A Sustainable Circular Plastics Economy in The Netherlands

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Contributor: Martin Calisto Friant

The circular economy (CE) has become a key sustainability discourse in the last decade. The Netherlands seeks to become fully circular by 2050 and the EU has set ambitious circularity targets in its CE Action Plan of 2015. The plastics sector, in particular, has gained a lot of attention as it is a priority area of both the EU and Dutch CE policies. However, there has been little research on the different and often contested discourses, governance processes and policy mechanisms guiding the transition to a circular economy and society. There is thus a dominance of technocentric imaginaries, and a general lack of discussion on holistic, and transformative visions, which integrate the full social, political, and ecological implication of a circular future.

circular economy plastics circular society policy analysis discourse analysis

extended producer responsibility polymer recycling environmental governance

sustainability

1. Introduction

The unsustainable accumulation of plastic waste has often been described as one of the most pressing environmental challenges of our time [1][2]. The global consumption of synthetic polymers (hereafter: plastics) has risen 20-fold since 1960 and is projected to keep rising by 3.8% per year (it will thereby triple from now to 2050) [2][3]. Yet, only about 9% of all plastic waste generated by humanity until 2015 has been recycled, the rest was either incinerated (12%) or ended up in landfills and the environment (79%) [4]. Nevertheless, it is undeniable that plastics provide key benefits to global economies as they are cheap, versatile, multifunctional, and lightweight materials that often substitute the use of scarce resources and materials which often have higher environmental footprints [5]. They also have valuable health and safety applications, such as protection from biohazards, preventing food contamination, ensuring access to clean water and sanitation, and securing the hygiene of medical devices, etc. [6]. However, dealing with plastic waste sustainably and responsibly remains a monumental challenge. Plastic waste presents a significant threat to biodiversity as an incalculable number of animals die due to plastic ingestion or entanglement every year and many more are affected by the toxicity of plastic compounds and additives that leach into the environment [7][8][9][10]. Plastics also present a risk to human health, with micro and nano-plastics now present virtually everywhere, including table salt [11], beer [12], honey and sugar [13], tap water [14] and even the air we breathe [15]. Research has linked plastic production, use and pollution to various serious diseases including cancer [16][17][18], endocrine system disorders [18][19][20], reproductive hazards [17][21][22] and obesity, diabetes, and cardiovascular diseases [21][23][24]. Moreover, producing, transporting, and recycling plastics produces significant amounts of greenhouse gases, thereby exacerbating global warming [25].

The circular economy (CE) is often promoted as a solution to these problems as it could allow for the elimination of plastic waste through innovative recovery processes, bio-based alternatives and reuse and reduce solutions. Various initiatives have thus been created to foster a CE transition for the plastic sector such as the ‘Global Commitment’ lead by the Ellen MacArthur Foundation [26], the ‘European Plastic Pact’ initiated by France, the Netherlands and Denmark [27] and the ‘Circular Plastics Alliance’ established by the European Commission [28].

The Dutch government, in particular, has set the ambitious target to become 100% circular by 2050 and its Circular Economy Action Plan focuses on plastics as a strategic sector to lead the transition [29]. Despite having a strong plastic waste management system with high recovery figures (with a 99% combined recycling and incineration rate for plastic packaging), the Netherlands is still facing key challenges. Indeed, Dutch plastic consumption continues to rise, and a proportion of its plastic waste is leaked to third countries and ends up in the environment [30][31]. Moreover, nearly 50% of end-of-life plastics in the Netherlands are incinerated instead of recycled [32].

The transition to a CE for plastics in the Netherlands, therefore, remains a significant challenge. Yet, there has been very limited research on the topic as there are just over a dozen academic papers on the CE of plastics in the Netherlands. Previous research on the topic has focused on analyzing bio-plastic alternatives [33][34][35], consumer habits [36], and polymer recycling practices and innovations [37][38][39][40][41][42]. However, studies have not analyzed the policies and discourses of the CE transition for the plastic sector in the Netherlands. Yet this is a key question as the CE is a contested and diverse concept that can lead the CE transition in many different directions, with different socio-ecological implications, depending on the specific discourse and vision of circularity which is implemented [43][44][45][46].

This paper, therefore, addresses this key research gap by answering the following research question:

What are the main discourses in the transition towards a sustainable circular plastics economy in the Netherlands and what implications and recommendations can be drawn from it?

