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INTRODUCTION

After years of development aid to local authorities in the Global South, the waste management and sanitation situation is still often catastrophic, despite the emergence of new approaches and new procedures. Given the significant impact of waste management and sanitation on the environment and health, these issues are rightly at the centre of the Sustainable Development Goals (SDG).

Groupe URD and the CEFREPADE are among the few French organisations who have developed competencies in these areas in recent years. They accompany organisations who implement solutions in the field that are both adapted to the context and relevant in the long-term. Central to both organisations' work is the dissemination of knowledge and capacity building. As such, they are keen to bring together those who want to accompany projects in the field in order to share competencies more effectively.

Organised annually since 2018, the GEDAE event provides an opportunity for participants to discuss waste and ecological sanitation, with the objective of sharing experiences and disseminating good practices and innovation. Aiming to be as practical and useful as possible, practitioners are able to discuss the reality on the ground with experts in solid waste and sanitation (from both the North and the South), in order to find concrete solutions and improve the quality of the actions carried out. Such an event is crucial to help field actors improve their grasp of the specific characteristics of these issues in crisis-affected and developing countries (economically, socially, politically, etc.).

Following the cancellation of GEDAE 2020, the 2021 event took place online, which allowed people to take part remotely. The event was associated with the International Congress on the Environment and Sustainability (CIAS II), held in Brazil. The main theme of CIAS II this year was: ‘Sanitation in cities: collective intelligence to overcome health crises’. The participants of GEDAE were able to watch the presentations made at CIAS II, which, for the most part, had been pre-recorded and subtitled in French, and the participants who were registered at CIAS II, most of whom were Brazilians, were able to follow GEDAE 2021 live, with simultaneous translation into Portuguese.

GEDAE 2021, co-funded by the Auvergne Rhône Alpes Region, Coopération Monégasque, Fondation de France and the French Development Agency, brought together experts from the North and South with a variety of backgrounds: humanitarian, development, private sector, foundations, scientific research, etc.

Each half day included three stages: introductory presentation(s), sharing of experiences and a round table. Below is a summary of the three half days.

1ST HALF DAY (08/09/21)

PROMOTING ECOLOGICAL SANITATION IN DEVELOPING AND CRISIS-AFFECTED TERRITORIES

Access to sanitation is still one of the major human development challenges throughout the world. The problem is well known: the absence of improved sanitation, which is defined by WHO as ‘hygienic sanitary facilities that allow all human contact with excreta to be avoided’, is the source of numerous illnesses, a major factor in the transmission of infectious diseases and the cause of 400 000 deaths each year. Sanitation is a human right: since 2010, the United Nations has recognised the right of every person to have ‘physical and affordable access to sanitation, in all spheres of life, which is safe, hygienic, secure, socially and culturally acceptable, which provides privacy and dignity’. SDG 6, ‘Ensure availability and sustainable management of water and sanitation for all’, depends on the rational management of resources and access to clean water. The central issue is to make sanitation available and accessible to people in precarious situations. CEFREPADE and Groupe URD’s missions are fully in line with the approach promoted by the United Nations: helping our partners to sustainably meet the challenge of sanitation in an environmentally friendly way.
For the most part, the issues at stake in sanitation are the same as those related to waste management: economic, political, financial, cultural, environmental and health-related. However, one specific characteristic is that it involves the intimate, and is often considered ‘shameful’. Around the world, cultural, social, or even religious aspects, mean that it is a ‘sensitive’ subject; few societies like to talk about their faeces in public... Thus, while encouraging local authorities to assume their responsibilities in terms of public health policies, our work with our partners involves calling on affected populations who do not have access to health facilities to get involved and take action.

