The Community of Practice: Waste to Value

INSTITUTED AND FUNDED BY THE NATIONAL RESEARCH FOUNDATION

COMMENTARY ON THE PROPOSED REGULATIONS REGARDING EXTENDED PRODUCER RESPONSIBILITY

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Under the auspices of the NRF Community of Practice: Waste to Value a collaborative interdisciplinary project spanning across numerous research chairs:

SARChI Chair - Minerals Beneficiation: focusing on the development of a small-scale metallurgical process for metal recovery from e-waste. (University of Cape Town)

SARChI Chair - Waste and Society: exploring the interplay between the plastic waste value chain and Municipal solid waste management. (University of the Western Cape)

SARChI Chair - Mineral Law in Africa: Activating the Circular Economy in South Africa: Assessing the Legal and Institutional Barriers. (University of Cape Town)

SARChI Chair - Waste and Climate: Implementation of integrated waste-to-resource systems using the W.R.O.S.E. model. (University of KwaZulu Natal)

SARChI Chair - Sugarcane Biorefining: Exploring additional waste streams as resources for biorefinery. (University of KwaZulu Natal)

About the Community of Practice: Waste to Value

A community of practice (CoP) is a collaborative effort towards a shared vision, using the knowledge of various experts to gain insight into issues faced by current society. The NRF supported Community of Practice: Waste to Value (WtV) aims at unlocking the economic, societal and environmental potential of the largely untapped resource: waste in South Africa.

In South Africa, the disposal of unsorted municipal solid waste (MSW) to landfill[1] and, illegal dumping[2] are still the primary waste management methods across the country. The Greenhouse gas generation potential from MSW landfills is well recognised, and the need for improved waste management systems has gained momentum globally to reduce greenhouse gas emissions and their impact on climate change.[3] Yet waste can constitute a resource, and WtV is aimed at understanding scientific, legal and social dynamics of value recovery from MSW in both the formal and informal economy.

The principal CoP participants straddle three disciplines with backgrounds in Engineering (Prof Petersen, Prof Trois and Prof Stark), Law (Prof Mostert) and Social Work (Prof Schenck). However, the well of expertise extends to fellow collaborators in disciplines such as waste management, environmental and geographical sciences, systems analysis, economics and business finance. Through ongoing collaborations, trans-disciplinary research in the WtV CoP is encouraged.

We, as a collective, kindly accept the invitation for comments on the Extended Producer Responsibility Regulations (EPR regulations). We endorse the policy direction and consider the furthering of section 18 of the National Environment Management:

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[1] Godfrey L (2017). Historical review of waste management and recycling in South Africa. *Resources*, 6: 57 doi:10.3390/resources6040057.

[2] Department of Environmental Affairs (2018). *South Africa State of Waste Report (Second Draft Report)* 67 http://sawic.environment.gov.za/documents/9066.pdf; Department of Environmental Affairs (2018). *South Africa State of Waste Report (Second Draft Report) 67* http://sawic.environment.gov.za/documents/9066.pdf.

[3] Zhang C, Xu T, Feng H & Chen S (2019). Greenhouse gas emissions from landfills: A review and bibliometric analysis. *Sustainability*, 11: 2282 doi:10.3390/su11082282.

Waste Act (Waste Act) in South Africa an innovative avenue to explore. We commend the Department of Environment, Forestry and Fisheries (DEFF) for encouraging shared responsibility across the value chain.

Background and Context

In the past three years, there has been a shift towards including the Circular Economy (CE) into sustainable development policy in South Africa.[4] Departments have acknowledged their role as enablers in the CE and have seen the potential for CE as an action area and a policy direction.[5] EPR is considered as one of the ways to manage waste streams and further CE policy initiatives. On the 26th of June 2020, DEFF invited comments on the proposed EPR Regulations[6] in terms of section 18 of the National Environmental Management: Waste Act (NEMWA).[7]

These regulations came after a policy shift away from Industry Waste Management Plans (IndWMP) towards the Extended Producer Responsibility principle.[8] The call for comment was made in an overarching government notice on the proposed regulations regarding extended producer responsibility[9] alongside government notices on

[4] *Hansard* (unrevised) (2017). Mini-plenary, Thursday, 25 May 2017.

[5] *The White Paper on Science, Technology and Innovation. Science, technology and innovation enabling inclusive and sustainable South African development in a changing world*. March 2019. https://www.dst.gov.za/images/2019/WHITE_PAPER_ON_SCIENCE_AND_TECHNOLOGY_web.pdf

[6] GN no 718 *GG* 43481 of 26 June 2020.

