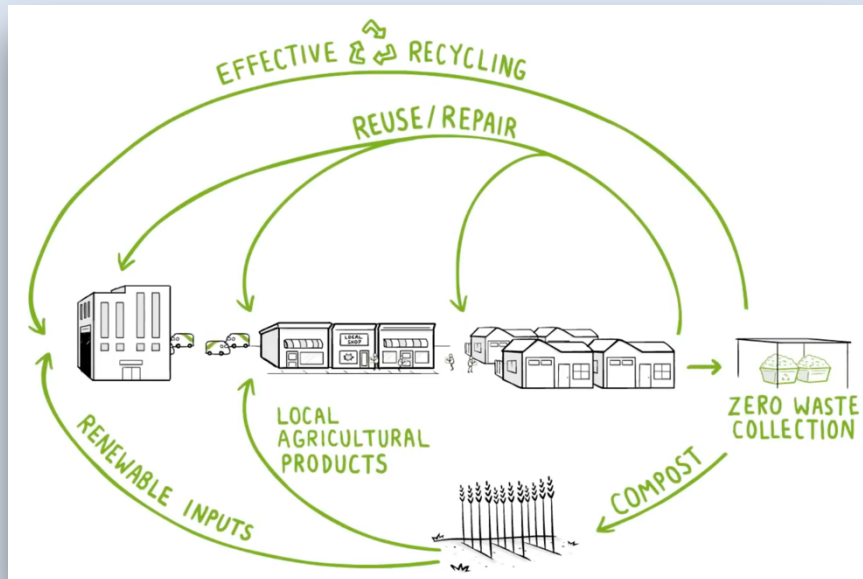




ZERO WASTE AND CIRCULAR ECONOMY: THE WAY FORWARD

ECOSOUM'S POSITION AND RECOMMENDATIONS ON WASTE MANAGEMENT, SORTING AND RECYCLING



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Infographics in cover page by The Story of Stuff Project (screenshot from "The Story of Plastic" documentary)

INTRODUCTION

Despite its exceptionally positive perception among the public¹, recycling comes with intrinsic limits that cannot be overcome. Infinite 100% recycling is merely a myth² and making recycling the cornerstone of our waste management systems means that we are doomed to fail managing our waste properly.

This short report aims to summarize the problems, limits and counter-productive effects of a recycling-based approach to waste management, in order to rethink and redefine the issue for the purpose of avoiding dramatic mistakes and counter-productive effects while carrying out actions towards zero waste and circular economy. The report ends with a summary of key positions and recommendations.

All observations, analyses, positions and recommendations presented below appear consistent with what is defended and promoted by the Zero Waste worldwide movement working on raising awareness and solving the global waste issue. More specifically, most information and recommendations in this report are based on various contents produced by Zero Waste France³ and The Story of Stuff Project⁴.

THE LIMITS OF SORTING AND RECYCLING

THE RELATIVELY MARGINAL ROLE OF INDIVIDUAL WASTE SORTING

First of all, it is important to put things into perspective when we start talking about individual waste sorting and such “good practices”. It is a common belief that if every “good citizen” sorted their recyclable waste properly, we could sustainably manage our waste and solve the issue once and for all, thanks to extensive and infinite recycling. But focusing so much on individual sorting tends to hide the fact that, actually, households directly produce a very small percentage of waste. For instance, households produce only 3% of all waste in the USA, 8% in Europe.⁵ In other words, on average, for one container of waste we produce at home, at least 70 more containers of waste were produced beforehand by the industries from which we bought our products.⁶

This means that even if all individuals perfectly sorted their recyclables within their households, the waste issue would not be solved at all in the current situation. Of course, sorting waste at home is part of the solution, but we should never forget that this kind of practice can only make sense if it is undertaken, with a good understanding of the big picture, as part of set of actions adequately addressing all waste producers.

