# CLIMATE CHANGE, PUBLIC TRUSTEESHIP AND THE TOMORROWS OF THE UNBORN

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ABSTRACT

The impacts of climate change on human and ecological systems and the increasing volatility of life situations demand of scholars to critically evaluate governments' protection of the natural resource base and the interests that communities have in a safe, healthy and preserved environment. It begs the question what the South African government must do as national 'public trustee' to protect the environmental interests and rights of unborn generations of South Africans. The recently adopted United Nations Secretary-General's Report on Intergenerational Solidarity and the Needs of Future Generations reiterates the relevance of the focus on the environmental and other needs of future generations. This article considers how the government as public trustee ought to approach 'climate-resilient development' as provided for in the Climate Change Response White Paper to ensure a long-term response adequate to protecting the environmental interests and rights of the present and future generations.

**Key words:** future generations, inter-generational justice, environmental right, public trusteeship, climate change law

> The tastes of future generations are not only unformed; it is our choices that will form them. The value persons remote in time place on the existence of, say songbirds, is not a given, but will be a function of the legacy we leave them.[1]

> For you, there'll be no crying
> For you, the sun will be shining.[2]

## I Introduction

Anthropologists, natural scientists, lawyers and philosophers alike have for decades been curiously exploring 'the unborn' and the metaphorical 'tomorrow' as a dimension of human beings' temporal space. Scholars continue to grapple with questions and to challenge assumptions about the rights of and obligations towards the people who are expected to inhabit the future. They do so from the perspective of ethics, environmental management, human rights, and the need for a prosperous, sustainable economic dispensation.[3]

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1 CD Stone 'Safeguarding Future Generations' in E Agius & S Busuttil et al (eds) *Future Generations and International Law* (1998) 65, 66.

2 From the lyrics of 'Songbird' by Fleetwood Mac, written by Christine McVee (1977).

3 See J Tremmel 'The "Generational Justice Principle": A Vision for the 21st Century' in Alfred Herrhausen Gesellschaft für Internationalen Dialog *Generations in Conflict* (2000) 201, 202.

At the heart of the curiosity seems to be a sense of the vulnerability of the 'coming faces'[4] whose chances of being exposed to a variety of environmental and other threats have been critically explored by many.[5]

Beyond the realm of scholarly discourse, the general concern about the future seems to be escalating, with more scientific data becoming available about the causes and impacts of climate change in particular.[6] One of the most recent publications of the Intergovernmental Panel on Climate Change (IPCC)[7] states that in recent decades, climate change has caused impacts on natural and human systems on every continent and across the oceans. The IPCC report indicates that both natural and human systems are severely affected. In many regions, changing precipitation or melting snow and ice are changing hydrological systems that affect water resource quantity and quality.[8] Shrinking glaciers affect runoff and water resources situated downstream while climate change also causes 'permafrost warming and thawing in high latitude and high-elevation regions'.[9] Terrestrial, freshwater, and marine species are said to be shifting their 'geographic ranges, seasonal activities, migration patterns, abundances, and species' interactions.[10] Studies further suggest that the negative impacts of climate change on crop yields are more common than positive impacts.[11] The indications are that climate change is not temporary, and even if it were, its present effects are already perpetually changing the natural resource base and by implication, the tomorrows of the unborn in most parts of the world.[12] Climate change is thus likely to continue far beyond the limits of the lifetime of the decision-makers who currently busy themselves with the matter in parliaments, convention centres and boardrooms. This reality evokes complicated questions about the unborn, including questions about the state of the natural resource base, future options and risks that future generations may be faced with when they arrive.

4 Future generations as referred to in Native American parlance. See BH Weston 'Climate Change and Inter-generational Justice: Foundational Reflections' (2008) 9 *Vermont J of Environmental L* 375, 386.

5 See, for example, J Boersema 'How to Prepare for the Unknown? On the Significance of Future Generations and Future Studies in Environmental Policy' (2001) 10 *Environmental Values* 35; H Jonas *The Imperative of Responsibility: In Search of an Ethics for the Technological Age* (1984); M Jacobs 'Sustainable Development as a Contested Concept' in A Dobson (ed) *Fairness and Futurity: Essays on Sustainability and Social Justice* (1999) 21, 26.

6 See, for example, the United Nations Framework Convention on Climate Change (UNFCCC) 'Document List' (2014) <http://unfccc.int/documentation/document_lists/items/2960.php>.

7 *Climate Change 2014: Impacts, Adaptation and Vulnerability (Summary for Policy Makers)* (2014) 4.

8 Ibid.

9 Ibid.

10 Ibid.

11 Ibid.

12 See, for example, UNFCCC 'Water and Climate Change Impacts and Adaptation Strategies' (2011) <http://unfccc.int/resource/docs/2011/tp/05.pdf>; and the range of more recent international, regional and country-specific special, methodology, technical and supporting reports and other data of the UN IPCC. IPCC 'Publications and Data' (2014) <http://www.ipcc.ch/publications_and_data/publications_and_data.shtml>.

Some recognisable impacts of climate change are already evident in South Africa.[13] Climatic changes such as sea level rise and highly variable availability of sufficient water affect many parts of the country. South Africa's Second National Communication under the United Nations Framework Convention on Climate Change (UNFCCC)[14] states that many of the country's economic sectors and ecosystems are climate- and water-dependent with water being the primary medium through which climate change will be experienced. Limited water availability significantly constraints continued economic growth and the securing of sustainable livelihoods.[15] The report indicates that 'surface water resources are already fully allocated in many catchments, and these catchments are additionally experiencing high levels of pollution from wastewater treatment works, mining, industry, and agriculture'.[16] In addition, changes in hydrological responses have major associated implications for agriculture, health, coastal management, and disaster risk management.[17] The rural and peri-urban poor in particular face health risks, as they inter alia rely on untreated water derived directly from rivers, wells, and wetlands.[18] These and other effects related to biodiversity loss and protection of the marine and coastal environment are expected to endure well into the future, rendering them part of what the unborn generations of South Africans may have to face in future.[19] This assertion is widely accepted and has resulted in the Climate Change Response White Paper in 2011.[20]

The White Paper is unequivocal that in responding to climate change, South Africa is not going to focus on an artificial divide between mitigation and adaptation measures, but will direct its laws and policies towards inclusive climate-resilient development.[21] The White Paper was further developed in the context of s 24 of the Constitution of the Republic of South Africa, 1996, famously entrenching an enforceable substantive environmental right which

13 See Department of Environmental Affairs 'South Africa's Second National Communication under the United Nations Framework Convention on Climate Change' (2011) <unfccc.int/resource/docs/natc/zafnc02.pdf>; as well as the research findings produced by the South African National Biodiversity Institute (SANBI) <http://www.sanbi.org>; and the Global Change Programme of the Council for Scientific and Industrial Research (CSIR) <http://www.csir.co.za>.

14 Department of Environmental Affairs (note 13 above) xii.

15 Ibid.

16 Ibid.

17 Ibid.

18 Ibid.

19 L Horn 'Climate Change Litigation Actions for Future Generations' (2008) 25 *EPLJ* 115.

20 Government of the Republic of South Africa 'National Climate Change Response White Paper' (2011) <http://www.pmg.org.za/node/28739> (White Paper).