[7] Act 59 of 2008.

[8] GN no 1659 *GG 42909* of 13 December 2019 withdraws the section 28 Notice calling for the Paper and Packaging Industry, Electrical and Electronic Industry and the Lighting Industry plans published under GN 1353 in *GG 41303* on 6 December 2017 https://www.gov.za/sites/default/files/gcis_document/201912/42909gon1659.pdf. See also *The Draft Revised and Updated National Waste Management Strategy*, GN 1561, GG 42879 of 3 December 2019.

https://www.gov.za/sites/default/files/gcis_document/201912/42879gon1561.pdf] which calls for greater emphasis on extended producer responsibility.

[9] GN no 718 *GG* 43481 of 26 June 2020.

proposed extended responsibility schemes for the lighting[10], paper, packaging and some single-use products[11] and electrical and electronic equipment[12] sectors in the lighting electronic and electrical equipment and the paper, packaging and other single-use industries.

EPR is a "waste management policy concept" furthering the aim of reduction, reuse, recycling and recovery of waste[13] through various regulatory, economic and information-based policy instruments.[14] Within the context of the proposed regulations, it specifically refers to the extension of a producer's responsibility for a product to the post-consumer stage of a product's life cycle.[15] The producer's responsibility in terms of NEMWA is qualified as "financial or physical"[16]. This includes waste minimisation programmes, financial arrangements for funds promoting reduction, re-use, recycling and recovery of waste, public awareness programmes concerning the health and environmental impacts of waste emanating from a product, and other measures mitigating potential health and environmental impacts.[17] EPR ensures the true social and environmental costs of products are not externalised to local municipalities and taxpayers, but rather burden those who profit from the

[10] GN no 717 *GG* 43480 of 26 June 2020 https://www.environment.gov.za/sites/default/files/gazetted_notices/nemwa_lightingsector_producerresponsibiltyscheme_g43480_gon717.pdf.

[11] GN no 719 *GG* 43482 of 26 June 2020 https://www.environment.gov.za/sites/default/files/gazetted_notices/nemwa_extendedproducerresposibility_paperpackaging_g43482gon719.pdf.

[12] GN no 720 *GG* 43483 of 26 June 2020.https://www.environment.gov.za/sites/default/files/gazetted_notices/nemwa_electricalequipmentsector_producerresponsibiltyscheme_g43483_gon720.pdf.

[13] Section 18(1) read with the Preamble of NEMWA.

[14] Nahman A (2010). Extended producer responsibility for packaging waste in South Africa: Current approaches and lessons learned. *Resources, Conservation and Recycling*, 54: 155-162.

[15] Regulation 1 of the Proposed Regulations regarding Extended Producer Responsibility, GN no 718 *GG* 43481 of 26 June 2020.

[16] See the definition of extended producer responsibility measures in section 1 of NEMWA. The draft NWMS seems to frame extended producer responsibility in broader terms. It refers to "producers taking physical and/or financial responsibility for products post consumption to prevent their disposal as waste".

[17] See subsections (a)-(d) of the definition of extended producer responsibility measures in section 1 of NEMWA.

product.[18] The hope is that this internalisation of costs would encourage innovative sustainable development.[19]

Comments on the Draft Guidelines

Our comments below are in specific reference to the proposed regulations on extended producer responsibility. However, some of our comments would by implication impact the sector-specific EPR regulations as well. The commentary is therefore not necessarily limited to the general EPR regulations but expounds their potential impact on identified sectors.

Regulation 1: Definitions

The definition of "extended producer responsibility scheme"

The definition of the term "extended producer responsibility scheme" in regulation 1 refers to "*full responsibility* to implement extended producer responsibility", which seems to be borne out by regulation 5. However, the producer's responsibility in terms of NEMWA is qualified as "financial *or* physical". In addition, the recent draft revised and updated NWMS refers to "producers taking *physical and/or financial responsibility* for products post-consumption to prevent their disposal as waste". Given this definitional variation, clarity is sought on whether EPR schemes can allow producers to exercise their responsibility by providing the financial resources required *and* assuming responsibility for the operational and organisational aspects?

[18] Nahman A (2010). Extended producer responsibility for packaging waste in South Africa: Current approaches and lessons learned. *Resources, Conservation and Recycling*, 54: 155-162.