¹ For instance, [a study](#) conducted in the USA in 2017 found that 97% of interviewed people “expressed recycling as an important method to waste management”. [Another study](#) conducted in France in 2019 also showed that 97% of people consider “the expression “100% recyclable” as the most evocative of respecting the environment”.

² [The Myth of Single-use Plastic Recycling](#), Greenpeace USA (2020).

³ www.zerowaste-france.org

⁴ www.storyofstuff.org

⁵ [EUROSTAT](#), 2017.

⁶ *The Next Efficiency Revolution: Creating a Sustainable Materials Economy*, John Young & Aaron Sachs, Worldwatch Institute (1994).

PRACTICAL NON-RECYCLABILITY, THE REAL FIRST OBSTACLE TO RECYCLING

Sorting is often presented as “*the first step*” in the recycling chain. In reality, the first essential step is actually that the producer (of the good or the packaging that will become waste) makes the choice of recyclable materials and designs that ultimately allows recycling. However, today, most products and packaging are still made of materials that are non-recyclable and designs that make recycling impossible (like multi-layer or multi-material packaging). Even if we perfectly sorted our recyclables, most of the problem would remain unchanged and waste would still end up in dumpsites and incinerators.

In addition, it is important to keep in mind that “*recyclable*” in theory does not even necessarily mean “*recycled*” in reality. For a material to be recycled, it is obviously necessary that a recycling process specific to it exists, but most often it is also required that another technology (or a lot of workforce) separates this material from other recyclables at the sorting-center level. These processes must also be actually available and implemented by an economic actor in a given context – which is far from always being the case, for financial reasons (too expensive technology or workforce, and/or lack of outlet for recycled raw material) or because of the poor quality of some recycled materials.

If we place ourselves in a perspective of “responsibility” of the producer, it seems essential to assess recyclability not only on the technical level (in theory, or in other countries, based on a hypothetical future technology that remains to be developed and/or introduced) but also on the operational level (in practice, in real life, in the local context).

LEAKS AND LIMITS OF RECYCLING PROCESSES

Systematic usage of expressions such as “100% *recyclable*” leads us to believe that, if everyone perfectly sorted waste and producers used only recyclable materials and suitable designs, we could reach a point where infinite recycling would be possible and could offer a such perfect circular economy that there would be no waste. Unfortunately, this is untrue. Even if we could enter this best-case scenario, waste would not disappear, because recycling is insufficient and irrelevant in many situations, due to several intrinsic limits.⁷

The first issue is that we can recycle only what we can recover, and sorting waste has its own limits. In any case, a significant part of resources gets dispersed as they are used (for instance, additives): it is impossible to collect these dispersed resources and make them enter the recycling process, so it is necessary to draw on natural resources to keep the amount of raw material constant. Out of 100 billion tons of natural resources extracted from the planet each year, it is estimated that 37 billion tons are unrecoverable because of dispersion and gas emissions.⁸ Recycling them is thus impossible.

Additives are also significant obstacles to recycling techniques themselves. For instance, it is impossible to remove colorant from plastic or glass, which limits considerably the possibilities of recycling at a significant scale. Substances previously contained in the

⁷ *Plastique : le grand emballement*, Nathalie Gontard, Stock (2020).

⁸ [Circularity Gap Report](#), 2020

material to be recycled can also pose a problem as they can leave traces even after washing and decontamination: for instance, cleaning products would leave their mark on plastic containers, so this plastic would not be suitable for recycled food packaging. These kinds of issues would require an extremely high and detailed level of sorting to be overcome (so as to enable to safely and adequately recycle a given piece of recyclable material), which would not be possible from a practical standpoint.

Very often, recyclables contain various kinds of impurities and perturbing elements that are virtually impossible to remove and make recycling very complicated, basically impossible. Alloys and mixes are another issue for recycling processes, as it is impossible to separate two metals or two types of plastic once they've been mixed.