This half day was facilitated by Rémy Bayard of CEFREPADE and Florent Brun of Réseau Assainissement Ecologique (RAE). Five professionals were invited to share their experiences related to ecological sanitation in developing and crisis-affected areas. Paul Cottavox of the Pierre et Terre Ecocentre, who specialises in Water, Sanitation and Hygiene (WASH) in humanitarian contexts, introduced the session with a presentation on sanitation challenges in the Global South and ecological sanitation. This was followed by a presentation by Florence Chatot of Groupe URD on the need to apply a social anthropology approach in projects. Both presentations highlighted the importance of applying solutions that are adapted to existing technical, economic and human constraints. In order to adopt solutions that are effective in the long term, we need to be familiar with the population and understand all of their needs. Solutions need to be built together with members of the communities concerned, who should be actively involved in projects. This was confirmed by the three speakers who shared their experiences, Ambre Diazabakana of ‘La Fumainerie’, Gaston Jean from Quisqueya University and Rémi Lombard-Latune of IRSTEA: the objective is not to provide a ready-made solution, but to work together to develop solutions that are integrated into existing ecosystems in the long term.

The presentations were followed by a round table on accompanying ecological organisations in the Global South and the Global North, the participants being the facilitators and the five speakers from the session.

**KEY MESSAGES FROM THE 1ST HALF DAY**

In response to questions from the audience regarding the provision of support to actors, the following determining factors were highlighted for the long-term sustainability of projects:

- NGO projects are faced with a significant problem: the duration of funding is often an obstacle for the acceptability of projects for the populations concerned. Solutions cannot be imposed on future users or operators. Time is needed to work together with communities.
- Field projects need to be designed in a way that guarantees the involvement and financial autonomy of future users. Financial tools need to be found that provide access to the technical solution, for example, micro credit.
- Projects need to be built in partnership with the stakeholders. The different communities and actors who are concerned by the implementation of a sanitation solution need to be identified. Without this, it is difficult to subsequently mobilise these actors to find a common solution.
- Projects need to be integrated: a sanitation solution should take into account all the needs that users have, such as access to clean water, or the need for water and fertilisers for agricultural activities. Ecological sanitation can be financially sustainable if it is used to generate valuable by-products, such as liquid fertiliser and organic soil improvers. This demand from the agricultural sector can provide significant leverage.
- Projects are often held up because of the ‘precautionary principle’ and regulations that are still too vague. This is not only the case in the Global North, but also in the Global South. It is essential to develop projects that show the advantages of alternative ecological sanitation solutions. These should take into account the fears that are associated with new practices: the economic model, environmental risks, and health risks need to be
evaluated and compared with other solutions, if they exist.

- Are ecological sanitation projects appropriate to meet people’s needs in crisis situations? This question confirms the importance of sharing lessons from projects carried out with displaced populations. This will make it possible to identify the sanitation solutions that effectively meet the needs of the people concerned.

2ND HALF DAY (09/09/21)
REDDUCING WASTE PRODUCTION IN THE SOUTH: CONVINCING AND MOBILISING COMMUNITIES

Due to demographic growth and changing methods of consumption, there has been an explosion in waste production in the Global South (even though the waste produced per inhabitant is still well below that in the Global North). According to the World Bank, waste production in South Asia, the Middle East and North Africa should double by 2050, and it should triple in Sub-Saharan Africa. And yet, in these regions – and particularly in the cities – the resources devoted to waste management are minimal. As 8 of the 17 Sustainable Development Goals concern waste management either directly or indirectly, it would seem essential that waste reduction should be a central objective. Everyone knows that the waste that costs the least to manage is the waste that is not produced.

Nevertheless, it is not necessarily easy to ask people who often live in very precarious conditions to reduce their waste. So, how do we mobilise the main producers, the richest people, businesses, as well as the most disadvantaged inhabitants and the public authorities? And what should we propose? What balance should we establish between restrictive measures and incentives? And to what extent can legislation and regulations contribute to reducing waste?