[19] Hickle, GT (2014). An examination of governance within extended producer responsibility policy regimes in North America. *Resources, Conservation and Recycling*, 92: 55–65; Mwanza BP & Mbohwa C (2019). Strategies for enhancing extended producer responsibility enforcement: A review. Conference paper. *West Africa Built Environment Research (Waber) Conference.* www.waberconference.com

Impact on Refurbishers

The guidelines provide a comprehensive definition of producers, which would decrease the likelihood of free-riders. As it currently stands refurbishers are included in this definition. Refurbishers play a vital role in giving a second life to long-lived items, particularly in the context of electronics, and promote circularity within the industry. In cases where refurbishers import products for the purpose of refurbishment they should be deemed the custodians of those items and their fate in South Africa.

However, in the case where local products are refurbished for resale this presents a conundrum as to who would be deemed the "producer" in this case - the initial producer who brought the product to market or the refurbisher who gave it a second life. This may potentially result in a case where the initial producer transfers their EPR responsibility to the refurbisher, which is essentially extending the life of their products.

Ultimately, this is a question of accountability and ensuring those players who serve to increase the circularity of products are not unjustly saddled with EPR responsibilities. It is our recommendation that a distinction is made between refurbishers who import secondhand products for the purpose of refurbishment and those who refurbish local products. This would be similar to the "first seller/ first importer" approach adopted by most jurisdictions in Canada whereby EPR obligations are assigned to the first person to introduce the item for sale in the territory[20].

Definition of "product responsibility organisations"

The term product responsibility organisation is defined and used in all regulations save sub-regulation 14(3). The latter sub-regulation refers to a "producer responsibility organisation". Consistency in terminology is advised.

[20] Hilton M, Sherrington C, McCarthy A & Börkey P (2019). *Extended producer responsibility (EPR) and the impact of online sales – Environment working paper 142*, Organisation for Economic Co-operation and Development. Available at: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP(2019)1&docLanguage=En.

Regulation 5: Extended producer responsibility measures to be implemented by producers

Paragraph 5(1)(d) Collection of extended producer responsibility fees

It is submitted that the term extended producer responsibility fee should be defined in regulation one.

Paragraphs 5(1) (k - l) - Inclusion of life cycle assessment in EPR

The inclusion of a life-cycle based environmental assessment directive demonstrates the importance of ensuring producers take into consideration the footprint of their products. We believe that life cycle assessment is a vital tool in this regard and may be used to inform the implementation of cleaner production measures as stipulated in 6(a). However, for 5(k) to be implemented effectively this would require a robust locally relevant scientific basis for conducting LCAs and a suitable number of qualified professionals, including a publicly available national life cycle database so accurate product LCAs can be developed smoothly.

First strides have been made towards a national database and this requires further development. [21] Specific developments are needed in terms of the hosting infrastructure, integration with the global platform GLAD facilitated by UNEP, and dataset preparations. This may be an opportunity wherein the inclusion of LCA in EPR may be used as an additional vehicle for the development of a national database, not only from a data perspective but potentially through the allocation of fees to infrastructure development and maintenance.

In addition, guidance documents may be developed for conducting an LCA, ensuring that the results are comparable and may be used in future product development. Ultimately, while we agree in principle that life cycle thinking and life cycle assessment should be included in EPR, it needs to be supported by robust infrastructure and

[21] A roadmap for developing a national LCA database for South Africa has been developed, with ongoing discussions between the CSIR, WWF-SA and UCT to be the founders of a special purpose vehicle for its development.

guidance documents to make it operational. We recommend that the requirement to conduct LCAs be suspended for a period of 18 months from the promulgation of the regulation to allow for a process of building up this infrastructure and for training LCA practitioners.

The capabilities of all producers to have the resources to conduct LCAs is also a concern, particularly from a financial perspective. While this might not be a constraint for large producers, some of whom already conduct LCAs, this potentially presents a challenge for SMMEs. Furthermore, clarification is required as to whether each producer would need to conduct LCAs for the individual products listed in sector-specific EPR schemes, and whether separate LCAs would be required for variations of the same product (e.g. different sized PET beverage bottles). Here we recommend a tiered approach to requirement 5(1)(k) whereby in a first phase (e.g. one year from the LCA regulation taking effect) only products with an annual market turnover in excess of, say, R1 billion would be impacted; followed by further phasing in over the next two years at thresholds of 50% and then 10% of the initial turnover threshold.