2. Plastic Policies in The Netherlands

As part of its CE Action Plan, the European Commission adopted the “European Union Strategy for plastics in a Circular Economy” which addresses issues such as recyclability, biodegradability, the presence of hazardous substances in certain plastics, and marine litter (European Commission, 2018). Several plastic specific directives were implemented to address these issues, such as Directive 2019/904 on the reduction of the impact of certain plastic products on the environment, which banned several single-use plastic products such as cotton buds, cutlery, stirrers, plates and straws and established eco-design and separate collection requirements for single-use plastic bottles. Moreover, the EU set new recycling targets for plastics packaging (50% by 2025 and 55% by 2030)

(Directive 2018/852) and established the obligation for the separate collection of municipal plastic waste (Directive 2018/851).

In addition to this, the EU has mandated the establishment of extended producer responsibility (EPR) systems to manage plastic packaging waste (Directive 2018/852). An EPR system is a policy mechanism by which the administrative, financial, and physical responsibility to manage the entire life cycle of a product, and especially, the take-back, recycling and final disposal, is given to the producers or importers of a product rather than to the government [47].

Three key policies regulate plastic waste within the Netherlands, the “National Waste Plan” established in 2003, as well as the “Packaging and Paper and Cardboard Management Decree” and the “Framework Agreement on Packaging and Litter”, which were both established in 2007. These policies set minimum plastic packaging recycling targets which rose from 32% in 2009 to 38% in 2010, and further to 42% in 2012. They also created a deposit system for large PET bottles and established the Dutch EPR system for packaging waste. These policies were updated in 2014 to increase the minimum recycling targets from 43% in 2013 to 52% in 2022 (with an increase of 1% per year).

The producers and importers of plastic packaging founded *Afvalfonds Verpakkingen* to collectively implement their obligations under the abovementioned policies (it is the so-called producer responsibility organization or PRO [48], which is responsible for the implementation of the packaging EPR system in the Netherlands). *Afvalfonds Verpakkingen* is financed by the packaging industry via a ‘waste management contribution fee’. This fee must be paid by producing and importing organizations when they bring and/or discard 50,000 (or more) kilos of packaging on the Dutch market, even if an organization is located outside the Netherlands.

The organizational and financing structure of *Afvalfonds Verpakkingen* and its recovery activities are presented in **Figure 1**.

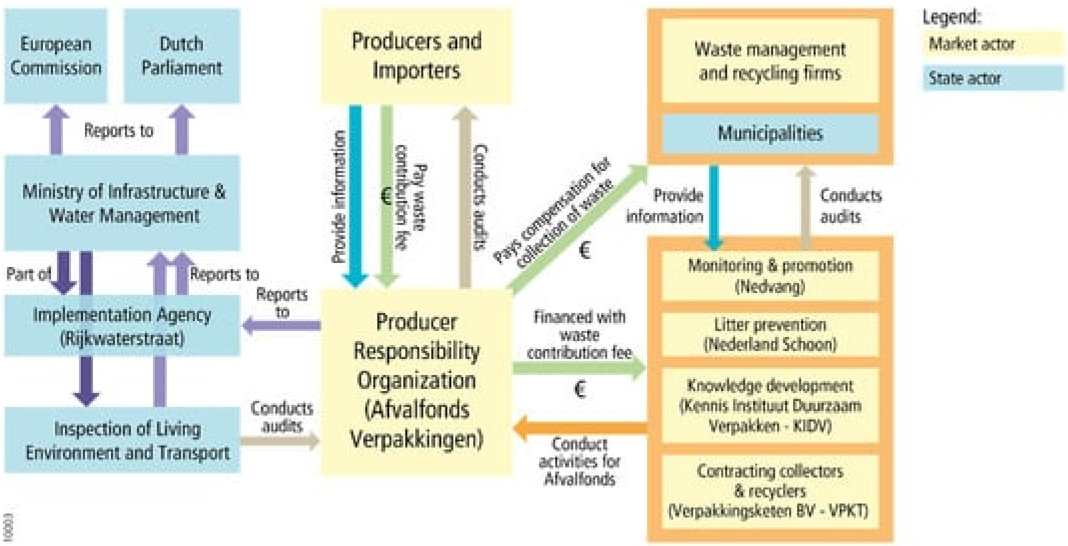

Figure 1. EPR-system of packaging in the Netherlands (source: developed by authors based on *Afvalfonds Verpakkingen*, 2018).