21 Ibid para 10. *Mitigation* is a central component of responding to climate change. It refers to the collection of actions to prevent greenhouse gases (GHG) from entering the atmosphere, that remove GHG from the atmosphere, or that reduce the sources or enhance the sinks of these gases. See AB Rumsey & ND King 'Climate Change: Adaptation, and Mitigation; Threats and Opportunities' in H Strydom & ND King (eds) *Fuggle and Rabie's Environmental Management in South Africa* 2 ed (2009) 1048, 1069–71. *Adaptation* deals with ways to optimally cope with climate change and its consequences through strategies ranging from risk-reduction to post-disaster reconstruction. See P Burnell *Climate Change and Democratisation: A Complex Relationship* (2009) 10.

provides that everyone has the right to have the environment protected for the benefit of 'present and future generations', through reasonable legislative and other measures.[22] The National Environmental Management Act 107 of 1998 further elaborates on the dictates of the environmental right, providing inter alia for a number of overarching and fundamental environmental management principles.[23] Two of these principles explicitly call for sustainable development[24] and environmental justice,[25] emphasising the importance in environmental management of the inter-generational protection of environmental interests. At the same time, the National Environmental Management Act 107 of 1998 (NEMA), the National Water Act 36 of 1998 (NWA) and other environmental sector laws provide for 'public trusteeship' as will be explained.[26] This concept incorporates into South African statute law the obligation of the state (government) to act as a trustee or custodian of the environment generally or of a specific natural resource, whilst the environment and certain natural resources are bequeathed to the people of South Africa.[27]

The impacts of climate change and the increasing volatility of life situations demand that legal scholars critically evaluate the role of government in protecting the natural resource base. It begs the question what the government of South Africa is required to do in its capacity as a public trustee to protect the environmental interests of unborn generations of South Africans. This article critically considers from a theoretical standpoint how the government as the public trustee ought to approach climate change resilient development[28] to ensure a long-term response adequate to protecting the environmental interests of the present as well as unborn, future generations. Part II offers a review of different legal perspectives on the vulnerability and deferred exposure of unborn future generations to environmental harms. Part III analyses the meaning and relevance of the idea that the natural resource base is held in public trust. Parts IV and V explore the nature of the relationship between the interests of the unborn, public trusteeship and the impacts of climate change. Finally, part VI sets out some critical and more practical views on the legally relevant demands of this relationship for the government's pursuit of climate-resilient development in South Africa.

22 Constitution s 24.

23 NEMA s 2.

24 Ibid s 2(2)-(4).

25 Ibid s 2(4)(c).

26 See ibid s 4(4)(o); the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) s 3; the National Environmental Management: Biodiversity Act 10 of 2004 s 3; the National Environmental Management: Integrated Coastal Management Act 24 of 2008 s 12; and the Mineral and Petroleum Resources Royalty Act 28 of 2008.

27 E van der Schyff 'Unpacking the Public Trust Doctrine: A Journey into Foreign Territory' 2010 (13)5 *PELJ* 122, 122.

28 Described in the White Paper (note 20 above) para 4.1 as 'all interventions – mitigation, adaptation or both – that contribute to a fair and effective global solution to the climate change challenge while simultaneously building and maintaining South Africa's international competitiveness, its social, environmental and economic resilience to the adverse effects of climate change, and any unintended consequences of global climate change response measures'.

## II The Deferred Exposure and Vulnerability of the Unborn as a Responsibility in the Present

Most people would agree, when thinking of the tomorrows of unborn people that it is a present moral duty to avoid causing harm to the environment and cultural heritage.[29] This duty is embedded in the understanding that the state of the environment and preservation of cultural heritage for future generations is largely in the hands of the present generation and that the unborn are, therefore, vulnerable.[30] Joel Feinberg[31] puts it as follows:

> We have it in our power now to make the world a much less pleasant place for our descendants than the world we inherited from our ancestors. We can continue to proliferate in ever-greater numbers, using up fertile soil at even greater rate, dumping our wastes into rivers, lakes and oceans, cutting down our forests, and polluting the atmosphere with noxious gases. All thoughtful people agree that we ought not to do these things.

Our responsibility for the future is also expressed in the widely adopted Earth Charter,[32] which states: '(w)e are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world.' The recently-adopted 'UN Secretary-General's Report on Intergenerational Solidarity and the Needs of Future Generations' expresses the view that 'the dedication to future generations is visible worldwide and across cultures. It is a universal value shared amongst humanity … Few would question the responsibilities the world owes to its children and grandchildren, at least in the moral sense if not strictly in the law'.[33]

This duty and the notions of inter-generational[34] solidarity and responsibility are however not new. It has received attention in urban studies[35] and philosophical[36] and legal scholarship[37] at the international and national levels for

29 BH Weston & T Bach 'Recalibrating the Law of Humans with the Laws of Nature: Climate Change, Human Rights, and Inter-generational Justice' (2009) <http://www.worldfuturecouncil.org/fileadmin/user_upload/Maja/Future_Justice_Library/Library_2.pdf>. With reference to the idea of inter-generational fairness being 'a moral instinct', see GH Frederickson 'Can Public Officials Correctly be Said to Have Obligations to Future Generations?' (1994) 54 *Public Administration Review* 457, 459; and Boersema (note 5 above) 39.

30 See Weston (note 4 above) 376.

31 J Feinberg 'The Nature and Value of Rights' in J Feinberg (ed) *Justice and the Bounds of Liberty: Essays in Social Philosophy* (1980) 159, 183.

32 Preamble of the Earth Charter (2002). The Earth Charter is an international soft law instrument, finalised and launched as a people's charter on 29 June 2000 by the Earth Charter Commission, an independent international entity.

33 2013 para 3 (UN Secretary-General's Report).

34 In this context 'inter-generational' refers to generations of people constructed of individual lives that are continuously overlapping. Stone (note 1 above) 68.

35 See for example R Sánchez-Rodíquez 'Urban Sustainability and Global Environmental Change: Reflections for an Urban Agenda' in G Martine et al (eds) *The New Global Frontier: Urbanisation, Poverty and Environment in the 21st Century* (2008) 149, 158.

36 See E Partridge (ed) *Responsibilities to Future Generations: Environmental Ethics* (1981); E Agius 'Obligations of Justice Towards Future Generations: A Revolution in Social and Legal Thought' in E Agius & S Busuttil et al (eds) *Future Generations and International Law* (1998) 3; Feinberg (note 31 above).

37 See P Sands 'Protecting Future Generations: Precedents and Practicalities' in Agius & Busuttil et al (ibid) 83, 84; Weston (note 4 above) 375–30.

years already.[38] Inter-generational responsibility calls for the promotion of the existing generation's accountability towards unborn generations and underpin the idea of inter-generational equity. Inter-generational equity is understood in this context as a matter of justice and as meaning that present generations are answerable to future generations for inter alia their stewardship of the natural resource base.[39] Inter-generational responsibility delineates the idea of 'mankind as a collectivity'; as a vision of community within countries as well as across borders; and the idea that a just inter-generational community must give a voice to the voiceless.[40] This is often said to mean that at a minimum the present generation has the responsibility to ensure that future generations inherit a global environment that is better or at least no worse than the one the present generation received.[41] This is partly so because current environmental goods, wealth and technology owe their development to prior generations, and 'this debt' cannot be discharged backward, so it is projected forward.[42] This idea of transcending inter-generational debt has, however, a limiting effect in the present. Dinah Shelton has argued that those living have received a heritage from their forebears in which they have beneficial rights of use that are limited by the interests and needs of future generations.[43] As such, the freedom of action of each generation is qualified by the projected needs and likely challenges of generations still to come.

Edith Brown Weiss puts this in rights-language: future generations possess rights in relation to the state of the environment, and the present generation is, in fact, dealing with a fundamental entitlement of future generations.[44] These rights are generational rights, which are held in relation to other generations – past, present and future.[45] Despite various nuanced differences in awareness about time[46] and making sense of the 'responsibility-towards-future-generations' axiom'[47] and inter-generational rights, it is widely agreed that at any given point in time the existing generation has a duty towards

38 Weston (note 4 above) 383 puts it that '(n)ot a little ink has been spilled on the meaning of "future generations" and inter-generational ecological justice'.