Paragraph 5(1)(k) must provide clarity regarding the system boundaries of the required LCAs, e.g. gate-to-gate, cradle-to-gate, cradle-to-grave. In the case of gate-to-gate, producers may be able to produce results with relative ease and a greater degree of certainty as it only relies on them assessing their own processes. In the case of cradle-to-gate, producers would be required to obtain data for upstream processes which could present a challenge, especially if the producers of these products are not subject to SA legislation (i.e. import products). When expanding from cradle-to-grave, this would require knowledge of consumer behaviour as well as waste management infrastructure and practices in each of the market locales.

Clarification is sought on section 5(l) with regards to whether producers will be required to develop interventions based on the LCA conducted as part of 5(1)(k) or whether they will simply be required to take into consideration the life cycle impacts of any potential design changes. In order to encourage producers to improve their

products on the basis of LCA results (i.e. the former), and implement cleaner production principles as stipulated in 6(a), we suggest the consideration of incentives through the EPR fees.

In general, the inclusion of the LCA in the EPR is commendable, as it is the basis for a comparison of product alternatives. However, the LCA does not account for the social sustainability of a product (i.e. its societal impacts, both positive and negative). While sub-regulation 6 (i) makes some steps towards the consideration of societal benefits in the form of job creation, this does not encompass the range of societal impacts a producer may have.[22] For example, the regulations do not address the macro-societal performance of a producer such as, the extent to which a producer contributes to indirect job creation through local procurement of inputs. We suggest that more consideration is made for the social performance of a producer to a level that is comparable to the environmental performance.

Paragraphs 5(1)(i - j) and sub-regulation 12(e) – development and management of data collection system and collation with SAWIS.

Currently, the South African Waste Information System (SAWIS) needs substantial improvements before accurate reporting on the targets and successes of any EPR Schemes can be expected.[23] What is most probably needed is an independent forum where data can be professionally stored and analysed.

Paragraph 5(1) (v) - secondary markets for recyclable materials

It is important that the secondary markets established consider circular economy principles. Although section 2(c) states that one of the purposes of the regulations is to encourage and enable the implementation of [...] circular economy initiatives", neither the regulations nor NEM:WA provides definitions. Only the Draft Revised and Updated

[22] Labuschagne C, Brent AC & Van Erck RPG (2005). Assessing the sustainability performances of industries. *Journal of Cleaner Production*, 13(4): 373–385. http://linkinghub.elsevier.com/retrieve/pii/S0959652603001811.

[23] Rodseth C, Notten P & Von Blottnitz H (2020). A Revised approach for estimating Informally disposed domestic waste in rural versus urban South Africa and implications for waste management. *South African Journal of Science*, 116 (1/2) doi.org/10.17159/sajs.2020/5635.

National Waste Management Strategy (Draft NWMS)[24] describes the circular economy as "an approach to minimising the environmental impact of economic activity by reusing and recycling processed materials to minimise: (a) the need to extract raw materials from the environment; and (b) the need to dispose of waste". Without a clear enacted legal definition, this may open pathways for waste dispersion to secondary but uncontrolled use, e.g. ecobricks, pavement etc., rather than concentration (as currently done in a landfill, from where some wastes could be recycled once technology becomes available).

Paragraph 5 (1)(w) - mandatory take back

The proposal regarding mandatory take-back of all products at the end of life is commendable but dependent on the capacity to handle the product. Supermarkets, for example, may not have the infrastructure to take back packaging, especially if it is contaminated.

There is a precedent for making retailers responsible for taking back packaging waste in other countries, where they initially referred to "all packaging". However, eventually mandatory take back had to be reconceptualised: it is now restricted to any part of the packaging not necessary for the safe transport and storage of the product until the best before date (i.e. aspects of product warranty need to be considered).

On the other hand, this take-back approach will lead to a redesign of packaging to the minimum size necessary (less packaged void volume, with added benefits regarding transport cost [environmental and financial]). See e.g. Germany, where the consumer may leave the carton of cereals at the till, if the cereal is contained in a plastic bag inside the carton. Initially, the shops suffered from added waste volumes (as they have to pay for the waste removal from their site), but this was not a long-term problem, because packaging design changed virtually overnight.

[24] GN no 1561 *GG* 42879 of 3 December 2019.

A take-back system for end-consumer packaging could be especially interesting in rural areas. Waste management in these areas is a major problem. Yet trucks delivering products to these regions return empty to the distribution center. These empty trips could be used to return recyclables.

The return of glass and certain plastic bottles could be incentivised by a deposit system, leading to a return of selected items that could enter the reuse rather than the recycle cycle.

For certain long-lived items (building material for example), the take-back regulation may pose problems. Would building companies be responsible for the deconstruction of unused buildings? How would one document which producer is the origin of the respective product?

