

# Human Computation and Crowdsourcing for Earth

## BLUE SKY IDEAS PAPER

Yasaman Rohanifar, Syed Ishtiaque Ahmed, Sharifa Sultana,  
Prateek Chanda, and Malay Bhattacharyya

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## 1 Introduction

## 2 The Novel Idea

## 3 Prospects and Challenges

# An Appeal



Our mother Earth is in real danger!!!

# Sustainable Development Goals (SDGs)

The growing population, climate change, natural disasters, and many other reasons are exceeding the Earth's natural limits and leading it towards a dystopian future.

To address such prospective disaster and “**achieve a better and more suitable future for all**”, the United Nations (UN) outlined 17 broad and interdependent Sustainable Development Goals (SDGs) in 2015.

# The Vision

Leveraging human computation and crowdsourcing to

- 1 Assist,
- 2 Measure, and
- 3 Accelerate

progress toward the Sustainable Development Goals (SDGs) outlined by the United Nations (UN).

# No Poverty

The current practice of spreading large tasks in the form of microworks and gig works is promising toward a sustainable income model.

**Challenge:** Providing Internet access.

# Zero Hunger

The distribution of food can be facilitated by human computation. Collaboration could be a key behind this attempt.

**Challenge:** Providing Internet access.

# Good Health & Wellbeing

By introducing appropriate gamification, wherein a patient can interact with a healthy environment, we can ensure the wellbeing of people.

**Challenge:** Tracking infectious diseases.



# Quality Education

Crowdsourcing projects on citizen science platforms can provide practical education to society. The quality of education can also be maintained through collaborative learning environments.

**Challenge:** Ensuring quality.

# Gender Equality

By designing an ‘equality monitor’ for the crowdsourcing platforms, we can ensure the quality of work based on a balanced gender ratio.

**Challenge:** Ensuring more participation of women.

# Clean Water & Sanitation

Crowdsourced technologies are considered to empower the citizens and promote a sense of ownership that ensures their continuity and sustainability.

**Challenge:** Still at a nascent stage.

# Affordable & Clean Energy

Socially responsible investment options have attracted investors to crowdfund more sustainable solutions for clean energy projects. Moreover, crowdsourced campaigns have been proven to be effective around the world.

**Challenge:** Better reachability.

# Decent Work & Economic Growth

The power of crowdsourcing has already exhibited how the work can be decentralized among people for a better economy.

**Challenges:** Ensuring a minimum wage; Reducing the dropout rate.

# Industry, Innovation & Infrastructure

Crowdsourcing has already proven its potential for moving tech-industry forward together with proper infrastructural support.

**Challenges:** Resource constraints; Conflicts between international and local policies.

# Reduced Inequalities

Removing societal inequalities using crowdsourcing approaches has been shown to be effective.

**Challenge:** Addressing structural disparities.

# Sustainable Cities & Communities

Crowdsourcing methods have already highlighted how city services can be distributed among the people in a smart way.

**Challenge:** Maintaining fairness.



# Responsible Consumption & Production

Crowdsourcing platforms are being used to identify materials for recycling in industrial scales.

**Challenge:** Ensuring safety.

# Climate Action

Crowdsourcing applications can be of great assistance in urging the governments for policy change and engaging the citizens in critical policy makings, generation and distribution of green and renewable energy, as well as sustainable and efficient transportation and waste management.

**Challenge:** Appropriate mechanism design.

# Life below Water

New crowdfunded technologies and ocean clean-up campaigns show promise in protecting marine resources.

**Challenge:** Limited attempts.

# Life on Land

Crowdfunding donations and resources in recent wildfire events around the world have become successful. Moreover, crowd-powered awareness campaigns to promote green technology have also shown promise.

**Challenge:** Limited attempts.

# Peace, Justice & Strong Institutions

Crowdsourcing platforms play an essential role in keeping peace and justice over online platforms by content moderation.

**Challenge:** Centralized versus de-centralized.

# Partnerships for the Goals

Human Computation provides excellent support toward organized partnerships.

**Challenge:** Incentive design.

# THANK YOU

**Send further queries to:** [malaybhattacharyya@isical.ac.in](mailto:malaybhattacharyya@isical.ac.in)

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