39 Agius (note 36 above) 6. D Shelton 'Describing the Elephant: International Justice and Environmental Law' in J Ebesson & P Okowa *Environmental Law and Justice in Context* (2009) 55, 62–3 describes inter-generational equity as a principle of international justice based on the recognition of two facts. First, human life emerged from and depends on the earth's natural resource base and is inseparable from environmental conditions; and second, human beings have the unique capacity to alter the environment upon which life depends. For a response to ecocentric criticism of the principle of inter-generational equity, see D Tladi 'Of Course for Humans: A Contextual Defence of Intergenerational Equity' (2002) 9 *SAJELP* 177–86.

40 Agius (ibid) 6, 11.

41 The idea originates from Brown Weiss' research in the 1980s and early 1990s. See for example E Brown Weiss 'Our Rights and Obligations to Future Generations for the Environment' (1990) 84 *AJIL* 198, 200.

42 Shelton (note 39 above) 63.

43 Ibid.

44 E Brown Weiss 'Inter-generational Fairness and Rights of Future Generations' (2002) *International Justice Review* 1, 6.

45 Ibid 1; Brown Weiss (note 41 above) 202.

46 See Boersema (note 5 above) 37 for a discussion of differences between cultures with respect to time awareness.

47 See, for example, the variant views and perspectives discussed by Weston (note 4 above) 388–89.

and stands accountable to future generations.[48] Philosophical questions about inter-generational solidarity, responsibility and accountability thus have discernible meaning in the present. Today, following the trend in international environmental law instruments,[49] most present-day national law systems make provision for the protection of the interests of the unborn, expressing concern in legal terms for the ecological well-being of future generations.[50]

Without explicitly accounting for the harms that future generations are likely to suffer absent far-sighted approaches to natural resource conservation and management, there is no guarantee that solutions in the present will be adequate into the future.[51] Burns H Weston's response to this is that the rights and duties of future and present generations, respectively, would best be fulfilled by focusing public and private policy on an ecological legacy that is informed by the ecological *values* that future generations are meant to inherit.[52] He holds further that unless they are rapidly and decisively addressed within the next decade many serious ecological and socio-economic harms are likely to occur within 100 years or less – the present generation accordingly does not have the luxury of any delay.[53] In this vein, Brown Weiss made a strong and often quoted case for our acceptance of three basic *principles* for inter-generational integrity, namely:[54] (a) the conservation of options;[55] (b) the conservation of quality;[56] and (c) the conservation of access.[57]

Future generations by their very nature are vulnerable in many respects in the sense that they have 'the capacity to be wounded'.[58] They are considered sensitive to climate change, for example, to the degree that they can be affected by it, and vulnerable to the degree that their options, the quality of their environment and their eventual access to the natural resource base can be harmed. Because vulnerability and its causes play an essential role

48 A Holland 'Sustainability: Should we Start from Here?' in Dobson (note 5 above) 46, 67 suggests that we adopt a procedural understanding of the accountability in terms of responsibilities towards future generations with a focus on governance and other principles upon which to act rather than on specific outcomes to be brought about.

49 For an account of some of the recent environmental law instruments that have referred to inter-generational ecological justice, see Weston (note 4 above) 389–91; and Weston & Bach (note 29 above) 14.

50 As observed by the UN Secretary-General's Report (note 33 above) para 3; and Weston (note 4 above) 378, 379.

51 Weston (ibid) 402–03.

52 Ibid 380 (own emphasis).

53 Ibid 385.

54 E Brown Weiss *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (1989) 40–5.

55 Translating into the duty to conserve the diversity of the resource base, so that the present generation does not unduly restrict the options available to future generations in solving their problems and satisfying their own values. See E Brown Weiss 'The Planetary Trust: Conservation and Intergenerational Equity' (1984) 11 *Ecology LQ* 495, 525.

56 Denoting the duty to pass the natural resource base or 'the planet' to the next generation in no worse condition than the present generation received it. See Brown Weiss (note 55 above) 525.

57 Referring to equal access to common resources – access to natural resources shared by humankind over time.

58 B Smit & O Philifosova 'Adaptation to Climate Change in the Context of Sustainable Development and Equity' (2003) 8 *Sustainable Development* 9.

in determining the overall future impact of climate change, understanding the dynamics of the vulnerability of future generations is as important as understanding climate change itself.[59] Their vulnerability may be countered by their capacity to adapt to change. Some of the determinants of adaptive capacity include:[60] economic conditions; communities' current level of technology and their ability to develop technologies; knowledge of the available options and skills; access to resources and infrastructure by decision-makers; the level of development of social institutions and institutional support (including managerial capacity); and the availability of and peoples' access to financial, environmental and other resources. These determinants of adaptive capacity are not independent of one another, nor are they mutually exclusive – the adaptive capacity of the existing and future generations is the outcome of a combination of factors and will vary over time.

If, from an originally moral obligation, the unborn generate inter-generational rights that must be fulfilled by present-day duty bearers, people living in the now are proxy or surrogate right-holders. Proxy right-holders can for example demand that future peoples' interests be treated as legally recognised rights.[61] The protection and promotion of these rights happens through the design and application of the law and policy-making as well as decision-making processes that give due consideration to the long-term consequences of insatiable human wants and rising ecological needs.[62] It further happens through present-day institutions.[63] The deferred exposure and inherent vulnerability of the unborn are believed to be worthy of protection in the now but cannot be addressed at the superficial level of moral or rights-based recognition alone. The commitment to '(s)ecure the Earth's bounty and beauty for present and future generations'[64] and a widely acknowledged (sense of) duty towards future generations then translate into action-dependent present-day responsibilities. But whose action and responsibility, exactly?

## III Natural Resources in Public Trust: Whose Responsibility is the Unborn?

The inter-generational protection of natural resources is not self-executing and cannot happen without intervention. The responsibility for proactive intervention may, however, lie with several potential role players. The Aarhus Convention,[65] for example, adopts an inclusive view in this respect, stating that '*every person* has … the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and

59 Ibid.
60 Ibid 895–97.
61 Weston (note 4 above) 406 (emphasis omitted).
62 LC Hempel *Environmental Governance* (1996) 3.
63 Ibid.
64 See Principle 4 of the Earth Charter (2002).
65 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) adopted by the UN Economic Commission for Europe in 1996.

future generations'.[66] All people individually and collectively are, in the words of Feinberg,[67] spokesmen and genuine representatives of future interests. Following this line of reasoning, it may be argued that the existing generation's responsibility towards the unborn is at the same time an individual and collective duty of everyone living in the present. There is, however, something to be said for coherently managing the collective duty, specifically, and in asking what its execution towards the unborn means in concrete terms.

It may be argued that the collective duty translates into a duty belonging to present generations and 'their governments'.[68] The management of the collective duty is by implication and by virtue of the meaning of 'the state' the responsibility of 'the government'.[69] The New Delhi Declaration of Principles of International Law Relating to Sustainable Development,[70] for example, determines that 'states' must take into account the needs of future generations. It has also been argued that the tacit arrangements in society for inter-generational fairness and justice are most often manifested in government, where temporal decision-makers are expected to act in certain ways out of a public duty towards future generations.[71] Accepting that it is a core government duty to protect the environmental interests and rights of future citizens from the exploitive tendencies of the existing generation, there is little clear direction on what exactly should be done.[72] How should the present-day public duty and responsibilities of government towards future generations be executed? Many scholars have usefully argued that future-focused government action should at a minimum be based on durable principles[73] that would inform government action.[74] These principles may serve to bridge the temporal gaps between elected or appointed governors, for example. Some of the suggested principles include:

- Design and adopt policies that address problems from a temporal and inter-generational perspective and that will at a minimum have a neutral effect on future generations.[75]

66 Ibid preamble (own emphasis).
67 J Feinberg 'The Rights of Animals and Future Generations' in Feinberg (note 31 above) 159, 183.
68 With reference to the works of Peter Brown and John Locke, see Weston (note 4 above) 395.
69 The word 'government' is derived from the Latin infinitive 'gubernare' meaning 'to govern' or 'to manage'. Government can also in some instances be referred to as 'the state' as it refers to the legislators, administrators, and arbitrators in the administrative bureaucracy who control a country at a given time, and to the system of government by which they are organised. A strong distinction between 'state' and 'government' is however not necessary for purposes of this article.
70 Principles 1 & 2 of the New Delhi Declaration of Principles International Law Relating to Sustainable Development adopted at the 70th Conference of the International Law Association (2002).
71 Frederickson (note 29 above) 463.
72 Boersema (note 5 above) 40.
73 Ibid 47–52.
74 Holland (note 48 above) 67; Frederickson (note 29 above) 463; Boersema (note 5 above) 52.
75 Frederickson (note 29 above) 459, 463.