Each Dutch municipality organizes their waste collection system independently, thereby resulting in a multiplicity of different collection systems. *Afvalfonds Verpakkingen* compensates municipalities for their collection by paying a specific fee based on the volume and quality of waste they collect. While this incentivizes an efficient collection, it also means that some municipalities which have poorly separated waste, do not receive enough compensation to cover their costs. In those cases, the costs for collection are not fully covered by *Afvalfonds Verpakkingen*, but rather by local taxpayers [49].

In 2016, the Dutch government established its national CE strategy "A circular economy in the Netherlands by 2050", where it set the ambition to reduce raw material consumption by 50% in 2030 and to become 100% circular by 2050 [29]. This policy established plastics as one of the central components of the transition and seeks that "in 2050, 100% renewable (recycled and biobased) plastics will be used without any harmful impact on the environment, wherever such is technically feasible" (p. 51).

In the following years, the "National agreement on the circular economy (2017)", the "Transition agenda of plastics (2018)", and the "Plastic Pact NL (2019)" were enacted as part of this commitment. The above policies represent various multi-stakeholder agreements, containing voluntary commitments from a wide variety of market, state, and civil society actors . They notably set several voluntary targets for 2025, such as ensuring that all single-use plastic packaging is 100% recyclable; reducing plastic usage by 20% (in kg) compared to 2017; reaching a 70% rate of plastic packaging recycling; ensuring that new plastic packaging contains at least 35% recycled content and increasing the use of sustainably produced biobased plastics [50].

In July 2019, a third "National Waste Management Plan" was implemented. It prohibited landfilling and incineration without energy recovery for all sorts of plastic waste.

The performance of the plastic recovery operations of *Afvalfonds Verpakkingen* can be seen in **Figure 2** (numbers in green represent recycling figures). It shows that the Dutch and European recycling targets were largely achieved, and that recycling rates improved almost every year except for 2017. According to *Afvalfonds Verpakkingen*, China's ban on the import of post-consumer plastic waste was a key factor explaining this setback (Annual monitoring report of 2017, p. 5). In fact, there is insufficient recycling capacity in the country and Europe as a whole (Interview with Director of a consultancy firm on CE) [49]. Therefore, Afvalfonds Verpakkingen is highly dependent on the export of its waste to third countries to fulfil its recycling targets and the Netherlands is thus one of the leading exporters of plastic waste in the world [30][51]. While data on the exact amount of Dutch plastics which are exported for recycling are unavailable, studies have found that, in the EU, as much as 46% of plastics that are destined for recycling are exported [31].

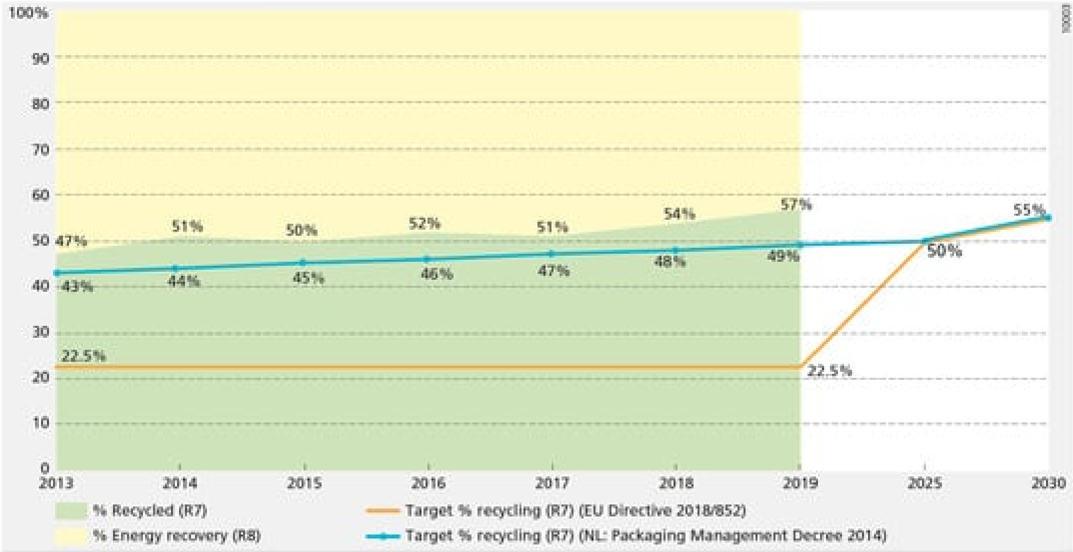

Figure 2. Results of recycling (R7) targets and energy recovery (R8) rates for plastic packaging of between 2013–2019 (author's work based on Afvalfonds Verpakkingen annual monitoring reports 2013–2019, see Supplementary Materials F for full data).

