

[samudra.world](https://samudra.world)

# Samudra.world

13-16 minutes

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The waste management sector accounts for 5-15% of human-made climate impact. Growing amounts of mismanaged and uncollected waste are rapidly increasing the sector's total negative impact on climate, environment and health. Our goal is to **increase municipal solid waste collection rates in low and middle income countries**, as currently 1 in 3 people globally have no access to waste collection services. To achieve this goal we are building a **global action network** - a new type of organisation, that is neither government, nor business, nor civil society, but a structure that combines the resources and competences of all of these.

## What is the problem

Currently about 25% of all municipal solid waste (MSW) goes uncollected - more than 500 million tonnes per year. The amount of MSW is increasing due to urbanisation, population growth and increasing purchasing power. This increase is especially rapid in regions where MSW collection rates are below 50%. Uncollected and mismanaged waste has a detrimental impact on

- **climate** - greenhouse gas (GHG) and black carbon emissions from organic waste and open burning of waste, damaging natural GHG sinks (oceans, soils and plants).
- **environment** - waste polluting the oceans, leachate from waste, toxic emissions from open burning of waste, wastewater from

unregulated recycling activities.

- **health** - air pollution, food contaminated with nanoplastics and heavy metals, polluted drinking water, disease-bearing mosquitoes breeding in uncollected waste.

According to UNEP (2015, p.12), a [10-15% reduction in global GHG emissions could be achieved](#) through improvements to solid waste management systems - such as dumpsite closure, waste diversion from landfills, generating energy from waste and recycling (not including waste prevention). According to the World Bank (2018, p.115), even basic improvements to solid waste management systems can [reduce the emissions associated with waste by at least 25%](#).

Waste management remains relatively neglected compared to other areas of climate action, global development and sustainability. Comparing the World Bank's reports from [2012](#) (p.15) and [2018](#) (p.32) shows little progress on waste management challenges.

## **What is being done and why it doesn't work**

Over the past decade the amount of funding and talent dedicated to addressing waste management challenges has been steadily increasing, yet little progress has been made. Having researched the space for more than two years, we identified three main reasons for this.

**Many efforts cancel each other out.** The scale of global waste management challenges and the lack of progress to date has led to an increase in the number of waste management stakeholders. Apart from direct collaborations, there is no coordination between stakeholders, which results in efforts that cancel each other out instead of being complementary. The connection is inadequate between the global vision and the micro level actions and tools.

**Reports, webinars and voluntary commitments.** Many efforts

backed by a significant amount of funding and talent result in reports and events, which are useful if considered in isolation, but in the context of existing reports and previous events they don't get us any closer to overcoming waste management challenges.

At COP26 nations agreed to “start a dialogue” on loss and damage resulting from climate change, but [a proposal to establish a new funding facility to help affected countries was unsuccessful](#).

Signatories of the 2010 Convention on Biological Diversity (COP10) [failed to meet any of the targets they set for themselves](#), which is now being discussed at the UN Biodiversity Conference (COP15). Given this history, it is difficult to be optimistic about the potential of the UN Treaty on Plastic Pollution that is currently being developed.

**Focus on visible problems and sexy solutions.** Plastic waste is getting all the attention, largely due to the fact that it floats in water. While plastic pollution is truly a major challenge, singling out plastic often prevents the development of holistic, financially sustainable waste management systems. Efforts like the [Ministerial Conference on Marine Litter and Plastic Pollution](#) in 2021 encourage governments to focus only on a fraction of the whole waste management challenge, thus drastically limiting the potential of successful solutions.

Often the focus is on short-term solutions (like plastic credits) and technology-enabled solutions (usually mobile apps), not on building financially, socially and politically sustainable waste management systems and infrastructure.

## What Samudra is planning to do

Let's change the way we approach change! To **increase municipal solid waste collection rates in low and middle income countries** we are building Samudra - a **global action network**, a new type of organisation that is neither government, nor business,

nor civil society, but a structure that combines resources and competences of all of these. Our focus is on the waste generated today and in the next 10 years. This is complementary to the [circular economy](#) efforts that focus mostly on building a waste-free future.

Large scale change requires weaving together relationships in new ways. It requires working with a much greater depth of collaboration than is supported by our current organisational and funding structures. **Samudra will develop and support peer-like relationships among** funders (e.g. IGOs, development banks), problem-owners (e.g. national and city governments, companies), methods leaders (e.g. research centres, companies that design and build infrastructure), capacity developers (e.g. waste management companies, NGOs) and other stakeholders. It is important to facilitate collaboration between stakeholders who usually don't interact or whose interaction is typically one-sided. We will focus on stakeholders that are the most motivated to overcome waste management challenges and that are in the strongest position to implement changes on a global level. Instead of requiring unanimous agreement from all stakeholders (a requirement that as we've seen holds back the UN climate process), we will create groups of stakeholders that develop their own vision of the future and a plan for how to make it real.

The connection is inadequate between the global vision and the micro level actions and tools. **Samudra will facilitate the development and implementation of a global waste management strategy in full technical detail** and ensure that the strategy keeps evolving along with changing circumstances, instead of becoming outdated. Samudra will have sufficient capacity to facilitate decision making on a global level.