- Adopt a precautionary approach in decision-making, striving for quality of life.[76]
- Invest in scientific research, technological development, learning and education with respect to resource conservation.[77]
- Do not tolerate actions that cannot be well-defended.[78]
- Improve access to resources and the sustainable use of renewable resources.[79]
- Reduce poverty and lower inequities in resources and wealth among groups.[80]
- Ensure public participation in decision-making to ensure that actions meet peoples' needs and resources.[81]
- Improve institutional capacity and efficiency.[82]
- Maintain facilities and services including with respect to financing and funding.[83]
- Monitor natural and cultural resource diversity and environmental quality.[84]

These principles may still be too abstract to draw conclusions about their normative potential for future generations.[85] They can, however, be treasured for their ability to articulate the rights and duties that underpin inter-generational resource-protection and equality and in guiding innovation in government for the use of law and other instruments to translate ethical norms, moral duties and values into practice.[86]

But Brown Weiss and others, inspired by US trust law, have put a different spin on governments' role. Brown Weiss is world-renowned for having held that: '(a)s members of the present generation, we hold the earth in trust for future generations. At the same time, we are fiduciaries to use it and benefit from it'.[87] This role of 'the present generation' echoes the objective of the so-called public trust doctrine.[88] This doctrine is the legal receptacle for

76 L Bento 'Searching for Inter-generational Green Solutions: The Relevance of the Public Trust Doctrine to Environmental Preservation' (2009) 11 *Common LR* 7, 7; and Brown Weiss (note 54 above) 119–48.

77 Brown Weiss (ibid).

78 Boersema (note 5 above) 47.

79 Smit & Philifosova (note 58 above) 899; Brown Weiss (note 54 above) 119–48.

80 Smit & Philifosova (ibid) 899.

81 Brown Weiss (note 54 above) 119–48; Smit & Philifosova (ibid) 899.

82 Smit & Philifosova (ibid) 899.

83 Brown Weiss (note 54 above) 119–48.

84 Ibid.

85 See also A Akhtarkhavari *Global Governance of the Environment: Environmental Principles and Change in International Law and Politics* (2010) 17–8.

86 Weston & Bach (note 29 above) 14.

87 See Brown Weiss (note 44 above) 1; Brown Weiss (note 54 above) 2.

88 See Van der Schyff (note 27 above) 125–49. See also W Freedman 'Conservation, Sustainable use of Natural Resources and the Notion of Public Trusteeship' in A Du Plessis (ed) *Local Government and Environmental Law in South Africa* (2015). Brown Weiss (note 54 above) 17–8 contains one of the first references to the idea that '(a)t any given time, each generation is both a custodian or trustee of the planet for future generations and a beneficiary of its fruits' and a reference to the analogy of a charitable trust.

governments' long-term duty, as supported by the judiciary, executives and administrations, to manage and perpetuate public enjoyment of natural resources.[89] The trust relationship depicted in the doctrine is analogous to that of a charitable trust in so far as it incorporates a public purpose, a government trustee, and an open-ended group of generalised beneficiaries.[90] Its scope is far-reaching as the doctrine introduces an inter-temporal approach to environmental protection.[91] The government has a fiduciary duty of stewardship of the public's environmental capital in so far as natural resources should be held in trust for the present and future use and benefit of the general public.[92]

Countries like South Africa have in recent years adopted the concept of public trusteeship that has features similar to those of the public trust doctrine.[93] As discussed below, the South African government has conferred upon itself the obligation to act as 'environmental' trustee or custodian, whilst the environment per se is bestowed upon the people of South Africa. Section 3(1) of the NWA, for example states that 'as the public trustee of the nation's water resources, the National Government, acting through the Minister, must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable manner, for the benefit of all persons and in accordance with its constitutional mandate'. While the NWA emphasises the role of the national government, the Constitution confers a duty on all three government spheres to ensure that environmental resources are beneficially used in the interest of the public.[94] The entire government has the constitutional and statutory duty to protect natural resources so that they will, inter alia, be available to future generations. This duty provides a legal basis for all public authorities to restrict by means of, for example, planning and administrative requirements the actions of private parties (for example mines and heavy industries) exploiting public natural resources such as water, minerals, biodiversity and marine resources. The fact that the government fulfils a custodian role that is entrenched in law,[95] however, also means that concerned citizens have access to a legal instrument that could be used reciprocally to constrain or dictate the management of natural resources to protect them for future generations.[96]

Public trusteeship is regarded as a fundamental legal mechanism for governmental protection of natural resources necessary for public welfare

89 Bento (note 76 above) 7.
90 See Brown Weiss (note 55 above) 495–82; and Bento (ibid) 8.
91 Bento (ibid) 8.
92 P Kameri-Mbote 'The Use of the Public Trust Doctrine in Environmental Law: Comment' (2007) 3(2) *Law, Environment and Development J* 197, 199 with reference to the work of Brown Weiss.
93 Van der Schyff (note 27 above) 124 warns that it is too simplistic to summarily equate public trusteeship as found in South African law with the public trust doctrine, a complicated foreign legal doctrine. See also Freedman (note 88 above).
94 Constitution s 24 read with s 7(2). See also sub-section V(c) below.
95 See the discussion in part V.
96 See Weston & Bach (note 29 above) 43.

and survival.[97] It follows that in South Africa and elsewhere, a legal construct already exists which incorporates into law the notion that the environment is held in a kind of fiduciary trust. This legal construct bestows on the state the responsibility to manage the collective duty of existing generations and to act as guardian of certain interests to the benefit of nations and succeeding generations as a whole.

The question as to *how* comes to mind since 'the state' is complex and multi-faceted, forming the basis of Mary Wood's[98] argument that while the public trust doctrine blankets all three branches of government – legislature, executive and judiciary – it manifests itself differently according to the unique constitutional role of each branch. The legislature is the trustee of the assets in its role as primary 'regulating' branch while the executive branch serves the function of an agent of the legislature or the trustee, encumbered with a very significant governance duty, namely to carry out sovereign trust obligations, for example, through policy-making, law enforcement and the design and implementation of programmes and projects. The judiciary is the ultimate guardian of the trust. It follows that in the South African context, different organs of state would fulfil different roles in executing the fiduciary duty of 'the state'. The deeper meaning and implications of this as well as the nature of the relationship among the three spheres of government and different role players (such as industry, state-owned enterprises, and international donors and financial institutions) required to optimise government's fiduciary role are significant. Further critical analysis of this aspect however falls beyond the scope of this article.

## IV Climate Change and the Links between Protecting the Environmental Interests of the Unborn and Public Trusteeship

Global climate change poses extraordinary present and future challenges to humanity.[99] Concerns about the future and the fate of unborn generations have become of growing relevance.[100] There are at least three dimensions to the interrelationship between climate change and the unborn.

