CAMBODIAN DESIGNATED NATIONAL AUTHORITY

SUSTAINABLE DEVELOPMENT (SD) COMPLIANCE CHECKLIST

FOR PROPOSED CLEAN DEVELOPMENT MECHANISM (CDM) PROJECTS

In filling in the following SD Compliance Checklist, refer to the *Sustainable Development Criteria and Assessment Matrix* available from the Cambodian DNA Secretariat, and explain how your project meets each of the sustainable development criteria listed.

Please attach all supporting documents where relevant (EIA report, stakeholder consultation report, environmental management plan, investment project approval, etc.).

Please fill out relevant information for each criteria below.

ELIGIBILITY CRITERIA	EXPLANATION OF HOW YOUR PROJECT MEETS EACH CRITERION
1. Environmental Protection and Improvement	
1.1 Contribution to mitigation of global climate change	In Cambodia 65.1%[1] of the rural population uses boiled water for drinking water. Biomass cannot be considered as a sustainable source of energy as the fraction of non-renewable biomass was determined to be only 77%.[2] Water purification at kiosk level using UV (which is considered as a low greenhouse gas technology)[3] eliminates the need for boiling water and further demand for water disinfection is suppressed. This leads to a significant emission reduction: In average one water kiosk (typically used by 1,000 people) reduces or averts emissions by around 82 tCO_2e per year.
1.2 Reduction in air pollution compared with the baseline scenario identified in the PDD	In rural areas, households use firewood with traditional cook stoves or three stone fires for boiling water.[4] Cooking and heating with solid fuels on open fires and traditional cook stoves results in high levels of indoor air pollution, emitting a broad range of hazardous pollutants, among them small soot particles that penetrate deep into the lungs.[5] The resulting exposure to hazardous air pollution has severe impact on health, as increased risk of acute respiratory infections, chronic obstructive pulmonary disease, lung cancer and further diseases. Affected are especially women and children in Cambodia.[6]

[1] Demographic Health Survey (DHS) Cambodia, 2010
[2] CDM-SSCWG43-A04,Information note: Default values of fraction of non-renewable biomass for Cambodia (Version 01.0)
[3] CDM methodology, AMS-III.AV Version 03
[4] GS DD, Production and dissemination of Ceramic Water Purifiers by Hydrologic, in the Kingdom of Cambodia Version 7 – 10/09/2012
[5] WHO 2011: Fact sheet N°292: Indoor air pollution and health.
[6] WHO, 2002: The health effects of indoor air pollution exposure in developing countries.

	The Teuk Saat 1001 project will reduce the amount of firewood burnt compared to the baseline situation. Hence the project activity will reduce the exposure of project beneficiaries to hazardous air pollutants.
1.3 Reduction in water pollution compared with the baseline scenario identified in the PDD	Improving access to safe drinking water makes an important contribution to improved health conditions. In Cambodia, there are 10,900 annual deaths attributable to diarrhea. All together, water, sanitation, and hygiene related deaths accounts for 11.6% of all mortality in Cambodia.[7] Diarrhoea remains one of the leading global causes of death among children under 5.[8] The Teuk Saat 1001 project will reduce the pollution in drinking water.
1.4 Reduction in soil pollution compared with the baseline scenario identified in the PDD	Cambodia has one of the worst deforestation rates in the world. Since 1970, Cambodia's primary rainforest cover went from over 70 percent in 1970 to 3.1 percent today and deforestation rates in Cambodia continue to accelerate.[9] Deforestation causes severe soil erosion and degradation. By reducing consumption of firewood, water kiosks are likely to have a beneficial impact forest cover, resulting in decreased soil degradation.
1.5 Reduction in noise pollution compared with the baseline scenario identified in the PDD	The project is not expected to have a significant impact on noise pollution.
1.6 Biodiversity conservation	As mentioned above, the deforestation rate is high in Cambodia. The high rate of deforestation and forest degradation as well as the decline in primary forest area are severe threats for Cambodia's forest biodiversity[10]. Hence the reduced consumption of firewood with water kiosks is likely to have a beneficial impact on biodiversity.
1.7 Sustainable use of land resources	Reduction in firewood use for boiling water will contribute to reduced deforestation and thus to a more sustainable land use with greater natural forests.

