

THE NOTION OF ENVIRONMENTAL CITIZENSHIP IN HOUSEHOLD WASTE MANAGEMENT IN THE CIRCULAR ECONOMY

GROBLER L* and SCHENCK R**

*Chair in Waste and Society, Department of Social Work, Faculty of Community and Health Sciences, University of the Western Cape, Robert Sobukwe Road, Private Bag X17, Bellville, 7535; Cell: 083 586 3662, E-mail: 3924846@myuwc.ac.za

** Chair in Waste and Society, Department of Social Work, Faculty of Community and Health Sciences, University of the Western Cape, Robert Sobukwe Road, Private Bag X17, Bellville, 7535; Cell: 082 864 0600, E-mail: cschenck@uwc.ac.za

ABSTRACT

As noted by Hobson (2016) there is a need for the application of broader analytical lenses in research into the Circular Economy since the latter requires transformative change, not only in terms of design and production, but also in terms of thinking, consumption, use, waste and reuse practices. In particular, the socio-political dimension of the shift in production-consumption-use-waste practices has received scant attention.

One aspect of the socio-political dimension concerns the role of the citizen within the Circular Economy. This paper utilizes the notion of environmental citizenship as a lens to analyze the socio-political dimension of the Circular Economy. Although environmental citizenship has generally become an established concept linked to scholarship on sustainability internationally, it has not been the case in South Africa. This literature review aims to investigate whether the concept is a viable construct in the South African context and in particular within the drive for a Circular Economy.

The first section establishes a nexus between the circular economy and citizenship. The second section broadly traces different theoretical approaches to environmental citizenship and the normative notions of environmental values, attitudes and behaviour advocated by proponents of each tradition. Thirdly, this paper deals with the application of environmental citizenship as a measure to address household waste in the Circular Economy. In the penultimate section, this paper interrogates the utilization of the concept in South African scholarly literature. This paper argues for the use of environmental citizenship as a useful lens in the shift to a Circular Economy in the South African context.

KEYWORDS

Circular economy, Environmental citizenship; Consumer; Citizen; Household waste; Waste management

INTRODUCTION: THE DRIVE FOR THE CIRCULAR ECONOMY

Internationally, the concept of the circular economy (CE) has become increasingly important in policy, advocacy, consultancy and science as indicated by the growth in relevant academic publications (Reike et al. 2018). Although there is a global urgency in promotion of the CE, there are significant differences in and a lack of clarity in the conceptualisation of the notion (Ghisellini et al 2016; Kirchherr et al 2017). The definition that is afforded the most prominence internationally originates from the Ellen MacArthur Foundation: “[The CE is] an industrial system that is restorative or regenerative by intention and design. It replaces the ‘end-of-life’ concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this business models” (Kirchherr et al 2017). Another definition, formulated by Kirchherr et al (2017: 224) based on an analysis of the main components of 114 definitions of the CE reads: A CE describes an economic system that is based on business models which replace the ‘end-of life’ concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations”. In contrast to the former, the latter more comprehensive definition highlights the notion of scale and temporality. Furthermore, it accentuates the social dimension by singling out actors, explicitly referencing consumption processes, sustainable development, economic prosperity and social equity.

The idea of a circular economy has only gained popularity in South Africa during the last decade (Ringwood 2016). The National Waste Management Strategy (NWMS 2020) approved by Cabinet during the second week of September 2020 emphasizes the centrality of the circular economy (DEFF 2020b). In fact, the Minister of Environmental Affairs indicated that the revised and updated national waste management strategy “lays the foundation for the conceptualisation of what we call the circular economy” (Parliamentary Committee Meeting, Environment, Forestry and Fisheries, 12 November 2019). The foreword of the NWMS 2020 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” (DEFF 2020a). Drawing on the definition from the Ellen MacArthur Foundation, the NWMS 2020 defines the circular economy in the newly added Glossary of Terms as “An economy that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles” (DEFF 2020a). Although these descriptions and definition do not mention the social dimension *per se*, the foreword of the NWMS ties the proposed policy and strategic interventions in the waste sector with the national goal of social transformation. In a similar and more explicit manner the Minister of Environmental Affairs previously stated: “For South Africa, growing the circular economy and broadening access to the opportunities it presents is indeed a fundamental part of our government’s programme of radical socio-economic transformation” (*Hansard*, 25 May 2017). This statement, apart from framing the move to a circular economy as essential in the transformation agenda, also emphasises that the shift to a circular economy should also address social transformation. Importantly, social transformation as a component of the transition to a circular economy is a collaborative effort involving the citizenry. In this regard, minister Creecy recently made a significant statement pointing to the nexus between citizenship and the circular economy: “We need to encourage all our citizens to become concerned about circularity and make the effort to buy products manufactured from recycled material” (DEFF 2020c).

