

Technology Fact Sheet for Mitigation

Technology	Description	Benefits	Challenges
Biogas for cooking ⁱ	Biogas can be produced on a very small scale for household use, mainly for cooking and water heating or on larger industrial scale. Small scale biogas for household use is a simple, low-cost, low-maintenance technology, which has been used for decades across the developing world. Such small-scale applications are mostly implemented through programmes supported by governments. In such cases, it usually concerns rural areas and communities without connection to the grid. Although some cattle would be needed to feed the digester (about seven) and water needs to be available as well, other requirements are rather low. A rough estimate of costs of a simple, unheated biogas plant, including all essential installations but not including land, is between 50-75 US\$ per m3 capacity. 35 - 40% of the total costs are for the digester	Social benefits are (smoke-free and ash-free kitchen, so women and their children are no longer prone to respiratory infections; women are spared the burden of gathering firewood); Environmental and health benefits (keeping manure and waste in a confined area and processing them in the digester reduces the amount of pollutants in the immediate environment and increases sanitation, households no longer need to extract wood for cooking, which can reduce deforestation levels where people heavily rely on woodfuel, the sludge remaining after digestion is a good fertilizer, increasing land productivity and farm incomes, the release of methane is avoided thus contributing to climate mitigation. A single, small scale bio digester reduces between 3 and 5 tCO ₂ -eq./year); Economic benefits (buying (fossil) fuel resources (e.g. kerosene, LPG, charcoal or fuel wood) is no longer needed	The main challenge is cultural among the rural communities associated with animal waste and let alone human waste and high prohibitive cost

ⁱ This fact sheet has been extracted from TNA Report – Technology Needs Assessment and Technology Action Plans For Climate Change Mitigation– Zambia. You can access the complete report from the TNA project website <http://tech-action.org/>