After an introductory presentation about the issues at stake in reducing waste and how legal frameworks have evolved, particularly in Sub-Saharan Africa, by Kenza Elazkem (GAIA and Break Free From Plastic), a number of case studies were analysed to look at how to convince and mobilise different actors: Samantha Brangeon presented the Joint Initiative that aims to reduce waste produced by humanitarian actors; then Farima Tidjani and Aisha Conte (Zéro Déchet Sénégal) described a project that has seen the creation of three ‘zero waste restaurant’ labels in Senegal. Lastly, a round table was carried out to discuss how actors can collaborate to implement the most effective reduction strategy.

In short, this half day, facilitated by Aline Hubert of Groupe URD, explored the strategies and tools adapted to different contexts that are used by those involved in the Zero Waste approach in countries in the South, and the results that they have achieved.

KEY MESSAGES OF THE 2ND HALF DAY

The session on waste reduction began by looking at the dynamics of waste production, and existing regulations and laws, and then highlighted from a critical perspective the related social and geographical inequalities that exist. Concrete measures at both the local and international levels were also presented during the session through the sharing of experiences which provided some inspiring strategies for convincing and mobilising people.

- Reduction is essential, including in Sub-Saharan Africa where waste production could be multiplied by three by 2050 due to demographic growth and changing forms of consumption. However, waste reduction cannot be legitimately promoted with everyone (such as the most disadvantaged).
- Waste reduction messages are not getting through because, in the media and in public policies, the accent is
placed on waste removal and recycling. A whole new way of thinking therefore needs to be built.

- There are very few actors working on waste reduction, but some initiatives are beginning to emerge, whether at the local level (such as the ‘Zero Waste’ restaurants in Senegal) or in the international sector (for example, among humanitarian aid organisations). In addition to their impact in terms of reduction, these initiatives help to raise awareness and to provide a positive example, and therefore encourage more and more actors to take part (such as a supplier who has been sensitised and who subsequently becomes a sensitiser).
- Environmental arguments do not necessarily have the greatest impact. Economic arguments are relevant, particularly when addressing businesses.
- Public waste reduction policies need to find the right balance between incentives and restrictive measures, particularly in applying the ‘3S’ rule: ‘Sensitisation’ – ‘Service’ – ‘Sanction’.
- Waste reduction activities need to be based on robust communication strategies in order to clarify the issues at stake and to show that ways exist to effectively reduce waste.
- The rhetoric of waste management is sometimes not compatible with the reality on the ground, where actors have to deal with pre-existing stocks of waste to be managed and a flow of waste that cannot be stopped either immediately or completely. This practical difficulty should not nevertheless prevent reduction measures from being planned as a priority, without which waste management will end up being mission impossible.

3RD HALF DAY (10/09/21)

REUSING PLASTIC WASTE: RECYCLING? FUELS? DO MODELS EXIST THAT ARE ECONOMICALLY VIABLE WITHOUT BEING HARMFUL FOR THE ENVIRONMENT OR FOR PEOPLE’S HEALTH?

Here is a worrying fact: plastic waste can be found in every part of the environment, with all the harmful effects that this can have. And here is a reassuring fact: it is possible to transform this waste into new materials and energy. The challenge, therefore, is to create income-generating activities and jobs based on plastic waste collection that are not harmful for the environment or for people’s health.

The priority should be to reduce the production of plastic waste, as is the case for all waste, in order to reduce the cost of managing it. However, there will always be plastic that needs to be treated, and its reuse should be promoted. Plastic waste should no longer be buried or burned - it should be transformed.

In every country in the world, waste reuse is almost always integrated into the market economy: the activity has to generate income in order to allow companies, jobs, and wealth to be created. However, when the price of oil is low, as it is now, this does not encourage the reuse of waste plastic, as plastic manufacturers still prefer new materials.

In France (and in Europe), it is regulatory constraints and the related financial measures (eco-organisms and eco-taxes, and the wider responsibility of producers) that makes recycling possible. In numerous countries in the Global North, the shortage of local processing plants or companies who can use recycled plastic means that waste has to be transported over long distances, notably to Asia. The waste plastic is transported there as long as this remains possible, though the fact that the Chinese border has been more or less closed has changed the situation. Everyday consumer goods are subsequently bought there, such as washing up basins, buckets, and toys, which could be made locally if moderate investments were made.
In countries in the Global South, the situation is simpler: if collection and processing activities are profitable, they develop, otherwise they stop, or they do not even start. However, this is often done in appalling health and environmental conditions because the economic models are not optimised.