Some broad outlines on citizen involvement in the circular economy may be gleaned from broader campaign and programme initiatives and both earlier and current waste management strategies. Initially, the NWMS of 2011 informed the Good Green Deeds programme launched in 2019 (DEA 2019a). The programme is inspired by the Thuma Mina campaign and in general aimed at the mobilisation of citizens in the service of environmental protection against pollution. It promotes “environmental actions that take into consideration sustainable living practices” (DEA 2019a). These actions are framed as a catalyst of environmental consciousness, as both individual and collaborative, as encouraging long term practices and, eventually, lifestyle change. In particular, the programme envisions a “clean South Africa which is free of litter and illegal dumping” (DEA 2019a). Two of the four proposed measures to implement the programme focus on behavioural change, namely, “litter-free and no dumping behaviour” and “waste minimization” (DEA 2019a). Significant is the emphasis the NWMS 2020 also places on the indispensable condition of

consumer behaviour change and the caveat that progress towards the realisation of a circular economy cannot solely be made by instituting a “top-down, inflexible legislative regime” (DEFF 2020a: 28) but necessitates the participation of all South Africans: the public sector, private sector and citizens. It envisages “changes in behaviour and attitude that lead to a culture of compliance with acceptable local and international standards taking root amongst citizens, businesses and government” (DEFF 2020: 37). In the light of these policy directives in terms of the NWMS, the Good Green Deeds programme and the Thuma Mina campaign, grounded in constitutional imperatives, it is therefore undeniable that progress towards a circular economy in the South African context involves social transformation of its citizens.

This paper investigates and argues for the utilization of citizenship and environmental citizenship in particular as a viable construct in the drive towards a circular economy. The first section establishes a nexus between the circular economy and citizenship. The second section broadly traces different theoretical approaches to environmental citizenship and the normative notions of environmental values, attitudes and behaviour advocated by proponents of each tradition. Thirdly, this paper deals with the application of environmental citizenship as a measure to address household waste in the Circular Economy. In the penultimate section, this paper interrogates the utilization of the concept in South African scholarly literature.

THE NEXUS BETWEEN THE CIRCULAR ECONOMY AND CITIZENSHIP

Systemic transformation and citizenship

Generally, it is acknowledged that the shift towards a circular economy is challenging because it requires systemic transformation and necessitates changes within a specific political and socio-cultural context (Marouli 2016). Not only technological and economic innovation are necessary but also socio-cultural renewal of attitudes and values regarding consumption, the reconceptualization of waste and rethinking of the relationship between humans, nature and natural resources (Marouli, 2016; Hobson and Lynch 2016). This renewal entails “deeper shifts in people’s attitudes to the environment” (Melo-Escrihuela 2009: 114). Despite the acknowledgement of the “human element” of the circular economy and the significance of “owners” and product “users”, their role has not been clearly described (Wastling et al 2018). Therefore, the role of socio-economic institutions, norms, practices, values and actors in a circular economy society still need to be investigated (Hobson and Lynch 2016; Moreau et al. 2017). However, there is a paucity of research on behavioural change in relation to the circular economy (Muranko et al. 2018).

Importantly, for systemic change to occur, there needs to be a shift towards education about systems and citizenship, interrogating the notion of an effective, active citizen as opposed to “passive and partial” citizens (Webster 2013: 300). Active citizenship should be nurtured to enhance stewardship towards the environment and social/collective responsibility (Marouli, 2016). Moreover, it has been proposed that a focus on the ways citizenship is constituted is necessary to address “socio-ecological relationships and struggles in the Global South” (Latta and Wittman 2012: 2). Although citizenship and environmental politics converged since the 1990s, and interest in citizenship revived after the end of the Cold War as a potential vehicle to address social and environmental problems (Cao 2013), citizenship in the circular economy has not been adequately examined (Hobson and Lynch 2016; Warenius 2017; Ractcliffe 2015; Seyfang 2006).

