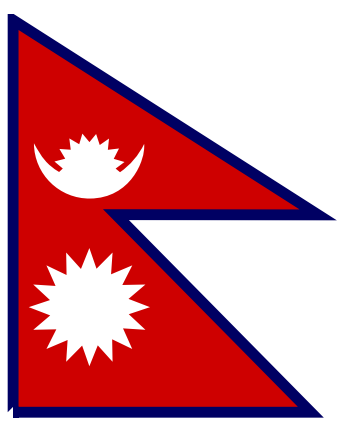


Mitigating Methane in Bhanu: Algae Bioreactors for Sustainable Solutions



Nepal / Asia

Our Clients

HOSPITALS

Hospitals produce medical waste and require oxygen for patients. Medical Waste Incinerators are required by law for hospitals for proper disposal. Algae Reactor treatment of medical waste incinerated flue gas can provide a cost effective solution for hospitals to produce oxygen within hospital grounds with low energy consumption.

WASTE INCINERATORS

Waste Incinerators are a great solution for cost effective management of waste. But the pollution through flue gas is extremely harmful for the climate. Installation of algae reactors in conjunction with waste incinerators could provide a novel solution to solid waste management problem.

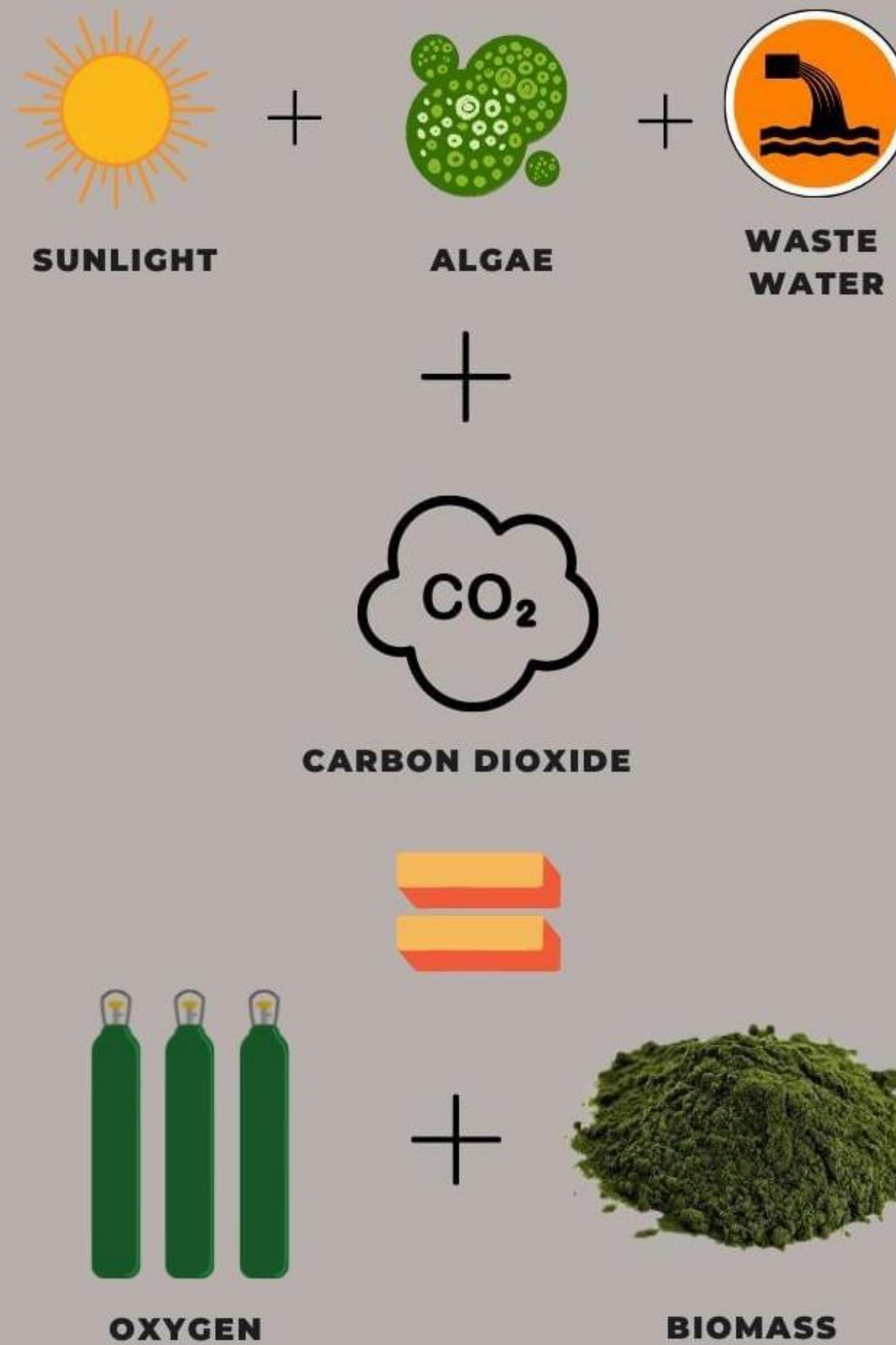
FACTORIES

Cement Factories, kilns, industries which require large heating produce Carbon Dioxide in abundance that can be a source of additional income for the industries through scalable oxygen production from flue gas.

GOVERNMENT

Government project for waste water treatment, EV charging stations and Carbon Neutral Housing solutions can be achieved energy generation from Algal Biomass.

How it works



Who we are

We are a team of Engineers, Research Scientists, activists and economists designing environmentally sustainable products within circular economy architecture.



PROJECT DESCRIPTION

- This project pioneers an approach to curb methane emissions with the use of algae bioreactors.
- An algae bioreactor is a machine that utilizes greenhouse gases, wastewater, and algae to produce biomass and oxygen. Algae bioreactors help to trap air, water, and solid waste pollution.
- This project underscores the pivotal role of algae bioreactors in mitigating methane release from agricultural and wastewater sources within Bhanu.
- This project galvanizes community involvement, sparks dialogue, and cultivates collaborative efforts towards sustainable methane reduction strategies in the region.

RESULTS ACHIEVED

- The implementation of bioreactors led to a measurable reduction of 500 metric tons of methane emissions annually in Bhanu Municipality.
- Scientific analysis confirmed an average methane capture rate of 70% through algae bioreactor technology, demonstrating its efficacy in mitigating greenhouse gas emissions.
- Collaborative efforts resulted in the establishment of a community-driven initiative, showcasing a 20% decrease in methane levels within the municipality's agricultural and wastewater sectors.



PARTNERS INVOLVED IN PROJECT

- CHYAU.BIO
- Bagmati UNESCO Club
- Gandaki UNESCO Club, project was implemented at Bhanu Municipality

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