These practical problems alone make the 100% recycling goal totally impossible to achieve. But the fantasy of infinite recycling is also made unrealistic due to the physical degradation of materials through the recycling processes. Sure, other problems aside, materials such as metal and glass can theoretically be recycled almost indefinitely if perfectly sorted by type and color; but it is not the case for most other substances, starting with plastic. Recycling plastic deteriorates its physical properties, which means it is virtually impossible to remake the same item by recycling its matter. For instance, a PET water bottle is never recycled into a new PET water bottle, only into a lower quality product. For plastic in particular, we should talk about “*downcycling*”, because each recycling process degrades the matter, which becomes very fast totally unrecyclable and ends up in dumpsites and incinerators. In fact, most recycled plastics are only recycled once before they are dumped or incinerated – or littered in the environment.

In the best-case scenario where we manage to remake the same item, there always is a loss of material in the process due to recycling degradation. In other words, even if we can make a PET bottle out of recycled PET, it always requires several bottles to make a new one. This physical limit inevitably means that even if we manage to really *recycle* (as opposed to *downcycle*), we constantly need to considerably draw on natural resources (which, in the case of plastics, are fossil fuels) to keep the production flow steady. Therefore, it is untrue to believe that recyclable waste can replace natural resources – at least not if our production/consumption flow remains unchanged.

In the end, beyond the specific issue of sorting, all these inevitable constraints to recycling explain that only 14% of plastic packaging is recycled worldwide, of which only 2% are *effectively recycled* (meaning it becomes something as useful as before) – the other 12% being *downcycled* into something worse.⁹ Sadly, 100% plastic recycling is simply a myth and recycling alone cannot bring sustainability to waste management.

SOCIO-ECONOMIC LIMITS OF SORTING AND RECYCLING

Even leaving all these “technical” and “physical” limits aside, it is of paramount importance to understand that a waste management approach based primarily on sorting and recycling cannot be sustainable also for socio-economic reasons (for a large part because

⁹ *The New Plastics Economy: Rethinking the future of plastics*, World Economic Forum (2016).

recycled materials have to be competitive with virgin raw materials, which is very complicated in a globalized market economy). In developed countries, which are supposed to be the most advanced ones, sorting and recycling are far from sufficient as they are, since only a small fraction of waste is actually recycled. But even as is it, this sorting/recycling sector is failing: it is absolutely not viable, autonomous and sustainable by itself.

The sector creates the impression that it is virtually working only because a large part of developed countries' "recyclables" sorted by households and other waste producers is actually exported abroad (almost entirely to China until the 2018 ban, and nowadays mostly to other South-East Asian countries such as Indonesia, Thailand and Malesia). But, there, most "recyclables" are not even recycled: a tremendous part ends up in wild dumps and incinerators, either because they are not really recyclable (for reasons mentioned above) or because not well enough sorted and cleaned in exporting developed countries (because it is way too expensive to do so) – or because, even in these countries, recycling costs for most materials are actually too high to be competitive with virgin materials. In the end, the part that really is recycled can only be thanks to the very cheap labour that can be found, in these poor importing countries, to carry out proper final sorting and recycling.

Reality is that the entire global recycling industry is based on social inequality and the exploitation of poor communities: it only seems to rather work because there are extremely indigent and marginalised people, hidden from us, that have no other choice but to manage rich countries' (or richer people of their own countries) waste in order to survive. As such, imagining that this approach could be globalized is simply unrealistic, because too few valuable materials can be recycled in proper, fair, economically viable, and sustainable conditions.¹⁰

ENVIRONMENTAL IMPACT OF RECYCLING AND GROWTH OF PLASTIC PRODUCTION

The fact that so many "recyclables" are actually not recycled in the countries they are exported to creates tremendous environmental impacts in these countries. Incinerators produce extremely toxic smokes and ashes that are not properly managed and controlled. What is not burnt ends up in open dumpsites or, very often, directly in the wild nature. In a nutshell, beyond its eco-friendly reputation, the real-life collateral damages of the global recycling industry are really dramatic.