This sub-regulation also implies that the producer has access to the waste to deal with it at the end of its lifetime. What about packaging? How would a producer know where their product has gone to? Would the consumer have to separate according to waste source/product producer rather than waste type? This would imply extensive labelling and relabelling (e.g. the consumer must be able to distinguish if that Coke bottle was purchased at Checkers or at Spar). In addition, some producers may also sell their produce quite widely (especially specialty products). How would they be able to account for their waste?

Moreover, waste is currently not valueless. Some established operations may become uneconomical if certain fractions of the waste are taken care of separately, or if the waste volume is reduced, endangering livelihoods.

Regulation 6: Minimum requirements and criteria for extended producer responsibility schemes to operate

Paragraph 6(h)(v) - disposal bans and restrictions

Section 6(h)(v) should be reformulated. The phrase reads "disposal bans and restricted". It should probably read "disposal bans and restrictions".

Paragraph 6(i)(i) - decent work

Paragraph 6(i)(i), indicates that decent work includes "the payment of fair prices for waste products returned to the producer of the scheme". However, it would seem that the payment of a living wage in paragraph 6(i)(ii) and improved quality of life in paragraph 6(i)(v) would also qualify as indicators of decent work if measured against article 7 of the International Covenant on Economic, Social and Cultural Rights (ICESCR)[25]. Nevertheless, the qualification of decent work is separated from other government priorities in the different paragraphs of sub-regulation 6(i). Should the qualification of decent work not be reconsidered in the light of article 7 of the ICESCR? For further details, see the comment on paragraph 8(6)(h).

Regulation 7: Financial arrangements for an Extended Producer Responsibility Scheme

Sub-regulation 7(2) - fee determination

Sub-regulation 7(2) provides a generic guideline for fee determination in which a product's weight and recyclability will be taken into consideration. This clause would incentivise producers to increase their product recyclability, which in turn would serve to grow the local recycling industry. Globally, there are many definitions of the term "recyclable". While a material may be technically recyclable there may not be the local infrastructure to recycle it. To avoid producers potentially exploiting this technicality,

[25] The ICESCR was ratified by South Africa in 2015.

we recommend that this clause be amended to specify "local recyclability". This would ensure that products are evaluated according to their likelihood of being recycled locally.

A further concern surrounding this fee determination is its applicability for long-lived electronics. Many of these items are composed of materials with varying degrees of recyclability, including plastics and precious metals. These factors would need to be considered when developing the EPR fee.

Would the assumption here be that a certain type and volume/mass of material (let's say a PET bottle) would incur a certain monetary, environmental and societal cost, that would be converted by some algorithm into a monetary value, weighed by the average end of life fate that is achieved or should be achieved (e.g. 30% refill, 30% recycled, 40% landfill)? How often will the algorithm be adjusted as SA becomes efficient in keeping material in the value chain? Would this model assume that the cost of waste management would be the same, irrespective of whether the waste occurs in an urban or rural area?

Social justice issues might also come into play. Would a producer selling products predominantly in urban areas not be at an advantage, since the collection and recycling of the waste may be quite easily achieved, rather than a producer selling to customers in rural areas, where collection and recycling may be much more pricey (small retailers, Spar etc.)? Would the product be made artificially more expensive for remote areas?

If a producer sells to both rural and urban customers, and has to fulfil a certain recycling percentage, would they not decide to focus on urban areas where collection is less costly, at the detriment of the countryside?

What would the likelihood be of an externalised fee, i.e. increasing the cost of the product? Considering the state of the economy, this would be detrimental to the aims of the EPR, as customers will make "the environment" responsible for the increased cost of living.

On the other hand, if the costs are externalised, the consumer choice could be used as a tool to push the agenda to work towards reduced waste / more sustainable waste. However, how would the consumer be informed to be able to make a choice? E.g., when thinking about short-lived products such as food, how can the consumer distinguish between the proportion of the cost for the product incurred by packaging and that of the product itself? Since both, the packaging and the food, are products, would labelling indicate (similar to nutritional data) what the sustainability is (e.g. carrots from the Free State, packaged in styrofoam vs carrots from Turkey, packaged in a paper bag)?

The local consumer is on average not trained well to understand the implication of any of the packaging labelling.

Paragraph 7(3)(a) - estimated revenue

Clarification is required regarding paragraph 7(3)(a), as to whether the revenue referred to is the producer's revenue from the sale of the products or revenue resulting from the EPR fees. If it is the former, it should be kept in mind that revenue is something most companies don't want to report on, which will likely lead to distortion.