**Samudra will act as a global orchestrator to develop synergies between different efforts** (especially those that don't agree with

each other), making them complementary instead of contradictory. Such a stewardship organisation is necessary to amplify the positive impact of all stakeholders and to identify and address gaps, duplications and conflicts that impede the change on a global level.

Samudra's work towards [15 out of 17 UN Sustainable Development Goals](#) (SDGs) will be funded by impact-based grants. In terms of organisational structure, we envision something similar to [Tech Zero](#) - a core team working alongside employees of major stakeholders that are dedicated to creating change by weaving together relationships in new ways. Samudra's goal is solely to create [large systems change](#). Once this is achieved, the organisation will dissolve.

## Why we think it is going to work

**Waste management is a comparatively easy problem.** Unlike GHG emissions that are hard to capture, waste is easy to collect; and it can be characterized without any specialised equipment. Technologies for waste processing and disposal are mature, scalable and tested in a wide range of conditions. Reducing GHG emissions requires tradeoffs, while an improved waste management system provides direct benefits to both the local area and the surrounding regions.

**We focus on structural change.** According to [Donella Meadows](#) 99% of sustainability efforts are focussed on [parameter changes](#), which lack leverage and are rarely a source of real impact. In waste management in particular, efforts often form a patchwork. Our work will contribute to implementing structural change necessary to create holistic, financially, socially and politically sustainable waste management systems.

**We are learning from those who have succeeded.** For example, to vaccinate children in low income countries against deadly

infectious diseases, [Gavi, The Vaccine Alliance](#) was created. They work with funders (governments of rich countries), problem-owners (governments of poor countries) and methods leaders (vaccine producers). To date they've helped vaccinate more than 880 million children.

**We understand the situation from the perspectives of different stakeholders.** Over the past two years we've been working with national governments, city governments, waste management companies, startups and NGOs. Different stakeholders have different capacities and goals, and they approach challenges in different ways. Making these approaches complementary instead of contradictory will ensure that different stakeholders can increase each other's positive impact, even if they don't agree with each other.

**We seek to blame no one.** We aim to engage as many different types of stakeholders as possible. We understand that not every stakeholder has the desire and the capacity to contribute to addressing global waste management challenges. Those who do can be sure that their contribution will be truly appreciated, not merely expected.

**We don't have a favourite waste disposal method.** Every solution can be good or bad depending on the context; and every solution has an opportunity cost. We assess all possible solutions based on their impact on climate, environment and health.

## **Other ideas we are planning to work on**

### **Providing data to enable everyone to make data-driven decisions**

Climate action, global development and overcoming waste management challenges is [not possible without data](#). Over the past two years of working with waste related data, we've met four

challenges:

- **Data is expensive.** Examples include [the review of plastic chemical recycling technologies](#) by Independent Commodity Intelligence Services, [the list of waste management infrastructure around the world](#) by AcuComm, and even [Global Plastics Outlook](#) by the OECD.
- **Data is hard to find.** Most often the references provided are not to primary sources and require following a long chain of references to reach the primary source. This and finding the cited information within primary sources (often hundreds of pages long) takes a considerable amount of time.
- **Data is outdated.** The amount of waste generated is growing rapidly and its composition is changing. Outdated data is misleading and does not provide enough information to be able to predict future volumes and composition of waste.
- **Most often the data simply doesn't exist.** This is particularly relevant when trying to show GHG emission reduction potential of a particular project. If there is no data about waste, officially there are no emissions associated with waste, and hence any non-zero-emission project will increase total emissions on paper.

Making useful, up to date data (with transparent citations directly to the original source) available for free will enable everyone to make data-driven decisions, regardless of their financial situation.

Examples of this being done in other contexts include [Right to Equitable and Professional Auto Industry Repair \(REPAIR\) Act](#) in the US and the [ESG Book](#) aimed at [disrupting the sustainability sector with free data](#).

### **Facilitating technical knowledge flow**

Creating a virtual centre of technical expertise in waste

management systems and infrastructure will allow us to put important technical conversations (about technologies, infrastructure and financial instruments) on the agenda of high level meetings that all too often focus on bold commitments without an actionable plan to achieve them. Fostering transfer of technical knowledge between countries, waste streams, different types of stakeholders, and academia will ensure that better decisions are made.

### **Working on future waste streams**

Currently plastic is getting most of the attention, as a relatively new type of waste that many countries are having problems dealing with. Other new types of waste - electronics, batteries, solar panels, wind turbines, demolition waste - will soon become prevalent. It is important to be prepared.

### **Developing innovative business ideas and financial instruments**

Being creative when developing new financial instruments and new business models (like the ones that blend different types of funding or leverage partnerships) will allow us to build financially sustainable waste management systems. The circular economy is currently the most innovative field in terms of new business models; we are planning to engage people from that field to help us solve waste management challenges.

### **Enabling startups to address global challenges**

While our main focus is on major stakeholders, we recognise that startups often create impact, new business models and innovation. Providing small amounts of initial funding to a large number of promising startups in the waste management space, especially focussing on the ones created by local people in low income



countries, will allow us to explore the solution space most efficiently.

Examples of this being done in another context include the partnership between International Finance Corporation (IFC) and Goldman Sachs in 2014, creating [the Women Entrepreneurs Opportunity Facility](#), which mobilized capital for local financial institutions to lend to women owned businesses.

Samudra's goal is to facilitate [large systems change](#) in the waste management sector. This will require implementing all of the above ideas and many more.