

# CHAPTER 6

## THE LINK BETWEEN ENVIRONMENTAL POLLUTION AND POVERTY IN AFRICA

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### **Abstract**

*This chapter examines the meaning of environmental pollution, the causal relationship between poverty and environmental degradation and the ways in which environmental pollution exacerbates poverty. The chapter also discusses some of the laws in place in Africa for the protection of the environment and environmental pollution in Africa using some specific case studies. It further addresses some of the challenges of addressing environmental pollution in Africa and proffers solutions to the problems. The chapter concludes by calling on African governments to take collective action to protect the environment in order to reduce the poverty that continues to damage the environment and puts the people at risk.*

### **1 Introduction**

One of the most pressing challenges in Africa is the extreme high levels of poverty and deprivation caused by environmental events. This poverty is largely caused by the interaction between humans and the environment in order to satisfy their daily needs. These human-environment relations result in damage to the environment, thereby diminishing the potential for sustainable development. It is important to note that the environment plays a crucial role in people's physical, mental and social well-being.<sup>1</sup> People's personal well-being is strongly related to the environment, particularly as it concerns their health, earning capacity, security, physical ambiance and decent housing. The food the African people eat, the air they breathe, and the water they use depends on how the environment is managed and the resources therein are exploited. A situation where multinational corporations and poor communities pollute and damage the natural resources in the world, coupled with the absence of equitable and balanced stewardship of the environment governed by ecological norms, makes the elimination of poverty a pipe dream.<sup>2</sup> Over the past

1 European Environment Agency ch 5 'Environment, health and quality of life' <http://www.eea.europa.eu/soer/synthesis/synthesis/chapter5.xhtml> (accessed 7 March 2016).

2 K Mwambazambi 'The complexity of environmental protection in sub-Saharan Africa and reduction of poverty' (2011) 4 *Ethiopian Journal of Environmental Studies and Management* 17 18.

30 years the African environment has continued to deteriorate.<sup>3</sup> While thousands of African people have already died from starvation caused by environmental degradation, millions more people currently are 'faced with imminent disaster because their water sources have run dry, their land has become so denuded they cannot rear livestock, and the soil so poor they cannot cultivate it'.<sup>4</sup>

The African continent is rich in natural resources. According to the *International Energy Agency (IEA)* report of 2007, 12,7 per cent of the total world crude oil production emanated from Africa – much of it in Nigeria in West Africa as well as Libya and Algeria in North Africa, with the region producing 6,8 per cent of the total world gas output.<sup>5</sup> Also, nearly 5 per cent of the world's total coal production occurs in Africa, largely South Africa, with the entire region having 9 per cent of total world uranium deposits.<sup>6</sup> Unfortunately, these resources have not translated to wealth in Africa, but rather to what may be regarded as a resource curse.<sup>7</sup> The richness of its biological and mineral resources notwithstanding, the region remains poor. Food insecurity threatens millions each year as environmental degradation threatens agricultural and pastoral lands, watersheds, surface and groundwater sources, and the rich forests and savannahs of Africa.<sup>8</sup>

The emphasis on pollution control was seen as incompatible with the broader goals of economic development and poverty alleviation. This dilemma was eloquently expressed by Indira Gandhi, then Prime Minister of India, during the Stockholm Conference on Environment and Development in 1972, when she asked:<sup>9</sup>

Are not poverty and need the greatest polluters? How can we speak to those who live in villages and in slums about keeping the oceans, the rivers and the air clean when their own lives are contaminated at source? The environment cannot be improved in conditions of poverty. Nor can poverty be eradicated without the use of science and technology.

Notwithstanding this general perception, pollution cannot be ignored, particularly in developing countries.

In this chapter I examine the causal relationship between poverty

3 Conserve Africa 'Environment and poverty', <http://www.conserveafrica.org.uk/sustainable-development-and-local-communities-in-africa/environment-and-poverty-in-africa/> (accessed 7 March 2016).

4 As above.

5 Venro Project 'Rethinking biomass energy in sub-Sahara Africa' *Prospects for Africa – Europe's Policies* (2009) 5.

6 As above.

7 See generally T Lawson-Remer & J Greenstein 'Beating the resource curse in Africa: A global effort' (2012) 3 *Africa in Fact – The Journal of Good Governance Africa* 21-24; S Jones 'Sub-Saharan Africa and the "resource curse": Limitations of the conventional wisdom' 2008 Danish Institute for International Studies (DIIS) Working Paper 2008/14, Copenhagen, Denmark.