Paragraph 7(3)(d) - allocation of revenue

Paragraph 7(3)(d) specifies that revenue must be allocated "amongst collection, waste minimisation, recycling, waste reuse". We recommend that the disposal of hazardous waste is also provided for within the EPR scheme. This is particularly relevant for WEEE, some of which is associated with hazardous waste.

Sub-regulation 7(4) - administration fee

Sub-regulation 7(4) specifies a maximum administration fee for "producer responsibility organisations". The current wording excludes EPR schemes that are not administered by PROs. We recommend that a maximum administration fee is stipulated for all EPR schemes.

Regulation 8: Monitoring, reporting and evaluation

Regulation 8 mentions several reporting requirements, namely: a midyear report on performance of the scheme in sub-regulation 8(1); an annual performance report in sub-regulation 8(3); an annual reporting requirement to SAWIS in sub-regulation 8(4) and an annual external audit report in sub-regulation 8(6). In practice it is challenging to comply with these extensive reporting. It is submitted that the administrative burden must be eased by limiting the reporting requirements to annual reports instead of mid-year and annual reports. In addition, it is questionable whether manufacturers possess reliable data to meet these requirements.

If we consider the sheer number of different products, as well as their potential fates, which institution will have the capacity to monitor all the submissions, and assess the correctness of the data submitted? This control instance is pivotal to the whole endeavour.

Paragraph 8(6)(e) - environmental impacts

Paragraph 8(6)(e) requires that the annual external audits include impacts to the environment, however, these impacts are not defined. We suggest that the required impacts are clearly defined, including guidance on how they are to be determined. For example, should carbon emissions be required, it should be specified what methodology should be used to account for them, the system boundaries (i.e. will emissions generated only in South Africa be considered or in other countries in the case of imported products), as well as whether both indirect and direct emissions should be reported. It should also be kept in mind that the true environmental impact may occur beyond what is measurable at the time of reporting.

Paragraph 8 (6)(h) – the number of decent jobs created

Paragraph 8(6)(h) indicates that the annual external audit report submitted to the Department must contain the number of decent jobs created. It is submitted that determining this number will be problematic, since the concept of a "decent job" presents challenges. The term "decent work" is defined in regulation 1 as "work based

on the understanding that work is not only a source of income but more importantly a source of personal dignity, family stability, peace in the community, and economic growth that expands opportunities for productive jobs and employment". This definition does not provide comprehensive and concrete indicators that can be measured to determine whether a job meets the requirements of a decent job, save for the reference to the qualification of the government priority in paragraph 6(i)(i), namely that decent work includes "the payment of fair prices for waste products returned to the producer of the scheme". It would seem that the payment of a living wage in paragraph 6(i)(ii) and improved quality of life in paragraph 6(i)(v) would also qualify as indicators of decent work if measured against article 7 of the ICESCR[26]. However, the qualification of decent work is separated from other government priorities in the different paragraphs of sub-regulation 6(i). Mclaren[27] proposes that article 7 of the ICESCR which establishes that work must be decent, can provide guidance in terms of the individual dimensions of the right to decent work. The latter would include rights to just and favourable work conditions including fair and equal wages (for work of equal value) which provides for an adequate living standard, the right not to be unfairly dismissed, equal opportunity to be promoted, protection from unemployment (and social security rights), safe and healthy working conditions and rest, leisure and holidays with pay. Although article 7 of the ICESCR specifically focuses on decent work, it is linked to regulation 6 (right to work) and regulation 8 (rights at work or collective rights). It is submitted that the regulations should be formulated to provide concrete guidelines to determine whether a job meets the threshold of a "decent job and to enable compliance with the minimum requirement in paragraph 8(6)(h).

[26] The ICESCR was ratified by South Africa in 2015

[27] McLaren D (2018). Realising the right to decent work in South Africa. Studies in Poverty and Inequality Institute Working Paper 16.

Regulation 11: Requirements and criteria for product responsibility organisations to operate

Sub-regulation 11(a). Why does this need to be a separate entity to the producer? (e.g. breweries could reuse glass bottles without involving another company.)

Sub-regulation 11(b). Why is this organisation specified as not-for-profit? Unfortunately, innovation and efficiency are in general driven by the opportunity to increase profit.

Sub-regulation 11(c) requires PROs to demonstrate the representativity of the product value chain. We question the necessity of this requirement and put forward that it may serve as a barrier for the registration of PROs who may have been operating effectively despite the lack of representation of specific value chain actors in their membership.