Environmental citizenship as a lens

A proposal for the use of citizenship as a lens to view the shift to a circular economy in the context of waste management, prompts a consideration of an appropriate form of “adjectival citizenship” (Bell 2005: 180). As the interest in citizenship expanded during the last thirty years, the permutations of adjectival citizenships, and, in particular variations of environmental citizenship, proliferated (Bell 2005; Dedeoglu and Dedeoglu 2020). Examples include “environmental citizenship”, “ecological citizenship”, “sustainability citizenship” and “green citizenship”. (Bell 2005; De Stefano 2018; Lee 2019). However, the meanings of these terms are often contested (Melo-Escrihuela 2008; Hobson 2013; Wood and Kallio 2020). This can mainly be attributed to various ideological approaches to remedy environmental concerns (Wolf 2009). In addition, these terms may partly overlap (Vihersalo 2017). Recent definitions of especially “environmental citizenship” and “ecological citizenship” hold the promise of more compatibility and comprehensiveness and may even be conflated (De Stefano 2018; Ratcliffe 2015; Wood and Kallio 2020).

The choice for environmental citizenship as a lens to view the shift to a circular economy in the context of waste management is strategic. Recently, environmental citizenship has been recognised as a significant developing field of study (Cao 2020). In addition, the comprehensive and widely accepted definition of environmental citizenship by the European Network for Environmental Citizenship (ENEC) might provide a basis for convergence on a conceptual point of departure. Moreover, South African scholars have also referred to the concept of environmental citizenship during the last decade (Ramsay & Naidoo 2012; Arendse & Patel 2014; Rodina & Harris 2016 and Harris et al. 2018) while some authors actively engaged with the notion (Lillah & Viviers 2014; Ractcliffe 2015).

Research interest in environmental citizenship as a measure to promote behaviour change and particularly pro-environmental behaviour has increased during the last two decades (Ractcliffe 2015). This trend was stimulated by the EU's growth strategy and the European vision for green, circular and low-carbon economy based on the EU-roadmap 2050 (Hadjichambis & Reis 2020). In terms of these policy directives, citizens' participation and engagement and consequently environmental citizenship receive prominence as avenues to address global environmental problems. Environmental citizenship has the potential to support the development of a more sustainable society and transform values, beliefs, attitudes and behaviours to promote global environmental concern. The definition of environmental citizenship endorsed by the ENEC can serve as a useful point of departure. It reflects the consensus of 120 researchers from 37 countries. Recently the ENEC has defined environmental citizenship as:

The responsible pro-environmental behaviour of citizens who act and participate in society as agents of change in the private and public sphere on local, national and global scale, through individual and collective actions in the direction of solving contemporary environmental problems, preventing the creation of new environmental problems, achieving sustainability and developing a healthy relationship with nature. 'Environmental Citizenship' includes the practice of environmental rights and duties, as well as the identification of the underlying structural causes of environmental degradation and environmental problems and the development of the willingness and the competences for critical and active engagement and civic participation to address those structural causes and to act individually and collectively within democratic means, taking into account inter- and intra-generational justice (Hadjichambis and Reis 2020: 8).

This paper employs the notion of environmental citizenship as a lens to analyze the socio-political dimension of the Circular Economy in the South African waste management context. The literature review firstly examines different ideological approaches to environmental citizenship and the normative notions of environmental values, attitudes and behaviour advocated by proponents of each tradition. Secondly, this paper deals with the application of environmental citizenship as a measure to address household waste in the Circular Economy. Thirdly, this paper interrogates the utilization of the concept in South African scholarly literature on waste management and the Circular Economy.

APPROACHES TO ENVIRONMENTAL CITIZENSHIP

Spectrum of approaches

Approaches to environmental citizenship differ as far as ontological and normative commitments are concerned (Hobson 2013). Cao (2013) distinguishes between two broader approaches to citizenship theory. On the one hand, some scholars argue that classical conceptions of citizenship can accommodate challenges presented by environmental politics. Conversely, scholars invest in formulating alternative notions of citizenship because they are not convinced that classical notions are adequate (Cao 2013). In later work Cao (2015) differentiates among classical, pluralist and globalist theories of environmental citizenship. The latter two categories could then be incorporated in alternative conceptualisations of environmental citizenship, whereas the first would correspond with the more traditional approach. The latter accommodates challenges emanating from environmental politics into classical mainstream conceptions of citizenship. In terms of the traditional approach, perspectives on environmental citizenship can be described as national (Cao 2013; Vihersalo 2017) and conforming to either the liberal or the civic republican (Cao 2013; Scerri 2013; Schild 2016; Wood and Kallio 2020) traditions.