In 2018 and 2019, GEDAE initiated exchanges about the low-tech transformation of waste plastic into paving stones, bricks, bitumen and fuel. GEDAE 2021 wanted to provide answers to the question: how can the reuse of plastic waste be improved in developing countries through the creation of income-generating activities that do not harm the environment or people’s health?

For this half day, facilitated by Pascale Martel Naquin of CEFREPADE and David Dupré la Tour of CORENVAL, four professionals involved in the reuse of waste plastic were invited to share their experiences. Bob Brignaud of Plastic Odyssey provided the introduction: ‘The reuse of waste plastic in developing countries: what procedures, what funding methods, and what social and environmental impact?’ Three presentations where then made to share experiences, with a focus on the different economic models adopted: the production of plastic pellets by Elven BARDOU of Kaoplast in Senegal; the production of paving stones and bricks by Mihajasoa Faly Andriamiadana of Madacompost in Madagascar; and the production of hydrocarbons by pyrolysis by German Jimenez of Polyfuel in Costa Rica. These were followed by a round table with Pascale Martel Naquin, David Dupré la Tour, Bob Vrignaud, Mihajasoa Faly Andriamiadana and Elven Bardou, on the following question: ‘How can the reuse of plastic waste be made economically viable, while respecting the environment and people's health?’

**KEY MESSAGES FROM THE 3RD HALF DAY**

- Establishing a plastic waste recycling network requires a lot of time and patience, as well as different actors, with waste that can be of very different kinds: it is difficult to make this process profitable, which is probably one of the reasons why there are so few organised networks in developing countries.
- Industry players are often reluctant to invest in new tools because the contexts (political, economic, security, etc.) are unstable and it is difficult to guarantee access to the resource. But transportation to other countries has a cost that could increase in the years ahead, and has a significant environmental impact. There is also uncertainty about the ability of importing countries to continue to accept this waste (cf. the Chinese border is more or less closed to imports of waste plastic).
- It might be useful to establish an ecotax for imports, perhaps on a voluntary basis, for example for each tonne of merchandise that enters, without distinction, if the flow of money can be made secure. In Europe, it is ecotaxes that allow certain networks to make a profit, whereas otherwise they would make a deficit. This is the case for the recycling of plastic waste, and will continue to be the case as long as the cost of new plastic, which is linked to the price of oil, remains low.
- Economic models need to be adapted to the local context. It is often necessary to pay to be able to collect waste rather than be paid for a waste management service. And the absence of the kind of ecotaxes that exist in Europe means that there is no compensation for low profitability. Security and health need to be protected, but with reasonable measures that do not block the development of activities.
- The production of fuel can be an appropriate solution, particularly when recycling is struggling to develop, without local investment for processing. Activities such as the pyrolysis of plastic waste, which allow storable hydrocarbons to be produced, are being developed more and more after having been blocked for many years.
- There is no single best solution. The relevant actors should be gathered together, a detailed assessment should be carried out, and the resources to be used should be carefully selected, based on their availability (taking care to ensure the supply is secure), their quantity, the cost of collection, local needs, etc. Each context has its own solutions.
CONCLUSION

Given the quality of this year’s discussions, we are convinced that this event continues to be pertinent in terms of questioning approaches and practices and presenting innovations that will allow more effective tools to be developed. In addition to technical issues, there are also economic, social, health and environmental issues which continue to be difficult to resolve... We therefore look forward to seeing you at the next GEDAE discussions in 2022 and/or 2023!

GEDAE 2021 is a partner of the International Conference on the Environment and Sustainability (CIAS II) held in Brazil
GEDAE 2021- A summary of the 3 half days of discussions

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