Towards a New Paradigm for Financing Sustainable Waste Management Infrastructure in Developing Countries.

Money spent on infrastructure that doesn’t deliver its promise is never a good use. This is especially the case when such money is intended for the development of lower-income countries funded by taxpayers of high-income countries.

In international development finance going towards waste management, it’s often the case that grant and concessional loans are used to make plans, studies and purchase equipment and build facilities (CAPEX). Such waste treatment facilities, often in the form of sorting plants, anaerobic digestion plants, composting plants, and waste-to-energy plants, when operated properly, serve a range of environmental and social benefits: diverting waste from dumpsites and landfills thus reducing methane emissions along with other gaseous and liquid pollutants, utilizing recyclable and recoverable materials and energy, reducing nuisances to the public and creating a clean and liveable environment for local residents. Additionally, proper waste management relieves pressure on natural ecosystems (for example, we cut down trees to make paper or grow food on the land, then waste the paper and food, resulting in more deforestation). They contribute to climate and many other sustainability impacts. However, more often than not, those facilities don’t manage to live their life to the end, stopping operation already at its early years. I have seen a few projects that do, but not all are taking full advantage of available proven technologies to deliver environmental, social and economic benefits to stakeholders.

Why?

First, in most developing countries, municipalities cannot yet afford to pay a fee sufficient to cover the cost of proper waste management as a public service. Second, let’s be honest, “waste is a valuable resource that can generate income enough for covering waste management services” is just a myth. If this were the case, European municipalities wouldn’t pay for such high gate fees (service fee per ton of waste treated) reaching up and over 100 Euro. If this were the case, we would have seen waste sorting and recycling facilities built up already in lower-income countries. In developing countries, most marketable recyclables have been recovered by informal waste pickers, and what is left is a net cost to treat.

On this matter, I quote my dear colleague Gerardo Canales’ statement which accurately describes the situation: "It is indeed very odd that putting the Polluter Pays Principle into practice for waste management has been harder than for any other sector in the Global South. There is, in many cases, a political cost nobody wants to bear. The problem is that the cost of inaction is much higher. That’s why improving waste tariff setting and collection are at the heart of any transformation we expect to be sustainable (In addition to brave politicians)."

On the optimistic side, I have come across some pilot projects that have found success by closely guiding municipalities for a number of years to help them design and roll out a proper level of waste

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1 Gerardo Canales, Director of ImplementaSur, formerly Director for Latin America of Centre for Clean Air Policy
fee charged to waste generators (including households), to communicate it, to build trust and transparency, and to roll it out until the system is working as designed. It’s hard work and requires time and meticulous attention; but it’s what’s needed at the very core of financing a public service that many have taken for granted, or ignored.

Sure, implementing polluter pays principle\(^2\), setting up and sustaining a fee collecting system take time. In the meanwhile, we cannot just wait until such systems are in place, especially in light of the climate emergency. Enormous amounts of methane are being emitted every day into the atmosphere from dumpsites and landfills without methane capture. Now put this reality against the backdrop of the Paris Agreement goal of keeping emissions under control so that temperature rise would be limited to 1.5 or maximum 2 degrees Celsius by 2050.

So, what can we do now? What could be a blueprint for building up sustainable waste management infrastructure in the countries where they are needed the most?

Among others, I see **two necessary actions** to be taken parallel to each other, now, ASAP.

On one hand, local governments responsible for waste management need to commit to implementing the Polluter Pays Principle, thus setting up a system of collecting sufficient fees paid by waste generators. With such a commitment, international development and climate funding needs to flow in to support on-the-ground work by experienced entities for helping local governments in the design and roll-out of such systems. Besides collecting waste management service charges by local governments, national governments have a role to play in putting in place incentive policies to further internalise environmental and social return of investment in proper waste management systems – these include examples such as build-in tariff for energy generated and materials recovered from waste. This process will take some time: some pilot cases have shown a period of three to five years.

On the other hand, meanwhile, waste management facilities need to be built up and operated properly to divert waste from going to dumpsites and landfills. The financing of such facilities requires strategic consideration. Traditionally, development finance, usually in the form of grants and concessional loans, has been the source of funding for building such infrastructure, covering project development costs and CAPEX. However, due to lack of sufficient income to cover operational costs, this is simply not enough funding and in the end is a waste of money.

There is a solution: use concessional funding to support OPEX in the early years of operation. Banks, DFIs, and equity investors will be willing to finance the CAPEX as long as the operational costs are covered by the payment of a sufficient service fee by the municipality (who would need to collect at least a portion of the fees from waste generators), and that the income from service fee and selling of energy and recycled materials provide confidence to CAPEX financiers of their return on capital. So, **instead of using development funding to finance CAPEX, it would be far more effective to use them to finance part of the OPEX for a number of years until the fee collecting system kicks in effectively.**

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\(^2\) Polluter Pays Principle: polluters should bear the expenses of carrying out the pollution prevention and control measures introduced by public authorities in order to ensure that the environment is in an acceptable state. In the case of waste management, it means that the persons and entities who generate waste should pay for the cost of preventing and proper management of the waste they produce.
Financing OPEX with subsidies has helped the renewable energy sector grow from its infancy to a market that we can now call mature without the need of subsidy. The built-in tariff is a classic example of how concessional funding, in this case subsidies, helped renewable energy production plants meet their OPEX and financing cost of CAPEX at the nascent of this industry. If governments, donors and financiers are serious about climate impact, replicating this type of mechanism would immediately speed up and scale up the building of sustainable waste management infrastructure, leading to massive methane emission reduction.

This is the goal of what we call “catalytic finance”: put grant and concessional funding in places and time where and when market-rate investors and banks are not yet willing to invest, thus attracting sufficient capital to flow into the places at the time needed. These two measures have to go hand in hand, leading to a phase-out of catalytic finance over certain number of years and the phase-in of fees collected from waste generators.

Once such waste treatment facilities are in healthy operation, closing down dumpsites will be no longer just a political statement at best, and at worst a useless effort that will lead to another new dumpsite on day one of closing the old one down.

We will need a tremendous amount of effort by many actors active in this space to push these two tracks at the same time. So many actors have done so much: mobilising local governors’ political will, collecting evidence data, preparing master plans and action plans, conducting pre-feasibility and feasibility studies, awareness-raising, capacity-building, and financing studies and CAPEX. Let’s coordinate a bit more to target our effort to where it’s most effective. I’m calling on NGOs, IOs, advocacy groups and consultancy firms to target their effort in encouraging commitment of governments and supporting them in setting up a system of collecting sufficient fees paid by waste generators, as well as in setting up national policies to provide incentives; and I’m calling on entities providing development funding, climate finance, concessional capital and philanthropic grants, to rethink how to strategically use their funding to catalyse the building up of waste management infrastructure that works for the planet.

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Jiao has more than ten years of experience on climate change and climate finance for infrastructure, including waste and resources management, regenerative agriculture and the food systems, renewable energy and energy efficiency. Hailing from a private sector and investment background, she has since worked for and with international organisations, NGOs and foundations for reaching Sustainable Development Goals and climate goals.