First, one may be tempted to analyse inter-generational responsibility at quite abstract levels, but the problem of climate change quickly directs the enquiry to practical, real-world questions.[101] One of the key pragmatic questions is how to accommodate the high level of uncertainty and variability that obscures the existing generation's understanding of, planning for and

97 Ibid 78.

98 MC Wood 'Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part 1): Ecological Realism and the Need for a Paradigm Shift' (2009) 39 *Environmental L* 43, 75.

99 Weston & Bach (note 29 above) 16.

100 NH Buchanan 'What Kind of Environment do we Owe Future Generations' (2001) 15 *Lewis and Clarke LR* 339, 350 argues that although all decisions are irreversible in the logical sense, 'the nature of environmental change can be irreversible in a much more profound sense … The most threatening of such irreversible possible environmental harms, for course, is global warming'.

101 F Soltau *Fairness, International Climate Change and Law* (2009) 133.

short- and long-term responses to climate change. It was stated with great foresight as early as in 1981 that '(w)hilst our ability to affect the future is immense, our ability to foresee the results of our environmental interventions is not'.[102] The unborn thus run the risk of having limited choice as to how they want to lead their lives one day and of having limited influence over the kinds of resources that they will be able to access.[103]

The unborn generations are vulnerable because of the intrinsic eroding effects of climate change. It follows that the three basic principles for inter-generational integrity referred to earlier, are increasingly at risk because of climatic changes. Following upon the Rio Declaration on Environment and Development, in 1992 the UNFCCC determined as a matter of principle that parties should take precautionary measures to anticipate, prevent and minimise the consequences of climate change and mitigate its adverse effects and that, where there are threats of serious or irreversible damage, the lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective.[104] Despite this noble international objective, future generations have no guarantee that present-day mitigation measures, and the adoption of a precautionary and no-regrets approach by state governments will, in fact, result in long-term benefits.

Second, concern for inter-generational resource protection is critical to any feasible and legitimate present-day law and governance response to global climate change.[105] This view is in agreement with the UNFCCC enjoining parties to protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.[106] It seems as if international agreement with respect to the relationship between the unborn and inter-generational obligations is one of the key factors necessary for solidarity in the now and in the world-wide attempt to mitigate climate change in the present.[107]

Third, climate change stems from activities at the very heart of economies and our way of life such as combustion of fossil fuels in vehicles, factories and electricity production, mining, methane-releasing landfills and agriculture, the loss of forests and the use of fertilisers and industrial processes that release nitrous oxide. The fact that governments execute control over these activities by way of authorisations and other administrative measures, monitoring and the enforcement of environmental and other laws, is not trivial. Governments

102 Partridge (note 36 above) 2.

103 See United Nations Development Program (UNDP) 'Human Development Report 2007/2008' (2008) <http://hdr.undp.org/en/media/HDR_20072008_EN_Overview.pdf> 1.

104 UNFCCC art 3(3).

105 Weston (note 4 above) 400.

106 UNFCCC art 3(1).

107 The current status and ongoing political struggles in this regard are well-covered in the literature. See, for example, P Lawrence *Justice for Future Generations: Climate Change and International Law* (2014).

such as that of South Africa face a legally entrenched fiduciary duty towards existing and future generations – also in the realm of climate change. It follows that public decisions of a socio-economic nature or directed at economic development in the now may in small and/or more significant ways contribute to climate change with unintended long-term quality, access and option-related consequences for future generations.

Ultimately, the link between climate change, the state's fiduciary role and future generations manifests in what the government must do towards the long-term protection of the natural resource base against the impacts of climate change in order to avoid inter- or intra-generational unfairness. The existing principles for future-focused government action offer some insights in this respect. What the remainder of this article then seeks to explore is what all of this may mean for South Africa specifically.

## V Public Trusteeship of 'Climate-resilient Development' – Fit for the Tomorrows of Unborn South Africans?

### (a) 'Climate-resilient development' – the background

Developing countries increasingly take conscious steps to develop climate law and policy at national level.[108] South Africa is no exception. The White Paper[109] is currently the most authoritative climate change policy in the country. It extensively provides for various objectives, principles, strategies, measures, programmes and developments towards short- and long-term mitigation and adaptation. The objective of the government is first, to effectively manage the inevitable impacts of climate change through interventions that build and sustain the country's social, economic and environmental resilience as well as its capacity to respond to emergencies; and second, to make a fair contribution to the global effort to stabilise GHG emission concentrations within a timeframe that would still allow for economic, social and environmental development to proceed in a sustainable manner.[110] The White Paper proposes that the government will adopt a phased approach with three time-bound planning horizons: the short-term (2016); the medium-term (2031); and the long-term (2050).[111] Overall, the government has adopted an integrated strategic approach in response to climate change, which is referred to as 'climate change resilient development'.

In terms of the White Paper, climate change resilient development refers to all interventions (mitigation, adaptation or both) that could contribute to a global solution to the challenge of climate change while simultaneously building and maintaining South Africa's international competitiveness and its social, environmental and economic resilience to the adverse effects of global climate change, and any unintended consequences of global climate change

108 BJ Richardson et al *Climate Law and Developing Countries: Legal and Policy Challenges for the World Economy* (2009) 12.

109 White Paper (note 20 above).

110 Ibid 11.

111 Ibid 12.

response measures.[112] In this regard, the White Paper sets out to develop a 'win-win' strategic approach that is: (i) needs-driven and customised; (ii) developmental; (iii) transformational, empowering and participatory; (iv) dynamic and evidence-based; (v) balanced and cost-effective; and (vi) integrated and aligned.[113]

### (b) A principled approach

The achievement of climate-resilient development is guided by a set of principles in the White Paper that is based on a combination of the Constitution,[114] the NEMA,[115] the Millennium Development Goals[116] and the UNFCCC. The principles include, amongst others: common but differentiated responsibilities and respective capabilities; equity; consideration of the special needs and circumstances of people that are particularly vulnerable (such as the poor and rural communities); uplifting the poor and the vulnerable; intra- and inter-generational sustainability; the precautionary principle; the polluter-pays principle; informed participation; and acknowledging that economic, social and ecological services are an integral component of responding to climate change.[117] An additional principle is to manage 'our ecological, social and economic resources and capital responsibly for current and future generations'.[118]

Future generations are referred to in several parts of the White Paper. It is inter alia determined that an objective of the South African government with respect to education is to ensure that a holistic understanding of climate change and related issues is included in formal education curricula to prepare future generations for a rapidly changing planet and the transition to a lower-carbon society and economy.[119] Of further significance is the statement in the White Paper that climate change is:

> a cross-generational challenge. The effects of action or inaction will not be felt immediately, but will have significant consequences for future generations. It is within this context, and informed by an appropriate sense of urgency, that the South African government has developed its National Climate Change Response Policy.[120]

Formally acknowledging the vulnerable position of unborn generations in the face of climate change in this way is a feather in the South African government's cap. A central tenet in this article is that vulnerability and the notion of public trusteeship must inform the government's interpretation of

112 Ibid.
113 Ibid 12–3.
114 Constitution chapter 2 .
115 NEMA s 2.
116 See the UNDP 'Millennium Development Goals' (2014) <http://www.undp.org/content/undp/en/home/mdgoverview.html>.
117 White Paper (note 20 above) 11.
118 Ibid 12.
119 Ibid 45.
120 Ibid 49.

and application of the principles underpinning climate-resilient development, now and into the future.