The problem with this is that it is very hard to control what happens to plastic waste once it is exported. Although exports of plastics are highly regulated under international law, actual controls are rather weak, so it is virtually impossible to guarantee how plastic waste will actually be processed and where it will end up (interview with Associate Director of a consultancy firm on CE and interview with Director of a consultancy firm in biotechnology). In practice, plastic waste changes hands multiple times along complex international trading routes, causing many leakages to the environment along the way and often ending up in countries in the Global South will little capacity to recycle it sustainably [52]. A large proportion of European plastic waste which is reported as recycled thus ends up in landfills or rivers and oceans across the globe [31]. Even *Afvalfonds Verpakkingen* recognised, in their 2017 monitoring report, that "there is uncertainty about the quantities and actual recycling of plastic packaging waste that has been exported to customers outside the EU" (p. 44). Moreover, recent research has found that actual Dutch recycling figures for 2017 were closer to 23% than to the reported 51% [32][38]. According to Bishop et al. the Netherlands is, in fact, the 5th largest European contributor to ocean plastic debris (in yearly kg of plastic debris per capita) [31]. Moreover, research suggests that China's ban will likely further increase the rate of mismanaged plastic as plastic waste exports are now being channelled to other countries with lower capacities to process and recycle plastic waste in a sustainable manner [31].

It is also worth noting that there is little demand for recycled plastic in the Netherlands, Europe, and the world as a whole because of its higher price and lower quality compared to virgin plastic (Interview with Professor in plastic packaging of Dutch University). This means that most recycled plastic is not re-used in high-quality products and applications, and much of it ends up stockpiled until it finds a buyer (interview with Business Development Manager of large recycling firm). In fact, the actual use of recycled plastic in new plastic products is only around 10% in the Netherlands [53].

3. Analysis of Dutch Policies

From the above results, it is evident that current CE practices in the Netherlands are primarily focused on eliminating landfilling and incineration and replacing it with energy recovery (R8) and recycling (R7). While recovery figures are quite high compared to other countries (the average rate of plastic packaging recycling in the EU was 41.4% in 2018), the Netherlands is highly dependent on the export of plastic waste to obtain these results. The Dutch plastic recovery system might thus lead to significant unintended socio-environmental impacts throughout the world.

In addition to this, the Netherlands is still highly dependent on energy recovery (R8, see **Figure 8**). While energy recovery can reduce CO_2 emissions by 30 to 45% compared to traditional electricity generation with fossil fuels, it is not a clean process as it produces significantly more greenhouse gases than recycling or re-using packaging [25]. Energy recovery also creates toxic residues that must ultimately be landfilled (about 1.5 to 2% of the net incinerated weight) [38]. Moreover, it fuels the need to continuously produce more virgin plastic, thereby reproducing a linear system.

The Plastic Pact NL has set targets that go beyond recycling and incineration, such as consumption reduction (R0 refuse) and recycled content (R1 reduce) objectives. However, those goals are purely voluntary; companies can therefore agree to those strong commitments to be perceived as greener and more sustainable, without facing much repercussion if they do not reach them [54][53][55]. In fact, research shows that voluntary agreements and partnerships are often used as key greenwashing strategies for corporations in the plastic sector to improve brand reputation and reduce regulatory pressure [54].

The Dutch Government's target to become 100% circular by 2050 is quite ambitious, yet it is unclear how this will be measured and implemented. It could mean that all manufacturing and recovery operations are delocalized to other countries, thereby exporting environmental impacts from industrial activities, while still allowing for an increase in the consumption of manufactured goods. This goal might therefore not guarantee that overall environmental impacts will be reduced on a global scale. Furthermore, it is, in reality, impossible to create a perfectly circular economy due to the second law of thermodynamics, which demonstrates the inevitability of entropy as materials and energy are irreversibly dissipated in any physical process [56][57][58][59]. This means that it is technically impossible to recycle plastics over and over again as material quality degrades over time and a significant portion is lost in each recovery cycle [46][60][61][62]. The Dutch Government's goal to achieve full circularity is thus more of a symbolic objective than a realistic aim.