Regulation 12: Obligations of Product Responsibility Organisations

A Product Responsibility Organisation (PRO) as defined in the regulations provides a public service largely under the auspices of private actors (producers in this case). PROs as proposed by regulation function in a quasi-public sector with a range of different stakeholders, all classified as producers governed by mandatory regulations. Accountability structures in this context can often be designed in such a way that producers are accountable to one another and to the government rather than to the recipient of the service the PRO provides. Services such as the collection, recovery and recycling of waste amount to crucial public services in the form of waste management.

If a producer becomes the provider of public services like waste management, then holding that producer responsible requires effective accountability structures. Administrative action (waste collection for example) taken by a private party (waste management company considered a 'producer') passes what is in the government's interest to provide adequately, to a third party.

PROs appear to be the main structure to ensure accountability when it comes to EPR. How can we ensure that the PROs are governed in an independent manner and what role do local governments play when they are the ones legally mandated to manage waste? Responsibility needs to be shared alongside state structures in a mutually beneficial manner to ensure the recipient of the waste management service, the citizen, is represented. Producers could externalise the lion's share of the cost of EPR schemes to consumers, rather than innovating the product.

One of the obligations of PROs mentioned in regulation 12, entails the payment of a "living wage, but not below minimum wage, to all registered informal waste collectors, reclaimers and pickers" (paragraph 12(a)(iv). Does this reference to wage payments imply that PROs only have obligations to registered informal workers classified as full-time employees? In comparison, paragraphs 6(i)(i) and 6(i)(ii) seem to cast a wider net in terms of government priorities and requirements for extended producer responsibility schemes, not only based on traditional employment relationships by referring to the payment of fair prices for waste products returned to the producer of the scheme. It is submitted that these obligations are clarified in the light of paragraphs 6(i)(i) and 6(i)(ii).

Regulation 14: Penalties

In terms of the penalty's clause of NEMWA, the national Act under which the proposed regulations will be issued, the maximum imprisonment period for offences specified in section 68 do not exceed 10 years. However, in comparison, paragraph 71(2)(a) of the Act states that regulations made under the Act may provide for an imprisonment period not exceeding 15 years. Regulation 14 reiterates these provisions. Nevertheless, the maximum imprisonment period prescribed in regulation 14 seems to be excessive compared to the period prescribed for other offences listed in section 68. This is disquieting when some of the prominent rationales for incarceration are not

adequately supported by evidence.[28] Crime is not in general deterred by harsher sentences, but rather by the likelihood that an offender will be caught and prosecuted. Higher incapacitation and longer sentences may not lead to the reduction of crime. Conversely, reduced incarceration does not lead to meaningful increases in crime. In addition, 2014 statistics indicated that South African prisons housed 25% more offenders than allowed in terms of their official capacity due to the increase in longer sentences. By March 2019 the occupancy level stood at 137.4%.[29] In this regard, sentences ranging from 10-15 years showed an increase of 77% in the period from 2004-2017.[30] Five years ago the daily cost per incarcerated prisoner amounted to R350[31] and slightly less than R130 000 per year. In 2018 the inmate population amounted to 164,129.[32] Excessive imprisonment periods are therefore costly and not necessarily effective.

It is submitted that the phrase "an appropriate fine" should be reconsidered, given the lack of adequate training in environmental law as well as burdened courts.[33]

[28] Cameron E (2017). Imprisoning the nation: Minimum sentences in South Africa. Dean's Distinguished Lecture, Faculty of Law, University of the Western Cape, 19 October 2017. https://www.groundup.org.za/media/uploads/documents/UWCImprisoningThe%20Nation19October2017.pdf

[29] World Prison Brief. World Prison Brief Data: South Africa https://www.prisonstudies.org/country/south-africa

[30] Magubane K (2017). More long jail terms point to rise in violence. *Business Day* (18 May 2017). https://www.businesslive.co.za/bd/national/2017-05-17-dramatic-increase-in-long-prison-sentences-troubles-michael-masutha/

[31] How much each prisoner costs SA taxpayers to stay behind bars. (2016) *BusnessTech* (19 November 2016).

[32] World Prison Brief. World Prison Brief Data: South Africa https://www.prisonstudies.org/country/south-africa

[33] Compare Fourie M (2009). How civil and administrative penalties can change the face of environmental compliance in South Africa. *South African Journal of Environmental Law and Policy,* 16(2): 93-127; September LMF (2012). *A critical analysis of the application of S24G provisions of the National Environmental Management Act (NEMA) – the Gauteng Province experience.* Master in Environmental Management, Potchefstroom Campus, North-West University.