### (c) The future being held in public trust

The inter-generational challenges of climate change amount to a form of risk management for which several role players in South Africa may have to take responsibility. The way in which the domestic environmental law system has developed since South Africa's constitutional transformation has however elevated the responsibility of the government.[121]

In 1996, the notion of public trusteeship became implicitly entrenched as a constitutional objective in the constitutional environmental right.[122] Section 24(b) of the Constitution determines that everyone has the right to have the environment protected, for the benefit of 'present *and future* generations' through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. Read with s 7(2) it is clear that the realisation of this right with its required inter-generational protection of the natural resource base is a constitutional duty of a fiduciary kind that rests with the authorities.[123] Public trusteeship was subsequently and in more explicit terms included as a legal construct in a number of national environmental laws.[124] Its legislative inception is said to have happened for two reasons: first, because the government failed to use its regulatory powers to benefit all South Africans during the colonial and apartheid eras; and, second, because authorities failed to use their regulatory and fiduciary powers to protect the natural resource base on an equal basis.[125] Given these reasons, the government is no longer entrusted with unlimited power to regulate the use and enjoyment of natural resources. Instead, its power is limited or restricted by imposing obligations and responsibilities on authorities. In other words, the government's powers are de-emphasised while its responsibilities are highlighted.

The responsibilities that public trusteeship impose may be divided into three categories: (i) public trusteeship as a principle of interpretation. The laws providing for public trusteeship must be interpreted in a manner that promotes the latters' aims and objects; (ii) a wide range of specific obligations of the government as public trustee in terms of specific legislative provisions;

121 See the discussion of the South African government's responsibilities and functions in relation to climate change in A Du Plessis 'Climate Governance in South African Municipalities: Opportunities and Obstacles for Local Government' in B Richardson (ed) *Local Climate Change Law* (2012) 353–87.

122 Constitution s 24(b).

123 Constitution s 7(2) determines that 'the state must respect, protect, promote and fulfil the rights in the Bill of Rights'.

124 These laws are further discussed in para 5 below.

125 See Freedman (note 88 above).

and (iii) additional obligations and responsibilities bestowed on authorities that are not necessarily explicitly set out in the relevant statutes.

As alluded to above, the constitutionally entrenched duty of government to respect, protect, promote and fulfil the right to an environment not harmful to health or well-being and to have the environment protected for the benefit of present and future generations[126] translates into a fiduciary public duty to protect peoples' environment and the natural resource base. This duty may be enforced by various categories of people with the necessary standing, including anyone acting on behalf of another person who cannot act in his or her own name and anyone acting in the public interest.[127] The NEMA further determines that 'the environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest, and the environment must be protected as the people's common heritage'.[128] In addition to the Constitution and the NEMA, which contain the principal South African environmental law provisions, several sector environmental acts also explicitly provide for public trusteeship.

The MPRDA contains an extensive provision on state custodianship over mineral resources – it provides that mineral and petroleum resources are the common heritage of all the people and that the state is the custodian thereof for the benefit of all South Africans.[129] The Act further provides that the national department (through the minister of the Department of Mineral Resources) may regulate mining through different management tools such as permits and exploration rights, and that mines may be expected to pay certain government levies and fees.[130] The Act states that the minister must ensure the sustainable development of mineral and petroleum resources within a framework of national environmental policy, norms and standards while promoting economic and social development.[131] In addition, the Mineral and Petroleum Resources Royalty Act 28 of 2008 has been passed to effect the collection of mining royalties from mines holding mining rights granted by government. The aim of this law is to enable compensation of the state for its custodianship over non-renewable mineral resources exploited by the mining industry. The National Environmental Management: Protected Areas Act 57 of 2003 (NEM:PAA) provides that in order to fulfil s 24 of the Constitution, the state through its executive organs of state should act as the trustee of protected areas in South Africa.[132] Repeating the message in the NEM:PAA, the National Environmental Management: Biodiversity Act 10 of 2004 (NEM:BA) also provides that in order to fulfil and progressively realise the constitutional environmental right, the state through its executive

126 Constitution s 24.
127 Constitution s 38(b) & (d). Notably NEMA s 32 extends this provision even further albeit in the environmental context.
128 NEMA s 4(4)(o).
129 MPRDA s 3(1).
130 Ibid s 3(2).
131 Ibid s 3(3).
132 NEM:PAA s 3.

branch should manage, conserve and sustain South Africa's biodiversity and its components.[133] In similar vein the National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEM:ICMA) provides that the state must act as the trustee of the coastal zone and must take reasonable measures to achieve the progressive realisation of the constitutional environmental right in the interest of every person.[134] Although none of these statutory provisions on public trusteeship directly speaks to the steps that may have to be taken with respect to climate change and its impacts, their existence serves to prove that a fiduciary and trusteeship role on the part of the government is well-established in the Constitution as well as framework and sector environmental law.

Given the potential scope of application of public trusteeship as a legal construct, it could be argued that it is not necessary to pay special attention in law to future generations, because their protection is implied in the constitutional provisions and environmental laws that protect present generations. Yet, as climate change poignantly illustrates, living in the present has its limitations and without explicitly taking into account and acting upon the interests and risks of future generations and the harm that may be done to them, there is no guarantee that legal provisions focused on the present will safeguard the unborn.[135] Governments need lengthened foresight for which the basis and governing instruments may have to be established in law. In order to comment on the adequacy of the legal framework in terms of which the government has to approach climate-resilient development and the interests of future generations it is useful to highlight a few of the strengths and weaknesses of the applicable body of South African law.

*(i) The strengths*

The government has the capacity to define a long-term legacy through constitutional and statutory law as the starting point for crafting and directing effective policy, plans, programmes and strategies to mitigate climate change and to facilitate long-term adaptation to it. Everyone has the enforceable constitutional claim to the government's protection of the environmental interests of future generations.[136] While the constitutional environmental right is less explicit on the fiduciary duty of the government than the environmental provision in the German Constitution, for example,[137] the duty is part of the

133 NEM:BA s 3.

134 NEM:ICMA s 12.

135 Weston & Bach (note 29 above) 52.

136 JC Tremmel & M Viehöver 'Standpoint: Can Inter-generational Justice be Achieved Without Improving Our Democracy? The Dilemma of Short-term Politics' (2002) 3 *Generational Justice* 1, 12; and Weston & Bach (note 29 above) 15.

137 The Basic Law of Germany art 20(a) determines that '(m)indful also of its responsibility towards future generations, the state shall protect the natural foundations of life and animals by legislation and, in accordance with law and justice, by executive and judicial action, all within the framework of the constitutional order'.

supreme law of South Africa and any law or conduct inconsistent with it is invalid.

Public trusteeship provided for in environmental legislation makes the conservation of options, the conservation of quality, and the conservation of access for future generations compulsory. However, the public trusteeship provisions are broadly construed principles and may therefore, on their own, be ill-equipped to meet the challenge of inter-generational resource protection in the context of large-scale environmental risks such as those posed by climate change. Public trusteeship is, however, supported by, amongst others, various concrete and enforceable procedural rights and laws. The Constitution and legislation make provision inter alia for access to information,[138] just administrative action,[139] and public participation in environmental decision-making,[140] as well as very wide legal standing as already indicated.[141] In its legal arsenal South Africa for example also has provisions for cooperative government,[142] an explicit mandate for decision-makers to apply the precautionary principle,[143] and provisions for the protection of future access to resources through environmental impact assessment.[144] There are also traces of the internationally recognised principles for inter-generational resource protection – provision is made for an extensive set of basic values and principles governing the public administration towards good governance and the strengthening of democracy, for example.[145] In addition to the long-term implications and vision of these provisions, the White Paper makes explicit reference to the principle to respond to climate change with the needs of future generations in mind.[146]

Various legal provisions and measures in South African law have been suggested internationally for government responses to climate change. These requirements include non-discrimination in the development, adoption, implementation, and enforcement of all environmental laws, regulations and

138 See Constitution s 32, the Promotion of Access to Information Act 2 of 2000; and NEMA ss 2(4)(g) & (k) & 31.

139 See Constitution s 33; the Promotion of Administrative Justice Act 3 of 2000; and NEMA s 2(4)(g) & (k).

140 See for example NEMA s 2(4)(f) & (g).

141 The strength of procedural environmental rights in claiming protection of the rights of future generations have been shown in recent years in the Phillipines case of *Oposa et al v Fulgencio S Factoran, Jr et al* (Department of Environment and Natural Resources); and more recently (November 2014) also in ongoing climate change / atmospheric trust litigation in the US Court of Appeals and the US Supreme Court. In this case a group of young Americans is seeking a decision that the federal government has public trust obligations to protect essential natural resources for present and future generations. See Our Children's Trust 'Legal Updates' (2014) <http://www.ourchildrenstrust.org/US/Federal-Lawsuit>.

