative, several benefits like improved health (avoiding 1.2 million premature deaths avoided per year), technological solutions for emissions reduction (catalytic converters), lowered crime rates (to 58 million less male incarcerations) and economic global benefits over \$2.4 trillion per year, equivalent to 4% GDP have been achieved. Source: [PCFV](#).





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