

Ceramic Water Purifier

Improved drinking water, Improved lives



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Nexus member

Hydrologic Social Enterprise

Objectives

- Reduce health hazards due to bad drinking water
- Protect forest ecosystems and biodiversity
- Mitigate global warming by limiting greenhouse gas emissions

Targets

- Families that do not have access to clean water
- Families that use charcoal and wood for boiling water
- Rural merchants and rural households

Context and stakeholders

In Cambodia, wood provides for more than 80% of people's energy needs. **People have traditionally relied on wood for cooking and for boiling water.**

Today, there is **no sustainable management of wood resources**, which has become a major issue due to the rapid pace of population growth and development.

Inappropriate water treatment, and the use of wood and charcoal to boil water have direct **negative health impacts** on users, most of which are women. Indoor air pollution from the use of wood and charcoal to boil water, is responsible for respiratory, heart and eye problems. According to UNICEF, indoor air pollution, mostly from burning biomass for cooking and heating, kills 1.6 million women and children each year.

Hydrologic is manufacturing and distributing **the Ceramic Water Purifier (CWP)**, which is a low cost alternative to boiling water. This provides both monetary and health benefits for users in addition to reduced burden on environment.

Key facts and figures

- Plan to disseminate **700,000 ceramic water purifiers** over 2011-2017
- Plan to reach approximately **3,360,000 persons** (4.8 persons/household)
- **1,834,862 tons CO2 eq** emissions reductions over 7 years
- **99.99%** reduction of e-coli vs. untreated water
- Diarrhea reduction typically **40-45%** in the field
- Economic saving for families vs boiling water is **75 USD/year**



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Impacts and benefits

Environmental benefits

On an environmental level, most of the fuel wood in Cambodia comes from unsustainable and illegal logging of local forests. **Burning less fuel wood cuts greenhouse gas emissions and reduces the pressure on national forests.** The CWP project helps to fight against deforestation and degradation of local resources by promoting improved domestic equipment in a sustainable, market-based manner.

Social benefits

In terms of social benefits, the CWP reduces the need for boiling water, thus **improving indoor air quality and users' health.** Using less fuel wood means **less time spent by poor families and children gathering wood**, time that can then be dedicated to education or income generating projects. Furthermore, the money saved by families on fuel expenses, medicines or loss of productivity due to sickness from poor drinking water quality can now be spent on education or new economic activities.

Economic benefits

Since the CWP will be manufactured locally, this project creates **new job opportunities for local communities in production, distribution and sales.**




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Action plan (2009-2016)

- **Local manufacturing:**
 - Local job creation for manufacturing of the CWP
 - Continuous improvement of the manufacturing process and quality control
- **Nationwide sales and distribution:**
 - Development of CWP retailers and middlemen network
- **Research and development:**
 - Monitoring and continuous evaluation of end user aspects

Project Developer and partners

	<p>Hydrologic Social Enterprise, the producer of Tunsai water filters, is owned by International Development Enterprises (IDE) Cambodia. It has established a water filter supply chain, production facility, and sales force.</p>
<p>Partners</p>	<ul style="list-style-type: none"> ● IDE ● WaterSHED ● Path ● GIFT

Contact

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Nexus-Carbon for Development is an alliance of pro-poor project developers whose shared vision is that the carbon market should tackle both climate change and poverty in a fair and transparent way. As a global alliance of social ventures, Nexus acts as a peer-to-peer services platform, creating synergies between its members and providing awareness raising, capacity building, carbon project documentation, and carbon asset management. www.nexus-c4d.org