In fact, recycling itself also has significant environmental impacts, notably in terms of water and energy consumption, as well as waste water production and CO₂ emissions. Of course, these impacts are lower than those associated with extraction of virgin raw material, but it does not mean that recycling should be seen as a perfectly sound process for the environment. Never mentioning the environmental impacts of recycling leads us to believe that this practice is ecologically neutral, or even positive; but this is the case only *in relative terms* when compared to extraction of virgin natural resources.

The relevance of recycling should not be exclusively assessed compared to the worst-case scenario, which makes it look so good, but also in comparison to other less harmful scenarios

¹⁰ For a striking glimpse at this issue, see [The Story of Plastic](#) documentary by Deia Schlosberg (2019).

such as non-production of waste. In other words, if we compared recycling to reusing or, even better, avoiding overconsumption and waste production in the first place, we would find that recycling has an extremely high impact on the planet.

Incidentally, recycling of single-use items is intrinsically linked to the production and existence of the said items, so we should consider the overall environmental impact of plastic through the prism of its whole life cycle, not just its hypothetically-sound end of life thanks to recycling. In other words, recycling is only possible if there is something to recycle, so if we want to fairly assess recycling's impacts (especially in comparison to avoid producing single-use items in the first place), we should also take the environmental impact of plastic's production, and the production of its raw materials into account. Plastic is made from fossil fuels like oil or fracked natural gas; and extracting those fossil fuels – and turning them into plastics – creates gigantic and dramatic pollution (pollution that most often affects marginalized communities nearby).¹¹

RETHINKING SORTING AND RECYCLING

HISTORICAL PERSPECTIVE ON THE EMERGENCE OF RECYCLING

If recycling has so many limits, why do all the measures and proposals of recent years essentially work towards *optimizing* the exploitation of resources by recycling raw materials, instead of focusing on *reducing* their consumption at source through repair and reuse? Although both are commonly affiliated to “*circular economy*”, these two approaches are actually fundamentally different in their objective: the first seeks “*to turn our waste into resources*” while the second aims to “*not turn our resources into waste*”. Why do we essentially favour the first one over the second, even though it seems to have so many flaws and limits?

Until the 1960s, the second objective (*not turn our resources into waste*) was the main and essential goal: plastic did not exist and circular waste management was largely based on reusable, returnable packaging. The take-back system was funded, organized and managed by the producers themselves, as it was clear to everyone that *they* were the waste producers – who thus had to deal with *their* waste. For example, beverage companies sold their drinks in glass bottles that they had to take back for reusing (it was agreed that when you purchased a drink, it was obviously the drink itself that you wanted, not its container). At this point, the system worked rather well and we were really limiting production waste at source. We were relatively close to a true circular economy.

But after plastic was invented, most companies realized they could make more profit if they stopped organising take-back of reusable packaging, which is why they progressively shifted to single-use disposable packaging. Within a couple of decades, almost all reusable (or organic/biodegradable) packaging disappeared and was replaced by single-use plastic. We switched to a much more linear economy and started producing tremendous amounts of waste.

¹¹ *Plastic & Health: The Hidden Costs of a Plastic Planet*, Center for International Environmental Law (2019).

In order to make this change possible, industries paid a lot of money to their lobbies for public relation campaigns to redefine “circular economy”. They started to present *recycling* (instead of *take-back and reusing*) as the best way to manage the increasing amounts of waste. This fundamental redefinition allowed them to offload themselves of the responsibility to manage their own waste and to transfer the burden to individuals and local administrations.¹²

The first and most famous campaigns of that kind were carried out, in the USA, by the well-known “*Keep America Beautiful*” lobbying association, thanks to which Coca-Cola and other beverage companies managed to establish the idea that we are “*all responsible*” and to blame people for not sorting their waste. This switch was facilitated by the fact that the brutal dismantlement of the take-back system had left people with no choice but to improperly dump their waste, which was in fact starting to pollute the environment. At that point, it was thus easy for industries to point an accusing finger at “irresponsible” individuals, and suggesting to sort and recycle waste could easily be presented as a beneficial solution – although it was essentially a deception to hide the problem that industries knowingly decided to create in the first place, for their own benefit.¹³