The liberal tradition of environmental citizenship conceive the state as a neutral institution. Accordingly, the pursuit of individual views of a good life and environment is important (Vihersalo 2017). The liberal approach accentuates individual rights (Cao 2013; Schild 2016) to particular environmental goods (Bell 2005) and stresses compliance with environment laws (Bell 2005; Vihersalo 2017). In terms of personal duties and obligations, the focus is frequently on “personal lifestyle attitudes, choices, and the management of environmental problems through actions such as recycling and boycotting unethical products” (Wood and Kallio 2020). Although liberalism is associated with a “property-oriented view of the environment” (Dobson & Sáiz 2005: 159), Bell argues that the environment can be understood as a provider of human needs to satisfy liberal rights (Bell 2005). Mechanisms such as a responsive market, property rights and the law of delict express environmental values. Therefore, consumption preferences, litigation and land/resource ownership serve significant functions in environmental citizenship (Hobson 2013). Within the liberal framework democracy and collective and societal action do not receive emphasis (Wood and Kallio 2020). Downsides of the liberal tradition of environmental citizenship include disconnection from decision making contexts and wider political activities along with a failure to challenge the origins of global environmental justice and related social structures (Wood and Kallio 2020).

The civic republican approach stresses the individual’s obligations in relation to the common good, including the protection of the environment (Cao 2013; Schild 2016). Responsibilities, virtues and community concerns are posited as priorities over the rights of the individual (Wood and Kallio 2020). These responsibilities involve countering the degradation of civic identity and engagement, cultivating awareness of individual and collective actions that have an impact on the state of the environment and making decisions to enhance the common good as a priority rather than individual interests. The civic republican tradition responds to the predominance of self-interest within the liberal tradition. It accentuates a stewardship model positing the interdependence of nature and humanity (Wood and Kallio 2020). One drawback of the civic republican tradition is that the approach does not necessarily provide an explanation for citizens’ motivation to participate in deliberative processes (Wood and Kallio 2020).

Recent notions of citizenship from various traditions have enriched the spectrum of approaches to environmental citizenship (see for example Wood and Kallio 2020). Moreover, the definition of environmental citizenship formulated by the ENEC also indicates that classical notions of environmental citizenship are not comprehensive enough. In response to the critiques of these theoretical variants accommodating enviro-political challenges in mainstream notions of citizenship, alternative theories of citizenship were formulated (Cao 2015). These theories include pluralist and globalist theories. Pluralist theories respond to the universalism associated with the mainstream theories and focus on power and identity/difference, indicating how particular groups experience exclusion from citizenship emanating from perceived difference. Two subcategories of pluralist theories include feminist critiques with the focus on gender and discrimination and culturalist critiques accentuating culture and discrimination against minorities and indigenous groups. Globalist theories, responding to the increased globalization of the last 70 years, are critical of nation-state centrism. Two subcategories of globalist theories include cosmopolitan and neoliberal citizenship theories. Cosmopolitan citizenship focuses on the idea of a single and universal and inclusive human community or cosmopolis as a point of departure for the determination of a shared moral imagination and political engagement. Since important environmental issues are international in nature, and transnational cooperation to find solutions is necessary, cosmopolitan citizenship has become a prominent variation of citizenship. Neoliberal citizenship focuses on the economic rather than the political arena and emphasizes the duties of work in order not to burden the community, and consumption. Social rights are associated with the undermining of individual freedoms, and the creation of inter-generational dependency on welfare. Consumer rights have become important to protect citizens in the market place and provide them with political agency as consumers, to “vote with their wallet” to influence public policy (Cao 2015: 67). In this way consumption has become an alternative arena for political activity. Within the context of the circular economy, this collapse of the difference between consumers and citizens is particularly significant.

ENVIRONMENTAL CITIZENSHIP, HOUSEHOLD WASTE AND THE CIRCULAR ECONOMY

Household waste is described as “any waste generated from a domestic source” (Inglezakis and Moustakas 2015: 310) and since it amounts to more than two-thirds of municipal solid waste it represents the biggest contributor to this category (Inglezakis and Moustakas 2015; Kumar 2016). According to 2012 statistics,

approximately 108 million tonnes of waste were generated in South Africa, including 59 million tonnes of general waste. In turn, 44 million tonnes of the general waste were classified as household solid waste (DEA 2012; Kubanza 2019). Five years later South Africa still generated more than 55 million tonnes of general waste (NWMS 2020: 24). Since households play such an important role in waste generation, the impact of their waste management behaviour is significant. In particular, waste availability and quality depend on household material separation (GreenCape 2019). There is a tendency in literature to link the concept of the household to consumers. A case in point is the Waste Market Intelligence Report (2019) which refers to households as post consumers. Investigating the consumer within the context of the household or domestic sphere is however an aspect of the circular economy research that has been neglected. Mylan et al (2016) note that the domestic sphere is “an important site and space for the enactment of practices which shape how and why consumers use particular products and services, ‘waste’ is generated, and ultimately how this might be changed. This is particularly relevant for CE solutions which require consumers to incorporate new products, use existing infrastructures in new ways, or to become enrolled in entirely different ways of meeting needs, such as required by the adoption of consumer-facing product-service systems” (2016: 795).