Moreover, the Dutch Government placed economic growth as a cornerstone of its CE strategy, which is seen as bringing plenty of "opportunities for sustainable economic growth" (p. 42) and which relies heavily on an "absolute decoupling of economic growth from environmental impact" (p. 10) [29]. This commitment to green growth is clearly within the *Technocentric Circular Economy* perspective (see **Figure 2**), and was chosen despite the fact that academic research has clearly evidenced that absolute decoupling is not happening and will most likely never happen on a scale relevant to significantly reduce current unsustainable patterns of resource use, greenhouse gas emissions, and overall environmental degradation [63][64][65][66].

All in all, the voluntary targets of the Plastic Pact and the 100% circularity objective of the Dutch CE strategy seem to be less science-based goals than marketing stances which allow these actors to be perceived as global leaders and front-runners in the CE transition. In fact, these strong commitments appear rather ambitious and progressive, yet they are not binding. Meanwhile, the policies which are actually compulsory in the Netherlands are doing little to fundamentally transform the linear plastic production and consumption systems. Indeed, recycling (R7) remains the core CE value retention strategy in Dutch policies and the only one with mandatory targets. Yet, recycling has clear limitations and cannot by itself lead to a sustainable circular plastic economy without strong policy measures and targets on higher value retention options such as reducing virgin plastic consumption (R0 refuse), eco-design requirements to reduce the environmental impact of plastics (R1 reduce), and the promotion of re-usable packaging (R2 reuse) [25][53][67].

It is also important to note that Dutch policies do not include specific social justice components. They thus do not address key issues regarding who pays for the transition, who controls CE technologies and how to support countries in the Global South, where a substantial share of Dutch plastic waste currently ends up [31]. All in all, it is clear from the above analysis that the Dutch government's approach to a CE transition for plastics follows a *Technocentric Circular Economy* perspective (see A Typology of Circular Economy Discourses: Navigating the Diverse Visions of a Contested Paradigm, 2020).

4. The Plastic Discourse in The Netherlands

Results indicate that Dutch societal perspectives and public policies are dominated by *Technocentric Circular Economy* discourses. Plastic governance in the Netherlands is thus not geared towards social justice or reduced plastic consumption and ecological footprints. Instead, it focuses on recycling solutions, whereby people are brought to believe that they can continue consuming more plastic as long as they throw it in the right bin. It thereby obscures the complex technological and logistical challenges of recycling and its impacts on people and ecosystems throughout the world by creating an illusion of perfect circularity, which incentivizes further plastic consumption [52][60][68].

To understand why this is the dominant framing of the plastic problem, it is important to acknowledge that the Netherlands is a key player in the global plastic industry with hundreds of producing firms in the sector generating a turnover of 17.5 billion euros (2% of Dutch GDP) in 2014 and exporting 83% of their production [69]. The powerful oil sector has also strongly pushed for an increased production of plastics as the biggest future use of fossil fuels, now that their use as energy sources must be reduced to comply with climate change commitments [54][70]. There are thus strong lock-ins that tie the economic and geopolitical interests of the Netherlands with the plastic industry and thereby incentivize discourses and policies that do not threaten its position as one of the top plastic producers and exporters in the world [70].

Another way to explain the dominance of *Technocentric Circular Economy* perspectives in the Netherlands is by acknowledging the role of highly processed foods, and the delivery industry in fostering the dependency on plastic packaging. E-commerce has greatly increased the demand for plastic packaging from the delivery industry, in particular for online food delivery services [71][72]. The rising consumption of ultra-processed foods also contributes to an increased dependence on plastic packaging [73]. Plastic packaging consumption in the Netherlands has thus risen by 11.75% from 2013 to 2019. The continuous growth and convenience of plastic packaging thereby limits the possibility of imagining a reduction in its consumption, through refuse (R-0), reduce (R0), and reuse (R2) alternatives; instead, it biases current discourses and policies towards improved collection, recycling (R7), and recovery (R8) strategies.

5. Policy Recommendations

The results from this research analysis allow us to evidence points of consensus for certain policies, which could be quickly implemented as *low-hanging fruits* for the transition to a sustainable circular plastics economy in the Netherlands.