142 See Constitution chapter 3; NEMA chapter 3; the Intergovernmental Relations Framework Act 13 of 2005 with its accompanying Regulations; and the Infrastructure Development Act 23 of 2014.

143 See NEMA ss 4(a)(vii) & 28; and NWA s 19.

144 See NEMA s 24 with its accompanying Regulations.

145 See in addition to the provisions already discussed, the Constitution chapter 10 & s 25(4) (the property right), for example.

146 White Paper (note 20 above).

policies; shifting of the burden of proof to developers to establish a reasonable certainty that proposed projects will cause no significant adverse effects on the environment or unfair treatment; incorporation of the 'best practical environmental option' approach; and provision for public consultation and input in government decision-making.[147] These requirements are, for example, captured in the objectives, provisions and regulatory instruments provided for in the Constitution and the NEMA, as well as five sector environmental laws,[148] amongst other national statutes such as the Local Government: Municipal Systems Act 32 of 2000.[149] Useful as it may be, a detailed analysis of these objectives, provisions and regulatory instruments fall beyond the scope of this article.

The government's fiduciary duty also hinges on the existence of a range of procedural rights. The Aarhus Convention, for example, provides that in order to contribute to the protection of the right of 'every person of present and future generations' to live in an environment adequate to his or her health and well-being, each party shall guarantee the rights of access to information, public participation in decision-making, and access to justice in environmental matters.[150] The underlying premise is that in the interactions in the present between people and public authorities, the public must have the right to information, public participation and access to justice, in public decisions that concern the environment. Sections 32, 33 and 34 of the Bill of Rights make explicit provision for each of these rights and also entrench the right to just administrative action in decisions with a bearing on the environment.

*(ii) The weaknesses (and governance challenges)*

What then, does South Africa's legal system need? First of all, no mention is made in the White Paper of the notion of public trusteeship or the fiduciary role of the government. In other words, despite its prominence in framework and sectoral environmental law, public trusteeship and the fiduciary role of government concerning the natural resource base have not been mentioned in, developed or adapted for the context of climate-resilient development. As a result, there seems to be inadequate focus on the role of the government in carefully managing the collective duty of the existing generation towards future generations in the climate-change context. Public trusteeship in some of the sector environmental laws speaks only to the executive branch of the government, while the literature convincingly suggests that the fiduciary duty of the state cuts across the legislative, executive and judicial branches of government. Playing down the role of the courts may be particularly dangerous

147 Weston & Bach (note 29 above) 71.

148 See the NEM:BA, the NEM:PAA, the NEM:ICMA, the National Environmental Management: Waste Management Act 59 of 2008, and the National Environmental Management: Air Quality Management Act 39 of 2004.

149 See the Local Government: Municipal Systems Act chapter 4 of the which deals extensively with community participation.

150 Aarhus Convention art 1.

since much still needs to be done in terms of the judicial development of the concept of public trusteeship.

Even though South African law makes ample provision for cooperative government, significant problems with optimising intergovernmental relations and cooperation have been flagged in the past decade.[151] To best serve the interests of future generations, cooperative government must be sought to avoid the danger of uncoordinated and fragmented climate regulation – diagonal regulation and planning which cut across the spheres and branches of government are necessary.[152] In other words, the spatial planning of coastal areas, programmes to reduce water-use and measures for the transition to low-carbon housing construction, to name but three examples, may have to be coordinated and aligned in the laws, policies, plans and institutions of all three spheres of government. In order to ensure that such alignment and coordination also cater for the protection of the interests of the unborn, it would also be necessary for law, policies, plans and institutions to provide for the conservation of options, the conservation of quality, and the conservation of access, as discussed earlier.

To mainstream the protection of future generations and to avoid 'band-aid' approaches in what the government does, a dedicated public watchdog or ombudsman for future generations may have to be established. These have been established in Israel and Hungary, for example,[153] designed to examine environmental issues and their effects on future generations.[154] In the South African context, an ombudsman for future generations may typically be modelled on the Public Protector or, the 'ombudsman' function could be made part of the mandate of existing watchdog institutions such the South African Human Rights Commission (SAHRC) or the Public Protector.[155] The ombudsman would have a role to play in, for example, public decisions on the approval of large-scale project developments with significant projected environmental impact[156] or the design and adoption of legislation and norms and standards for the use of new technologies for alternative energy generation

151 See, for example, W Du Plessis 'Legal Mechanisms for Cooperative Government in South Africa: Successes and Failures' (2008) 23 *SA Public Law* 87–110; LJ Kotzé 'Improving Unsustainable Environmental Governance in South Africa: The Case for Holistic Governance' (2006) 9(1) *PER* 75–110; and C Bosman, LJ Kotzé & W Du Plessis 'The Failure of the Constitution to Ensure Integrated Environmental Management from a Co-operative Governance Perspective' (2004) 19 *SA Public Law* 412–14.

152 Weston & Bach (note 29 above) 80.

153 Ibid 14.

154 Until it was disbanded in 2007, the Israeli Knesset Commission for Future Generations (established in 2001) gave opinions about proposed laws' impacts on the interests of future generations and it had the authority to demand information from any governmental entity, including ministries, public companies, state institutions and government corporations, for example. See the discussion in Weston & Bach (ibid) 52.

155 Both of these institutions are provided for in chapter 9 of the Constitution.

156 See in this regard A Du Plessis & R Alberts 'Cooperative Environmental Governance: At the Coalface of Sustainable Infrastructure Development in South Africa' (2014) 29 *SA Public Law* 441–68.

and distribution, the introduction of carbon tax and/or the protection of highly valuable agricultural land, for example.

In general, the enormous advance in technical knowledge worldwide has not been complemented by an increased sense of inter-generational responsibility and far-sightedness amongst authorities. This is a result of the fact that democratic dispensations are founded on a structural governance problem, namely the 'glorification of the present and neglect for the future'.[157] Today's decision-makers will not be held responsible for the long-term effects of producing atomic waste, exploiting resources or destroying peoples' 'sense of place'. And the voice of the unborn cannot be directly incorporated into democratic structures and processes. This is a fundamental dilemma of democracy and leads ultimately to a preference for the present, and thus to a structural disadvantage for future generations. A cultural transformation and change in thinking across all sectors of society (governments and those who vote for them) is required if a paradigm shift to public trusteeship is to be accomplished and to endure.

Public trusteeship must become the focus of multiple institutional government initiatives including short- and long-term initiatives directed at climate-resilient development.[158] It is accordingly not implied that we should do away with present systems of democratic governance. Rather than assigning blame to the structure(s) of liberal democracy, South Africa must continue to pursue ways to improve existing democracy to cope with potential generational injustices. Joerg Tremmel and Martin Viehöver argue that this is possible through the long-term creation of a new system of future ethics which is constitutionally embedded, and through institutional measures (for example the establishment of an ombudsman institution) to protect the rights of those who are unable to vote in the present.[159] A crucial part of these institutional measures would be to facilitate proper access to information, access to the courts, and effective participation in decision-making processes for those who act as proxies for future generations (such as parents, environmental and human rights non-governmental organisations (NGOs) and an ombudsman institution).