A prevalent representation of citizens within the circular economy, characterises them as consumers “of reconfigured and partially dematerialized services” to such a large extent that the citizen is difficult to separate from the consumer (Hobson and Lynch 2016: 16). This narrow conceptualisation of citizens only highlights one dimension of environmental behaviour, namely consumer behaviours and neglects other aspects such as environmental activism, non-activist political behaviours, ecosystem behaviours and behaviours specific to individual expertise or workplace (compare Monroe 2003). Within the narrow consumer behaviour frame, citizens should respond adequately to labelling and price signals, minimize household waste and partake in innovative consumption for example the sharing economy (Hobson and Lynch 2016). The essence of this role is encapsulated in the acceptance or rejection of business models, but not to question the norms on which these models are still premised (Lynch 2016). This is confirmed by an extensive study on the conceptualisation of the circular economy (Reike 2018 et al.).

Reike et al. (2018) distinguish three historic phases in the development of the notion of the circular economy. The current stage, dubbed CE 3.0, takes into account more stakeholders including consumers. However, consumers are also the stakeholders ascribed the status of the “weaker link in the chain” due to their consumer waste behaviour. In their synthesis of the key notions of the circular economy, Reike et al (2018) propose ten value retention options consisting of eight reutilization options and two preventative options to operationalise the circular economy. These value retention options vary from ones closely related to consumer/customer alternatives (refuse, reduce, resell/re-use and repair) to some involving upgrading of used products on the side of users but mostly carried out by business actors (refurbish, remanufacture, repurpose) and options frequently leading to down-cycling (recycle, recover, re-mine). According to their literature review consumers in particular play a role in refusing waste creation (by buying or using less consumption articles), reducing waste (less frequent use, more care and prolonged use and repairing purchased products), re-selling/re-using products (by predominantly second consumers, buying second hand, sourcing buyers for unused or infrequently used products) and repairing. Importantly, Reike et al. (2018) also indicate that most scholarly literature on the conceptualisation of the circular economy does not focus on the role of consumers and that greater emphasis on other actors should be encouraged. This will allow some neglected value retention options to be appreciated, such as refusal of waste creation which is of particular relevance here. The synthesized typology or value retention options proposed by Reike et al. (2018) might serve as a starting point to conceptualise and operationalise engagement in the circular economy from an environmental citizenship perspective. Viewed within the context of the spectrum of environmental citizenship theories, the synthesized typology of Reike et al (2018) might inform elaboration of the duties entailed in citizenship from a civic republican perspective, and enrich globalist theoretical frameworks, e.g. neoliberal citizenship theory, with its focus on consumption and consumer choices as political activity.

ENVIRONMENTAL CITIZENSHIP IN SOUTH AFRICAN LITERATURE

There is a paucity of literature on environmental citizenship in South Africa. Environmental citizenship is as Govender confirms, a “young, niche and emerging concept” in the country (Govender 2017: 47-48). A few studies acknowledge the notion without analysing it, for example Ramsay & Naidoo (2012); Arendse & Patel (2014), Rodina & Harris (2016), Govender (2017) and Harris et al. (2018). However, some studies

engaging with the concept have been published during the last half decade and may give some initial indication of dominant ideological influences on the conceptualisation of environmental citizenship.

Lillah & Viviers (2014) investigated perceptions of university students and academics relating to environmental awareness and values, the implications of environmental management, environmental education, pro-environmental behaviours and incentives to go green. These factors were studied to determine whether there were indications of a shift towards environmentally responsible citizenship. The authors concluded that business education in the research context was not conducive to the cultivation of environmental citizenship. These authors rely on some of the earlier environmental citizenship literature, including the work of Hawthorne and Alabaster (1999) and MacGregor and Szerszynski (2003). They also refer to Dobson (2010). Aspects highlighted include responsible pro-environmental behaviour, participation and earth directed concern.