Short-term policy recommendations, with strong support across societal stakeholders:

- *Tax virgin fossil-based plastics and non-recyclable plastics and reduce the taxes on recycled plastics (statement #39).* The price of virgin plastics remains too low for recycling to be an economically competitive alternative [37][74]. Taxes can thus make virgin fossil-based plastics and non-recyclable plastics more expensive and thereby stimulate the production and uptake of recycled plastics [75][53].

- *Establish a fund focused on innovation and R&D of circular solutions (such as new sorting and recycling technologies) financed by fees on virgin materials (statement #21).* Resources are still needed to improve the cost-effectiveness, eco-efficiency, and commercial readiness of new technologies [37][76]. A fund could thus provide much-needed financial resources while also reducing the competitiveness of unsustainable virgin materials [75][53].

- *Establish financial and legal incentives to discourage the incineration of lower-grade plastics (with or without energy recovery) and promote their recycling (statement #12).* In the Netherlands, the costs of recycling outweigh those of energy recovery by as much as 36.7% [77]. Financial and legal incentives with key targets to reduce energy recovery could thus help make recycling a more cost-effective solution.

- *Design for recyclability and lower overall environmental impacts throughout a product's lifecycle (including resource use and hazardous substances) (statement #11)*. Plastic products currently contain a large number of different polymer types and additives, which provide specific textures, colours, and properties, but that heavily reduce recyclability [78]. Moreover, there is no evidence showing that EPR systems lead to changes in the eco-design of products to make them more easily recyclable or longer-lasting [79][80][81][82][83]. To improve recycling potential and reduce the overall environmental impact of plastic packaging, it is thus key to establish direct eco-design regulations that limit the number of additives, multilayer and composite plastic materials and support the use of sustainable alternatives [54][49]. The eco-modulation of EPR fees is a key manner to achieve this objective, whereby producers pay EPR fees based on the environmental impact and recyclability of their product, thereby directly incentivizing eco-design innovations [38][81][84][85][86].

- *Increasing plastic recycling targets (statement #32).* The Plastic Pact NL voluntary commitment to reach a 70% recycling rate by 2025 could become a mandatory target to stimulate the industry and reduce the risks of free riders.

- *Set minimum requirements for recycled plastic content in new plastic products (statement #30).* The current use of recycled plastic in new products is only about 10% in the Netherlands [53] it is thus key to set new mandatory targets which help create new market avenues for recycled plastics.

- *Ban the export of plastic waste outside Europe so plastic waste is recycled and processed within European borders (statement #2).* This policy is key to ensuring that plastics are properly recycled and do not end up causing more harm to human health and ecosystems [31][52]. Not only will this stimulate the recycling industry in the EU, but it will also allow countries in the Global South to focus the little recycling capacity they have on their own plastic waste.

While they are important, the above policies alone are not enough to create a fair and inclusive transition towards a sustainable circular plastics economy. Other key policies, which might not have the strongest support, are thus necessary, especially considering the recommendations of previous research in the area.

Policy recommendations, which are important from a sustainability and circularity perspective:

- *Afvalfonds Verpakkingen should include civil society organizations and local and national government representatives in a participatory and inclusive manner so that its decisions regarding plastics are more democratic, transparent, and inclusive (statement #26)*. Evidence from this and other research shows that EPR systems tend to choose the cheapest and most profitable recovery option rather than the most social and environmentally sustainable options [48][79][87]. This is why most of the waste in the Netherlands is currently incinerated or exported to the Global South. While EPR costs are borne by society, which pays the EPR fee and suffers the consequences of plastic pollution and incineration, people currently have no say on how EPRs are managed. It is, therefore, key to increase the democratic inclusiveness of the system by placing civil society organizations and local government representatives in the board of *Afvalfonds Verpakkingen*, with an equal say in decisions compared to private actors. The EPR system would thus not only become more inclusive, but it will also create full transparency and accountability regarding what happens to collected plastics. This can thus lead to key improvements in the social and environmental performance of the EPR system [48][79][82][84].

- *Establish targets to reduce overall plastic consumption per capita (statement #42)*. Reducing overall plastic consumption is the ultimate aim of any CE policy for plastics according to academics and practitioners alike [3][88][52][89]. It is thus key to focus on this goal as a binding policy target.