That is how, progressively, the world switched to the new definition of “circular economy” (*to turn our waste into resources*) and recycling became the alpha and the omega of waste management – paving the road to guilt-free over-consumption. In the current race to recycle, the question of the social utility of the produced objects is no longer weighed against their social and environmental impact. We end up looking for ways to recycle what shouldn't even exist in the first place. The all-recycling approach is therefore not only insufficient, it has become counterproductive.

THE OVER-POSITIVE PERCEPTION OF RECYCLING, A DISINCENTIVE TO PREVENTION

Over time, we have been made incapable of picturing waste management systems and circular economies that are not essentially based on recycling. Although the ‘3R’ principle still states that *reusing* is theoretically better than *recycling*, the latter has taken such a large place in our minds that it actually surpasses every other consideration: we do know that *reusing* is supposed to be better, and yet we can't help but look at *recycling* as a perfect alternative solution, the ultimate process that can solve all our problems.

Unfortunately, this over-positive perception of recycling has become a disincentive to prevention. Recent theoretical and experimental studies clearly showed that the positive connotations of recycling outweigh the idea of not over-consuming or wasting: by association of positive ideas regarding recycling, an individual is led to overconsume a resource that is offered to him when he knows or thinks that there is a possibility of

¹² *Toxic Sludge Is Good for You! Lies, Damn Lies and the Public Relations Industry*, John Stauber & Sheldon Rampton, Common Courage Press (2004).

¹³ *Ibid.* Among many other books and articles about *Keep America Beautiful* and greenwashing lobby campaigns, see also short summary of the issue in [More Recycling Won't Solve Plastic Pollution](#), Matt Wilkins, Scientific American (2018).

recycling.¹⁴ Presenting recycling as such a good solution for waste management is thus decreasing people's motivation to make the necessary changes in their habits and practices to avoid producing waste in the first place. As it is always hard to make significant changes in our lives, we tend to favour the easiest solution: sorting our increasing waste is easier than changing our consumption habits, so we unconsciously end up choosing the sorting/recycling option over reducing.

Incidentally, the infinite recycling myth keeps us thinking that, ultimately, we will not need to extract natural resources anymore. But, as we already mentioned above, this is also untrue, especially if idealization of recycling keeps us from reducing our consumption. Although recycling slowly progresses, extraction of natural resources increases much faster, and plastic production currently knows a double-digit growth. Between 2005 and 2015, yearly global plastic production increased by 45%¹⁵: how could recycling ever follow that pace?

If the recycling approach is not linked with a drastic decrease in plastic production (in line with a significant change in our consumption practices), recycling is doomed to remain a negligible unsustainable process totally incapable of managing the waste we produce. Or worse: a fallacious pretext to keep producing and consuming beyond reason and moderation.

INSTRUMENTALISATION OF RECYCLING: AN ALIBI FOR GREENWASHING AND OVERCONSUMPTION

In fact, “*recyclability*” has become a selling point, an element of justification and, more broadly, an alibi for our globalized production and distribution model based on single-use. This model, which is the cornerstone of our agri-food system in particular, is “addicted” to disposable packaging, for two logistical reasons at least, linked to the extension of distances and chains of actors involved. The first reason is the multiplication of transportation, handling and storage steps, which require protecting the products with multiple packaging layers (and make reusing of packaging virtually impossible for producers who want to extend their markets worldwide). The second reason why this model increases the need for packaging is the longer duration between production and consumption of the goods: food preservation becomes an issue, or even a challenge, so packaging is fallaciously presented as the first weapon against... waste!

In other words, the omnipresence of disposable packaging is directly linked to the disconnection between producers and consumers. The problem is that recycling brings water to the mill as it is constantly instrumentalized through communication campaigns and policies to create the illusion of sustainability for this deleterious economic model: recycling has become a justifying alibi for single-use products.