More recently, Ractliffe (2015) applied the notion of environmental citizenship within the context of food consumption behaviour of upper middle income South African retail food consumers to determine whether and how environmental citizenship might be exhibited by consumers. Although the author concludes that environmental concern and knowledge may positively predict pro-environmental behaviour, the study also found low levels of pro-environmental behaviour in the sample population. Ractliffe (2015) mentions an extensive list of authors on environmental citizenship in passing but mainly refers to the work of Hawthorne and Alabaster (1999) and Dobson (2007). In addition, the author relies on the work of Seyfang (2006). Again, the notions of responsible behaviour in service of the common good is significant. Significantly, responsible behaviour and obligations in particular refer to consumption patterns.

Van Wyk (2015) studied the emergence of environmental citizenship in a citizen science group through participation in citizen science. Although the author draws on the work of some established environmental citizenship theorists, Global Citizenship Education was used as a framework for the case study rather than environmental citizenship. Consequently the citizenship features studied do not necessarily focus on the elements of environmental citizenship *per se*. In addition, Van Wyk does not differentiate different approaches to environmental citizenship, but the author's approach fits in with alternative approaches to environmental citizenship. The author concludes that environmental citizenship can be nurtured through citizenship science.

A preliminary survey of the environmental citizenship theory referenced by these authors indicate that South African authors highlight elements of environmental citizenship commensurate with the civic republican tradition with the focus on responsible pro-environmental behaviour and participation. This aspect has at least in one example been fleshed out to refer to consumption patterns, confirming the nexus between the citizen and consumer. In addition, in terms of scope, there are some indications of a preference for globalist approaches, in particular a cosmopolitan tendency. These tentative observations can however not be extrapolated. It is unfortunate that so few studies have recently explored environmental citizenship as a perspective, especially within the context of the shift towards the circular economy. Given the conflation of the consumer and citizen in international literature on the circular economy, further studies based on the synthesized value retention options identified by Reike et al. (2018) may be one avenue of further investigation to flesh out elements of environmental citizenship within the South African context and the current shift towards the circular economy.

CONCLUSIONS

The current scarcity of literature on environmental citizenship in South Africa neither allows one to draw conclusions on the ideological conceptualisation of environmental citizenship, nor on the conceptualisation of the notion in the context of household waste management in the country. However, it may be possible that the trend to conflate citizen and consumer in international circular economy literature may, in tandem with the foundational role of the circular economy in the National Waste Management Strategy, stimulate environmental citizenship perspectives. Furthermore, one may propose that elements of environmental citizenship may be fleshed out based on selected pro-environmental value retention options.

At least from a policy angle, the National Waste Management Strategy invites the use of environmental citizenship theory as a useful perspective on the shift to circular economy. Recent wide international consensus on the definition of environmental citizenship also underscores the usefulness of the concept in

the global discourse on environmental issues and in this context the management of household waste. In addition, the broadly accepted definition with its comprehensive scope also allows for conversations on the underlying structural causes of waste and undesirable waste disposal practices as well as social justice considerations. This might address the impoverished and depoliticized view of citizens currently associated with the circular economy.

ACKNOWLEDGEMENTS

The authors acknowledge the funding support from the Council for Scientific and Industrial Research (CSIR).