- *The government and companies should highly increase the use of reusable packaging (statement #36)*. Reusable packaging has been in steady decline in the last decades [90]. Yet, it has a unique potential as it can lead to both economic savings and environmental impact reductions compared to single-use options. Studies have found that reusable packaging outperforms single-use packaging for both business-to-business and business-to-consumer applications [90][67][91]. Moreover, reusable packaging enjoys renewed customer acceptance [67]. To facilitate the deployment of reusable packaging options, the state should establish deposit-refund systems and reduce taxes for reusable packaging [53]. In addition to this, an eco-efficient and customer-friendly design of standardized reusable packaging containers, bottles, crates, and logistical systems should be established to improve the economic and environmental efficiency of return systems.

- *The government should establish a fair and just societal system to make sure that all the fees and costs of a circular economy transition for plastics do not fall on the poorest and most vulnerable people (statement #16)*. The EPR fees and the additional taxes which are suggested as policy options above will increase the overall price of products for consumers in a regressive manner (those that have the least will pay the most as a percentage of their income) [53][83]. To compensate for this, it is key to redistribute some of these resources to low-income communities through projects and initiatives that employ vulnerable and disenfranchised groups and support local livelihoods [75]. Pay-as-you-throw systems, which reward people for recycling, could also be established to redistribute part of the collected taxes and fees [81].

- *Government and companies from the Global North should provide financial assistance and technology transfers to countries in the Global South so they can better manage plastic waste (statement #17)*. Waste management infrastructure and technology is very expensive, in low-income countries it can be the single highest budget item for municipal governments [31]. Yet these countries must deal with many other key sustainability issues from poverty to climate change and lack of housing [92]. Therefore, they require significant amounts of financial and technical assistance to help them develop their waste management infrastructure [52][75]. Fostering open-source technologies can also help in this regard as they can spread circular innovations and solutions throughout the world and democratize the transition to a circular economy and society [46].

- *The government and companies from the Global North should establish a fund to finance clean-up activities of plastics in the oceans and other natural ecosystems (statement #6)*. Plastic pollution is ultimately a “collective action problem”, which requires global action to succeed [93]. Those that produce and consume the most plastics and have the greatest financial capacity should thus take the lead in solving this problem by funding clean-up activities throughout the world [52][53][94][95].

- *Educate citizens and create more public awareness and change the culture of mass consumption to reduce overall plastic use (statement #13)*. In many ways, plastics themselves are not the problem, they are durable, efficient, and infinitely adaptable materials [5]. Rather, the problem resides in the high-paced capitalist system of mass consumption and production that depends on cheap throwaway plastics. The question is thus not only how to better recover and reuse plastics but rather how to use less of everything [96]. Sustainability education and awareness-raising should not focus on individual consumer choices and behaviours, which have very limited environmental impacts [97]. Instead, it should focus on "questioning our over-consumptive consumerist lifestyles" [55] and "challenging entrenched corporate and societal views about growth" [54]. It is indeed key to promote post-materialist worldviews, which not only reduce the demand for unnecessary consumption but also open the door to slower, healthier, and more convivial ways of life [98][99][100].

The above policy recommendations should be understood as a set of integrated policies which complement each other. Plastic poses complex problems, which cannot be addressed through siloed actions or single strategies. A combination of value retention options from refuse (R0) to remine (R9) are thus needed, along with strong social justice and global solidarity policies. While these recommendations are specifically formulated for the Dutch policy context, they might also bring insights and ideas for the transition to a circular economy in other countries and contexts.

6. Conclusions

All in all, our research has found that the dominant discourse on the CE transition for plastics in the Netherlands assumes that the current system of mass-production and consumption can remain unchanged. Next-day deliveries and highly processed foods and products made with components and ingredients from all over the world are thereby set as unchangeable variables. Our research shows that the dominant imaginaries in the Netherlands are not considering alternatives, such as neighborhood stores and restaurants, repair cooperatives, and community-based markets of local, fresh, healthy, and seasonal goods that require little or no packaging in the first place. We observe that the economic interests of plastic industries, online retailers, and ultraprocessed foods dominate the material and discursive landscape upon which CE policies are formulated. Therefore, the current plastic discourse in the Netherlands does not challenge the capitalist system of fast-paced mass consumption, which fuels the need for so much plastic in the first place. Moreover, it replicates recycling fairy tales and neoliberal imaginaries of continuous economic growth, which disregard the biophysical limits of earth and the laws of thermodynamics. Under this discourse, our findings suggest that plastic production and consumption will likely increase, leading to significant adverse environmental and human health implications.

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