General comments:

In addition to the regulation specific comments, there are additional comments which we believe warrant raising. These relate to the potential widespread impacts of the EPR guidelines as a whole.

Emphasis on reuse and refurbishment in the context of WEEE

The EPR guidelines emphasise product recyclability, including mandating design for recycling and stipulating recycling targets for the different identified products. Implementation of EPR presents an opportunity to transition our manufacturing industry to a circular economy. For electronics in particular, this is an opportunity to incentivise producers to manufacture items that have an extended lifetime through the facilitation of repair and refurbishment of their items. For example, Germany's directive for WEEE aims to decrease waste generation and places emphasis on ease of disassembly, reuse and refurbishment[34]. Furthermore, producers may not include specific design features that prevent reuse unless required by law or fulfil health and safety requirements.

Potential impacts on SMMEs / entrepreneurs / informal workers

One of the largest groups producing typical packaging wastes (by waste volume) are retailers, which will be responsible for implementing the regulations. By number, however, the largest group of producers will be SMME / entrepreneurs / informal traders. In order not to disadvantage this essential group of the SA economy, a threshold volume should be defined which would exempt this group from the enormous administrative and financial burden otherwise incurring.

With regards to impacts on SMMEs / entrepreneurs / informal workers engaged in waste management, it is submitted that the regulations should clearly address

[34] Act Governing the Sale, Return and Environmentally Sound Disposal of Electrical and Electronic Equipment (Electrical and Electronic Equipment Act, or ElektroG) of 16 March 2005. 2005. (Germany) Available: https://www.elektrogesetz.com/elektrog.shtml.

responsibility towards current and well-established role players separating wastes and collecting recyclables (e.g. waste reclaimers, other informal collectors such as the "bakkie brigade" and the Buy-back centres).

Impacts on waste trading

While the EPR guidelines serve to increase diversion of waste from landfill, it must be ensured that this is done in a responsible manner. We must avoid a situation whereby waste is labelled as "recyclable" for the purposes of export to other countries. The potential consequences of this are exemplified by the case of plastic, whereby the practice of waste trading has left many Asian countries unduly burdened by the waste of other countries[35]. While the practice of exporting is not all malicious, we must ensure that the door to such kind of waste tourism and burden-shifting is firmly closed. This may include firmer rules on the export of waste, including mandating exporters to provide proof that the waste is being responsibly treated at its destination.

Composite products

What will happen with wastes generated by business-to-business transactions, i.e. where a multitude of different products (in various kinds of packaging) are used to produce another product?

Global regulatory compatibility

Any kind of consumerism will remain global, also meaning that the regulations on waste management should strive to be interconnected to other (already existing / international) regulations. How have other countries regulated this? Could there be some learning by looking at their strategies?

[35] Liu Z., Adams M. & Walker TR (2018). Are exports of recyclables from developed to developing countries waste pollution transfer or part of the global circular economy? *Resources, Conservation and Recycling*, 136: 22–23. https://doi.org/10.1016/j.resconrec.2018.04.005.

Incentivising end users

The incentive for the recycling for end-user wastes must be placed with the end-user. They should be (partially) refunded by returning e.g. packaging to a dedicated collection place. This would reduce dispersed wastes in the environment, and support waste picker and sorter businesses, and increase the return of resources to collection points, from where they are sold to companies interested in their recycling. The recycled material will re-enter the packaging sector (assuming the required quality of material) if the price is less than virgin material, and/or if the mark-up on the packaging (fee) is incrementally reduced, the more recycled material is used. In other words, a set of fees would have to be determined for each of the virgin materials, as well as for their recycled counterparts, and the ratio of recycled material is considered in the fee. The Department could even decide to restrict the number of different materials successively (with materials not explicitly mentioned having to receive special permission). This would reduce the complexity of the recycling issue, especially for household wastes. It would also omit the necessity of LCAs for each producer.

Concluding Remarks

Whilst we have outlined several aspects which we believe requires further revision, we consider the policy direction a formidable contribution towards sustainable development and circular economy initiatives in South African law. We welcome the direction and consider EPR a worthy principle to implement regarding South Africa's waste management policy and legal framework.

We do however require the abovementioned concerns be considered. The community of practice: Waste to Value is honoured to have participated in the consultation process and our researchers are available to support the final drafting of any of the EPR regulations.