REFERENCES

- Arendse W and Patel Z (2014). 'No Messing in Bonteheuwel': The role of social capital and partnership building in sustainable community development. *SSB/TRP/MDM 65*: 1-11
- Bell DR (2005). Liberal Environmental Citizenship. *Environmental Politics*, 14(2): 179-194.
- Cao B (2013). Environment and Citizenship: Rethinking what it means to be a citizen in the 21 Century. In J Arvanitakis and I Matthews (eds). *The Citizen in the 21 Century*, 153-166. Brill. DOI: https://doi.org/10.1163/9781848882386_001
- Cao B (2015). *Environment and Citizenship* London & New York: Routledge.
- Cao B (2020). Environmental citizenship in the Indian Ocean region. *Journal of the Indian Ocean Region*, 16(1): 1-5.
- Dedeoglu C and Dedeoglu CE (2020). Information Infrastructures and the Future of Ecological Citizenship in the Anthropocene. *Social Sciences*, 9 1-17 doi:10.3390/socsci9010003
- De Stefano, G. 2018. Citizenship and Environmental Sustainability. A Survey Study on Swedish Lund University Unpublished Students Masters in Political Science
- Department of Environmental Affairs (DEA) (2019a). Good Green Deeds. <https://www.environment.gov.za/event/deptactivity/goodgreendeeds>
- Department of Environmental Affairs (DEA) (2019b). Draft Revised and updated National Waste Management Strategy, Government Notice 1561, Government Gazette 3 December 2019.
- Department of Environment, Forestry and Fisheries (DEFF) (2020a). National Waste Management Strategy 2020, received through personal correspondence, Friday 31 July 2020.
- Department of Environment, Forestry and Fisheries (DEFF) (2020b). Keynote Address Delivered by Honourable Minister of Environment, Forestry and Fisheries, Ms Barbara Creecy During the 2020 Waste Management Officer's Khoro in Pretoria, 17 September 2020. <https://www.gov.za/speeches/minister-barbara-creecy-2020-waste-management-officer%E2%80%99s-khoro-17-sep-2020-0000>
- Department of Environment, Forestry and Fisheries (DEFF) (2020c). Keynote Address by Minister Creecy at the 2020 International Coastal Clean-Up Event and the Launch of Inkwazi Isu Project, 19 September 2020. https://www.environment.gov.za/mediarelease/creecy_internationalcoastalcleanupday_amanzimtotisp_eech
- Dobson A. (2010). *Environmental citizenship and pro-environmental behaviour*. London: Sustainable Development Research Network.
- Dobson A and Sáiz ÁV (2005). Introduction. *Environmental Politics*, 14 (2) 157-162. DOI: 10.1080/09644010500054822
- GreenCape (2019). Waste: 2019 Market Intelligence Report
- Ghisellini P, Cialani C and Ulgiati S (2016). A Review on Circular Economy: The Expected Transition to a Balanced Interplay of Environmental and Economic Systems. *Journal of Cleaner Production*, 114: 11-32.
- Hadjichambis AC and Reis P (2020). Introduction to the Conceptualisation of Environmental Citizenship for Twenty-First-Century Education. In AC Hadjichambis, P Reis, D Paraskeva-Jadjichambi, J Činčera, J Boeve-de Pauw, N Gericke & M Knippels. *Conceptualizing Environmental Citizenship for 21st Century Education* Springer Open.
- Hansard (unrevised) (2017). Mini-plenary, Thursday, 25 May 2017.
- Harris LM, Kleiber D, Rodina L, Yaylaci S, Goldin J & Owen G (2018). Water Materialities and Citizen Engagement: Testing the Implications of Water Access and Quality for Community Engagement in Ghana and South Africa. *Society & Natural Resources. An International Journal*, 31(1):85-105.