[7] Estimated deaths attributable to water, sanitation and hygiene ('000), by disease and WHO Member State, 2004
[8] UNICEF, 2013: Committing to Child Survival: A Promise Renewed. Progress Report 2013.
[9] FAO. (2007). Brief on national forest inventory NFI Cambodia. Rome: Forest Resources Development Service, FAO.
[10] FAO, 2010: Global Forest Resources Assessment 2010.

1.8 Rational use of mineral resources	The project has no negative impact on Cambodia's mineral resources.
1.9 Sustainable use of forest resources	The project will help reduce the use of non-renewable biomass from Cambodia forests, assisting the maintenance of existing forest stock, protecting natural forest eco-systems and wildlife habitats.
1.10 Sustainable use of water resources	The protection of standing forests will ensure the maintenance of watersheds that regulate water table levels and prevent flash flooding. In addition, water quality will be improved for domestic use.
1.11 Archaeological, cultural, historical and spiritual heritage	The project does not involve and is not complicit in the alteration, damage or removal of any critical archaeological, cultural, historical or spiritual heritage. The only practice that is altered is the replacement of boiling water as a means of water purification, which is not considered as a cultural practice.
2. Social – Enhancement of Income and Quality of Life	
2.1 Poverty alleviation	Safe water from Teuk Saat 1001 water kiosks will reduce the burden of disease and increase the number of productive working days. This will contribute to poverty alleviation, as the saved time can be used for the improvement of the living conditions of the project beneficiaries (e.g. health services, education or income generation). Furthermore, purchasing or collecting firewood or fossil fuels to boil water constitute a significant expense for the very poorest households and communities. The project will provide access to clean drinking water, which will reduce cost for families and increase productivity, and more generally give a sense of hope and opportunity.
2.2 Provision of community infrastructures	The project involves the construction of water kiosks for local purification of drinking water which is an important part of improved infrastructure.
2.3 Stakeholder consultation	The will organize an extensive local stakeholder consultation in 2014.
2.4 Access to community assets	Water kiosks will make surface water safe for drinking and thus improved access to freshwater resource assets within the community. The water kiosk is managed by the community and is itself a community asset.

2.5 Equity in accessing the community benefits of the project for the target communities	The Teuk Saat 1001 water kiosks provide water to all population segments within the target communities. The project aims to produce and distribute the water for the lowest price possible in order to make it affordable for all.
2.6 Creation of employment in country	By 2018 the Teuk Saat 1001 project aims to employ more than 400 people for operation and maintenance of the water kiosks.
2.7 Impact on public health	The project will improve public health by reducing the incidence of water-borne diseases and by improving indoor air quality (see section 1.2 and 1.3). Main health benefits are expected for children below five years.
2.8 Gender equity	Home delivery of drinking water reduces the burden on women to carry water and enables them to participate in income generating activities.
3. Technology Transfer	
3.1 Transfer of appropriate and best available technology	The water purification technique applied in the water kiosks utilizes modern treatment operations including micro-filtration and UV disinfection. Solar energy powers the system. The process is easy to be maintained as well as appropriate for local context.
3.2 Capacity building	The project will transfer skills and technique for use and maintenance of water purification equipment to local entrepreneurs. Community trainings on water, sanitation and hygiene improve the health knowledge of rural communities in Cambodia.
4. Economic Benefits	
4.1 Use of local businesses and industries	Local technicians/companies are contracted to install the water kiosks. The water kiosks are operated and maintained by local entrepreneurs.
4.2 Share of project budget spent in-country	The entirety of the project budget is spent in Cambodia.
4.3 Reduced dependence on fossil fuels (energy projects only)	N/A
4.4 Reduced dependence on imported energy (energy projects only)	N/A