¹⁴ *The Effect of Recycling versus Trashing on Consumption, affaire: Theory and Experimental Evidence*, Monic Sun & Remi Trudel, *Journal of Marketing Research*, (2017).

¹⁵ *Production, Use, and Fate of All Plastics Ever Made*, Roland Geyer, Jenna Jambeck & Kara Lavender Law, *Science Advances* (2017).

This observation is not true for packaging only, but also for a wide range of products, starting with clothing. Fast fashion needs us to buy and throw away our clothes fast in order to buy new ones, so clothing industry has developed a perfect alibi by pretending that they manufacture “*recyclable clothes*”. In reality, most of it is not recycled, but thanks to this communication approach based on recycling, over-consumption can be legitimized and enforced. Nowadays, most fast fashion brands even offer discount vouchers in exchange for old clothes brought back for “recycling”: this kind of practice should not be seen as an eco-friendly gesture or a way towards “sustainability”, but as a vicious instrumentalization of an idealized vision of recycling, which actually pushes towards overconsumption and increased waste production.

Pure greenwashing is also extremely common when the alleged “recyclability” is highlighted on products’ packaging, although it is only theoretical and there is no effective recycling at the end of their life. For instance, when Starbucks proudly announced in 2019 that they produced a “recyclable” cup lid with a spout to replace straws¹⁶, they forgot to mention that this “recyclable” cover would not actually be recycled because no sorting-center had the ability to isolate these specific items, and no recycling facility was actually recycling this kind of soft polypropylene in most countries Starbucks operated.¹⁷

Recycling simply becomes the instrument of the lobbies to avoid restrictive regulations that would attack and forbid disposable products and packaging. Industries display commitments or voluntary action plans to prevent the legislator from getting too caught up in the subject and attacking single-use items. Most companies have become very good at building communication campaigns on virtuous objectives and hollow promises, without ever communicating on their non-existing actual results.

As long as we let the myth of 100% recycling justify this production/consumption/recycling pattern, there is no reason we will ever observe any reduction in overall waste production. There is simply no way this approach can get us any closer to a zero-waste objective.

Actually, the recycling industry needs production and consumption to remain high, in order to feed their processes and remain relatively profitable and economically viable. Recycling and single-use production legitimize each other. Therefore, there is no room left for alternatives such as reducing, so there is no reason the production of waste would tend to decrease. In that sense, the promotion of recycling really comes dramatically against reducing. Incidentally, the existence of incinerators comes against both reducing and recycling, as they constantly need gigantic amounts of waste (especially -recyclable-plastics, which, being essentially oil, burn easily and are necessary to ignite other kinds of less flammable waste) to operate and remain economically viable.

Beyond the previously mentioned logistical reasons associated with our globalized growth-based economic model, it is important to understand that the very idea of infinite recycling is much more convenient and suited to this model than reducing and reusing waste. However imperfect and limited recycling really is, the industry of recycling does significantly

¹⁶ <https://stories.starbucks.com/stories/2019/say-hello-to-the-lid-that-will-replace-a-billion-straws-a-year/>

¹⁷ *Recyclage : Le Grand Enfumage. Comment l'économie circulaire est devenue l'alibi du jetable*, Flore Berlingen, Editions Rue de l'Echiquier (2020).

contribute to GDP growth, directly and indirectly. On the contrary, reducing consumption and avoiding producing waste in the first place would lead to reduce that GDP growth, which is something our governments and all supporters of our economic model aim to avoid at all cost. In such a context, if we are not willing to question the dominant capitalistic economy, changing our consumption patterns and reducing waste become virtually impossible – so the objective of zero waste is doomed to remain a pipe dream.

SO, WHAT SHOULD WE DO?