- Hawthorne M and Alabaster T (1999). Citizen 2000: Development of a Model of Environmental Citizenship. *Global Environmental Change* 9: 25-43.
- Hobson K (2013). On the making of the environmental citizen. *Environmental Politics*, 22(1): 56-72.
- Hobson K and Lynch N (2016). Diversifying and degrowing the circular economy: Radical social transformation in a resource-scarce world. *Futures*, 82: 15-25.
- Inglezakis VJ and Moustakas K (2015). Household Hazardous Waste Management: A Review. *Journal of Environmental Management*, 150: 310-321
- Kirchherr J, Reike D and Hekkert M (2017). Conceptualising the Circular Economy: An Analysis of 114 Definitions. *Resources, Conservation & Recycling*, 127: 221-232.
- Kubanza NS and Simatele MD (2019). Sustainable Solid Waste Management in Developing Countries: A Study of Institutional Strengthening for Solid Waste Management in Johannesburg, South Africa. *Journal of Environmental Planning and Management*: 1-14 DOI: 10.1080/09640568.2019.1576510
- Kumar S. 2016. *Municipal Solid Waste Management in Developing Countries*. Boca Raton: CRC Press
- Latta A and Wittman H (2012). Citizens, Society and Nature: Sites of Inquiry, Points of Departure In A Latta & H Wittman (eds.). *Environment and Citizenship in Latin America: Natures, Subjects and Struggles*. New York & Oxford: Berghahn Books, pp 1-20.
- Lazell J, Magrinos S & Carrigan M (2018). Over-Claiming the Circular Economy: The Missing Dimensions. *Social Business*, 8 (1): 103-114.
- Lee T (2019). Which Citizenship Do You Mean? The Case of the Seokkwan Doosan Apartment Complex in Seoul. *Energy & Environment* 30(1): 81-90.
- Lillah R and Viviers S (2014). Does business education cultivate environmental citizenship? *African Journal of Business Ethics*, 8(1) 5-28.
- MacGregor S and Szerszynski B (2003). Environmental Citizenship and the Administration of Life. Paper Presented at Citizenship and the Environment Workshop, Newcastle University, 4-6 September 2003.
- Marouli C (2016). Moving towards a circular economy: The need to educate – Why and How? In *Proceedings of the International Conference on Sustainable Solid Waste Management, Limassol, Cyprus*, 23-25 June 2016. Available online: <https://pdfs.semanticscholar.org/cc62/87330a9efeed56701e2c910248dcb88d53db.pdf>
- Melo-Escrihuela C (2008). Promoting ecological citizenship: Rights, duties and political agency. *ACME: An International E-Journal for Critical Geographies*, 7(2): 113-134.
- Monroe MC (2003). Two Avenues for Encouraging Conservation Behaviors *Research in Human Ecology*, 10(2): 113-125.
- Moreau V, Sahakian M, Van Griethuysen P and Vuille F (2017). Coming Full Circle. Why Social and Institutional Dimensions Matter for the Circular Economy. *Journal of Industrial Ecology*, 21(3): 497-506.
- Muranko Z, Andrews D, Newton EJ, Chaer I and Proudman, P (2018). The Pro-Circular Change Model (P-CCM): Proposing a Framework Facilitating Behavioural Change towards a Circular Economy *Resources, Conservation & Recycling*, 135: 132-140.
- Mylan J, Holmes H and Paddock J (2016). Re-Introducing Consumption to the 'Circular Economy': A Sociotechnical Analysis of Domestic Food Provisioning. *Sustainability*, 8: 794-807.
- Ractliffe T (2015). *Environmental Concern, Knowledge, and the Enactment of Environmental Citizenship in a Retail Environment: An Investigation into the Perceptions and Behaviours of Cape Town Consumers*. Unpublished MPhil Thesis in Climate Change and Sustainable Development. University of Cape Town.
- Ramsay LF and Naidoo R (2012). Carbon footprints, industrial transparency and community engagement in a South Durban neighbourhood. *South African Geographical Journal* 94(2): 174-190.
- Reike D, Vermeulen WJV and Witjes, Sjors. (2018). The Circular Economy: New or Refurbished as CE 3.0? – Exploring Controversies in the Conceptualization of the Circular Economy through a Focus on History and Resource Value Retention Options. *Resources, Conservation & Recycling*, 135: 246-264.
- Ringwood F (2016). Establishing a circular economy. *Resource* 18(4): 41-43.
- Rodina L and Harris LM (2016). Water services, lived citizenship and notions of the state in marginalised urban spaces: The case of Khayelitsha, South Africa. *Water Alternatives*, 9(2): 336-355.
- Scerri A (2013). Green citizenship and the political critique of injustice. *Citizenship Studies*, 17(3-4): 293-307.
- Schild R (2016). Environmental citizenship: What can political theory contribute to environmental education practice? *The Journal of Environmental Education*, 47 (1): 19-34.
- Seyfang G (2006). Ecological citizenship and sustainable consumption: Examining local organic food networks. *Journal of Rural Studies*, 22 (4): 383-395.
- Van Wyk S (2015) *Environmental Citizenship in Citizen Science: A Case Study of a Volunteer Toad Conservation Group in Noordhoek, South Africa*. Unpublished Master Half-Thesis in Education (Environmental Education. Rhodes University).

- Vihersalo M (2017). Climate citizenship in the European Union: Environmental citizenship as an analytical concept. *Environmental Politics*, 26 (2): 343-360.
- Warenius L (2017). *Sustainable Capitalism in the Making? The Marshallian Citizenship Conceptualisation Expanded in a European Circular Economy*. Unpublished Master Thesis in European Studies. University of Gothenburg.
- Wastling T, Charnley F and Moreno M (2018). Design for Circular Behaviour: Considering Users in a Circular Economy. *Sustainability*, 10: 1743 doi:10.3390/su10061743.
- Webster K (2013). A practitioner's perspective – Missing the wood for the trees: systemic defects and the future of education for sustainable development. *The Curriculum Journal*, 23(2): 295-315.
- Wolf J, Brown K and Conway D (2009). Ecological citizenship and climate change: Perceptions and Practice. *Environmental Politics*, 18 (4): 503-521.
- Wood BE and Kallio KP (2020). Green Citizenship: Towards Spatial and Lived Perspectives. In S Davoudi, R Cowell, I White and H Blanco (eds). *The Routledge Companion to Environmental Planning*. Abingdon, Oxon and New York: Routledge, 171-180.