With reference to the conflict between protecting the interests of the unborn and taking immediate care of the present poor, Christopher Stone[160] has asked that '(i)f we recognize a layer of responsibilities to some beings who live beyond our own moral community, how do we balance the claims of strangers in space with those strangers in time?'. His profound answer is 'both at once' – we should seek ways in which to conserve the environment for future generations whilst increasing and redistributing wealth congruently.[161] South African law and governance must not only balance social, environmental

157 Tremmel & Viehöver (note 136 above) 12. For a critique on the environmental authorisation process for large-scale projects in South Africa, for example, see Du Plessis & Alberts (ibid).

158 Weston & Bach (note 29 above) 79.

159 Tremmel & Viehöver (note 136 above) 12.

160 Stone (note 1 above) 68.

161 Ibid 76.

and economic interests to secure the well-being of the present generation, but should also balance the weal of future generations with that of present generations when making contemporary decisions – including decisions about how best to respond to climate change.

The reality is that while it is important to focus on future generations, it is also essential in post-apartheid South Africa and in the pursuit of transformative intra-generational justice to address the equity concerns of communities within the present generation.[162] As an ecosystem deteriorates, poor communities often suffer most, because they cannot afford to take the measures necessary to control or adapt to the degradation.[163] These communities have neither the capacity nor the desire to fulfil inter-generational obligations when they cannot even attain basic human needs from the earth today.[164] In this context, it has been held that in most cases one of the best ways to promote the welfare of future generations is to work to alleviate present poverty and deprivation.[165] This fundamental link between poverty and environmental protection has not yet been fully mainstreamed in environmental law and governance.[166] One reason may be that for long, the future of South Africa was the year 1994 and catching-up with backlogs and making transformation work has since become the focus of the today and tomorrow of many. The White Paper, however, shows much potential in this respect in that it refers to poverty alleviation several times and provides concrete initiatives to ensure that the impacts of climate change do not exacerbate poverty. These initiatives include a Water for Growth and Development Framework, which has a 2030 planning horizon and which aims to balance the critical role of water in terms both of providing people with access to water and of economic development – be it for domestic, industrial, mining, agricultural or forestry use.[167]

## V Conclusion

If we accept the best science on climate change, a moral dilemma confronts us with great urgency and huge amounts of uncertainty.[168] All over the world the predicted and pervasive impacts of climate change on human civilisation call issues of legacy into question.[169] State governments must, therefore, explore, evaluate and further develop legal and policy instruments that articulate the obligations that the present generation has towards future generations. The role of government and government processes in managing the present

162 See W Du Plessis & A Du Plessis 'Striking the Sustainability Challenge in South Africa' in M Faure & W Du Plessis (eds) *The Balancing of Interests in Environmental Law in Africa* (2011) 413–58.

163 Brown Weiss (note 44 above) 5.

164 Ibid.

165 C Wolf 'Poverty, Fertility, and Opportunity: Factors for Inter-generationally Sustainable Development' (2002) 3 *Generational Justice* 1, 15.

166 See the discussion in A Du Plessis 'South Africa's Constitutional Environmental Right (Generously) Interpreted: What is in it for Poverty?' (2001) 27 *SAJHR* 279–307.

167 White Paper (note 20 above).

168 Smit & Philifosova (note 58 above) 899.

169 Weston & Bach (note 29 above) 60.

generation's collective duty towards future generations is significant, and law and policy-making are a key part thereof. While there is nothing new about uncertainty stitched into environmental threats, the scale of climate change and its countless and complex repercussions are unprecedented – in South Africa, as everywhere else. It is impossible to think that the government responses to these challenges can be successful without effective law and policy action that takes into account both the present and future generations' environmental interests.[170] Fortunately, various principles and legal constructs such as public trusteeship are already illuminating authorities' way. And so is the direction from critical thinkers such as Stone,[171] who is of the view that:

> the best insurance we can write for future persons has to include, as a central element, enhancing their flexibility to deal with risks presently unforeseen. Fortuitously, this means that if we devote added resources to eliminating many of the problems that bother us – including racism, poverty, nuclear weapons, illiteracy, unrestrained population and excessive nationalism – we will go a long way in helping them. One of the best legacies the existing generation could leave would be, aside from economic prosperity, a more flexible and adaptable set of economic and social institutions.[172]

Governments must seek inter-generational economic prosperity and must set-up and promote institutions and processes that facilitate total adaptive capacity; the ability of all people to adapt to change. Stone alludes to the political and socio-economic external determinants or 'problems' that may have a negative impact on the abilities and capabilities of future generations. The suggestion is that political and socio-economic decisions and decision-making structures in the now may be just as important for the protection of the interests of future generations as future-conscious laws, policies and ombudsman-institutions, for example. This supports the view that the vulnerability of future generations may be countered by their capacity to adapt to change. The determinants of which were highlighted above.

As part of the evaluation in this article of some of the perspectives on the vulnerability and deferred exposure of unborn future generations, generally, the usefulness of existing legal constructs such as the public trusteeship model and a value-based and principled approach to protect future generations' environmental interests were discussed. With respect to climate change, its predicted future consequences and the South African scenario, it was considered how significant a government response to climate change which explicitly caters for representation and protection of the environmental interests of future generations may be. It was shown that the country possesses a good mix of constitutional provisions, legal instruments and policy objectives to enable the government to adopt and implement Brown Weiss' three principles for inter-generational integrity, namely the

170 Ibid.

171 Stone (note 1 above) 75.

172 Ibid 79. B Barry 'Sustainability and Intergenerational Justice' in Dobson (note 5 above) 118, 123 holds in similar vein that 'the root idea of sustainability is the conservation of what matters for future generations, its definition is inescapably bound up with one's conception of what matters'. See also Tremmel (note 3 above) 201–20.

conservation of options, the conservation of quality, and the conservation of access. However, the government's respect for, and protection and promotion of these legal instruments and the actual implementation of policy objectives are of paramount importance. It may for this reason be necessary to invest in a new and dedicated watchdog institution or to adapt the mandate of existing institutions such as the SAHRC to mainstream and monitor future generation-thinking and action in critical government decisions and processes. An ombudsman for future generations or a similar body would typically be required to represent future generations in decisions such as government's recent approval of new large-scale, coal-fired power plants (for example, the Medupi and Kusile Power Plants in some of South Africa's agricultural hotspots) and the decision to proceed with highly contentious hydrological fracturing in the water-scarce Karoo.

The need remains for extensive interdisciplinary research on the environmental and other interests of future generations and sensible and sustainable governmental, transnational and global measures to protect these interests. Such research can only benefit from the fact that today 'scientific inquiry allows society to understand the long-term impacts of our actions, while technological advancement means we are in a position to mitigate harmful consequences, if we so choose'.[173] The time is arguably also right for jurisprudence that deals with the concept of public trusteeship as we need judicial confirmation of how the concept has rudimentary foundations in constitutional law and in our constitutional values. Judicial engagement with the concept of public trusteeship is thus necessary to strengthen the concept in our constitutional legal order – specifically in relation to the rights of future generations.

The difficulty with protecting natural resources and securing climate-resilient development lies in the temporal remoteness and indeterminacy of existing South Africans' descendants – their present facelessness and namelessness.[174] The country's long-term planning with respect to climate-resilient development stops in the year 2061. In that year I am expected to turn 83. However, the number of children and grandchildren I will have at that point is unknown. Still, whomever these human beings turn out to be, they will have interests that the government as the public trustee can affect right now, for better or for worse.

173 UN Secretary-General's Report (note 33 above) para 4.
174 Feinberg (note 67 above) 183.