Obviously, the conclusion of all these observations is certainly not that sorting and recycling are pointless or fundamentally bad. On the contrary, they are definitely an essential part of the solution to the waste issue. But they should not be carelessly over-promoted and presented as a magical solution to all problems. We should always keep in mind their intrinsic limits, their counter-productive potential effects, and more broadly the dangerous risks of instrumentalization that they bear. In a nutshell, recycling is indispensable, but insufficient and should be handled with caution.

ADVOCACY FRAMEWORK TOWARDS ZERO WASTE

With a view to reducing waste, but also and above all to preserving resources, it is of paramount importance to urgently halt the use of disposable products, meaning both single-use items (such as packaging) and products designed for a too short lifespan (clothing, furniture, equipment...). Individuals can, through purchasing decisions, send signals to this effect to economic actors. But this is not enough: in the absence of a collective organization that tends towards forbidding disposable products, individual actions can only have limited effects. Political decision makers need to make a stand and adopt relevant audacious legislations. Zero waste activists should always advocate primarily for this act.

A way forward should involve obligation of take-back for industries as well as an effort of standardisation of reusable packaging, in order to increase economic viability and reduce environmental impacts. For instance, if all drinks were sold in the same bottles, or all food in similar jars, washing and reusing packaging would become much easier for all stakeholders. In any case, one way or another, the overall responsibility to manage waste needs to be transferred back to industries (the real waste producers), as it essentially used to be before the 1960s. When companies proudly promote their social responsibility as they start reusing packaging, it should not be seen as a kind gesture but as the least they should do anyways.

The fight towards zero waste should also include ways to reduce planned obsolescence and increase the durability of commercialised products. Transparent information to the consumers, for instance through “durability” or “reparability” indicators on products, would be essential for this shift in our production/consumption patterns. More active involvement of governments, notably through the introduction of effective and significant bonus/penalty incentives on companies, would also be necessary. National authorities should systematically be advocated toward those essential changes if we want zero waste to eventually become an achievable goal.

Paradoxically, we should also keep in mind that advocating for larger investments in recycling facilities comes with a dramatic counter-productive effect: once a massive investment has been made, it becomes essential to keep feeding the facilities with recyclables in order for them to remain viable. In such a context where the new recycling facilities' survival depends on constant (and ever growing) supply of recyclable waste, how could reducing single-use and disposable plastics production remain the paramount objective?

RELEVANT ACTIONS TO IMPROVE SORTING AND RECYCLING

That being said, it is outrageous and unthinkable that we keep dumping and burning recyclable materials. It is thus necessary to sustainably ensure recycling solutions for non-disposable products which reach the end of their life after multiple and/or long uses. Great progress can be made if we stop wasting precious time and resources in the all-out search for new recycling processes for materials which are used to make objects or packaging of very little social utility. Let's concentrate our efforts on improving the sorting and recycling of items and materials that are really worth it and that are most easily and efficiently recyclable.

It is important to fight against the misleading use of the term "*recyclable*" when, admittedly, it is technically possible, but where there is no operational recycling channel in real life, in the local context. Some non-recyclable materials should simply be prohibited when a recyclable alternative exists. Similarly, designs that make recycling impossible should be condemned and forbidden. Like for reusable packaging, standardisation of disposable packaging with both recyclable designs and materials should be encouraged, or even imposed on industries (for instance same glass bottles for all vodka brands, same PET bottles for all soft drinks, same PP jars for all yogurts, etc.). The packaging industry should use only a limited range of materials that we already can recycle in our country, and designs products that always enable recycling.

All these measures would really facilitate waste sorting at home and recycling in industries. It would also reduce the need for technological investments in sorting centres and recycling facilities, allowing to focus investments on well-known effective and efficient techniques. These measures would also reduce the quantity of impurities in the outflow of recycling processes, which would increase the quality and value of recycled materials.

Citizens can play a significant role in pushing for these essential changes if they sort their waste properly: not only proper sorting would allow proper recycling right away thanks to existing recyclers with processes they already master; but - in contrast - it would also enable displaying what kind of non-recyclable (or non-effectively recycled) items still end up in households' waste. Non-recycled waste should not be simply dumped or incinerated behind the scenes, it should first be strictly sorted, by type of material and by companies and industrial sectors, in order to be able to produce solid data to build advocacy campaigns and to design relevant measures and standards. Obviously, all sorting and recycling actors (sorting centres, recycling facilities, etc.) have, like citizens, a major role to play in this approach, which requires that they assume a stronger activist posture (instead of simply remaining profit-seeking entrepreneurs).

Only then, together, we can irrefutably show what kinds of waste from which producers are not effectively reused or recycled, and have a chance to push for significant changes and make recycling a useful and sustainable process. For instance, it is absolutely inexcusable that glass bottles and jars are not entirely recovered and reused by drink and food industries when citizens and other field actors make the effort to sort them. The concerned companies need to step up immediately and fully respect their social responsibility obligations, beyond hollow promises and greenwashing campaigns.

Communications and advocacy efforts for these changes must take the limits of recycling into account, courageously and transparently, in order to give back recycling its rightful place. The issue of honest communication on recycling is essential because, for the moment, as we already mentioned above, studies show that the possibility of recycling tends to encourage people to overconsume. Promotion campaigns in favor of recycling should thus always transparently and thoroughly explain its costs and limits (technical, practical, physical, socio-economic and environmental). We should not hide the imperfections of recycling, but on the contrary we should build our awareness-raising activities on its very limits: people can understand that recyclers are not magicians, so it is essential that key changes are made at source, both in manufacturing processes and consumers habits.

Let's stop trying to "*make our waste resources*" and go back to "*not make our resources waste*"! It is the fundamental mission of zero-waste activists and relevant waste-related projects to put all companies that bring products on the market (both manufacturers and importers) in front of their waste management responsibilities. If possible, this should be done through honest and transparent peaceful collaboration; but, if necessary, we should not be afraid to use stronger communication campaigns meant to raise public awareness and increase the pressure on the real waste producers – for them to realign their practices towards real sustainability and circular economy.

SUMMARY OF KEY POSITIONS AND RECOMMENDATIONS

ALL OUR ADVOCACY, AWARENESS-RAISING AND PRACTICAL ACTIVITIES SHOULD TAKE INTO ACCOUNT, EXPLAIN, PROMOTE AND/OR BE CONSISTENT WITH THE FOLLOWING KEY POSITIONS AND RECOMMENDATIONS:

- **Keep all waste management considerations in the framework of the “big picture” of our societal economic model** in order to truly understand the core challenges and waste management issues;
- **Fight for immediate and strict ban of disposable products** (both single-use and short lifespan items);
- **Be transparent about the limits and drawbacks of recycling** to avoid counter-productive disincentive effects on waste reduction/reusing;
- **Condemn and forbid misleading use of the term “recyclable”** when recyclability is only theoretical and no operational recycling processes are actually implemented in Mongolia;
- **Push all industries to systematically switch to reusable packaging and organise reusable packaging take-back;**
- When products cannot be made reusable:
 - o **promote priority use of recyclable materials;**
 - o **ban non-recyclable materials** when a recyclable alternative exists;
 - o **condemn designs that make effective recycling impossible**, even when theoretically recyclable materials are used;
- **Push packaging industry to:**
 - o **reduce the range and number of materials they use**, especially in terms of plastic types;
 - o **stop making multi-material packaging** that can't be effectively recycled;
 - o **standardize packaging by type of product** for all companies and brands, both for reusable and recyclable packaging;
- **Encourage people to adapt their consumers' habits** so as to reduce waste generation in the first place, and/or to favor reusable items and packaging;
- **Call for extensive waste sorting not just by households** (who actually produce less than 10% of all waste) **but by all waste producers, especially industries** (which produce most of our trash);
- **Use extensive sorting not only for direct recycling but also to produce data** so as to better understand what non-recycled products and brands currently make up most Mongolian waste - and subsequently advocate for adequate measures to be taken.