8 UNEP *Africa environment tracking: Issues and developments* (2006) 1.

9 Quoted in A Hayes & MV Nadkarni (eds) *Poverty, environment and development: Studies of four countries in the Asia Pacific region* (2001) 46 (as reproduced in A Rosencranz et al *Environmental law and policy in India: Cases, materials and studies* (1991)) 39.

and environmental degradation and the ways in which environmental pollution exacerbates poverty. The chapter also discusses the legal framework in place in Africa for the protection of the environment and environmental pollution in Africa using some specific case studies. It further considers some of the challenges of addressing environmental pollution in Africa and suggests solutions to the problems. The chapter concludes by calling on African governments to take collective action to protect the environment in order to reduce the poverty that continues to damage the environment and puts the people at risk.

## 2 Legal framework for the protection of the environment in Africa

The African Convention on the Conservation of Nature and Natural Resources was adopted by the defunct Organization of African Unity (OAU) on 15 September 1968 in Algiers, Algeria. The Convention declares that the

Enforcement of these legal instruments is vital to the protection of the environment in Africa, which in turn, could give zest to the quest to achieve poverty reduction initiatives ... in the region. This enquiry starts with a discussion of the regional attempts to address environmental concerns in Africa.<sup>10</sup>

The request to revise and update the 1968 Algiers Convention was made by two governments, those of Nigeria and Cameroon. The request was aimed at addressing the weaknesses of the original Algiers Convention, among which are 'its failure to provide the administrative, legal, institutional and financial foundations for its implementation and the pragmatic means to honor the international law principle of *pacta sunt servanda*'.<sup>11</sup> The Revised African Convention on the Conservation of Nature and Natural Resources was finally adopted by the second ordinary session of the Assembly of the African Union (AU) in Maputo, Mozambique, on 11 July 2003. The Convention places an obligation on African countries to recognise and enforce the conservation of the environment as a common goal<sup>12</sup> and to 'prevent damage that could affect human health or natural resource in another state by the discharge of pollutants'.<sup>13</sup> Article VI(3)(c) enjoins member states to ensure that 'mining and the disposal of wastes do not result in erosion, pollution, or any other form of land degradation'. To this end, the Convention requires measures to be taken to control pollution and

10 Quoted in Mwambazambi (n 2) 18.

11 Report of the Study on the Development of Strategy to Guide the Promotion of the Ratification of the Revised African Convention on the Conservation of Nature and Natural Resources (Maputo Convention) AMCEN/14/REF/8-E 2012. *Pacta sunt servanda* is a Latin term meaning 'agreements must be kept'. It is a principle of international law which is to the effect that international treaties should be upheld by all the signatories.

12 See FJ Terblanche 'A legal framework for the transboundary movement of hazardous waste in South Africa and Lesotho' LLM dissertation, North-West University, 2007.

13 Art VII(1)(b).

water-borne diseases and to ensure that people have access to a sufficient and continuous supply of water.

Also important is the African Charter on Human and Peoples' Rights (African Charter). This was the first binding regional instrument to expressly provide for a substantive environmental right as evident in the provisions of article 24 of the Charter which provide that 'all people shall have the right to a general satisfactory environment favourable to their development'. In other words, the Charter stressed the need to promote a quality environment for African people. As noted by Amechi, the inclusion of this right in the Charter 'constitutes an acknowledgment by its framers of the importance of a healthy environment to Africa's socio-economic development as well as the realisation of other human rights in Africa'.<sup>14</sup>

Improperly-handled environmental pollution poses significant risks to the environment on which the present and future generations rely for the resources needed for survival. The cost of restoring the environment impacted by pollution can be very high, and the process can take many years to complete; and where the community's water supply and soils that are used for agriculture or pasture are impacted, it diminishes the economic benefits derived from such land.<sup>15</sup>

The United Nations (UN) Committee on Economic, Social and Cultural Rights (ESCR Committee) has also explained that the right to health contained in article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) extends to the underlying determinants of health, including 'a healthy environment'.<sup>16</sup> The ESCR Committee has noted that the obligation of states under article 12(2)(b) extends to 'the prevention and reduction of the population's exposure to harmful substances such as ... harmful chemicals or other detrimental environmental conditions that directly or indirectly impact upon human health'.<sup>17</sup> Thus, the failure by governments to take necessary measures to prevent third parties from polluting or contaminating food, water supplies and air, and/or a failure to enact or enforce laws may constitute violations of the rights to health,<sup>18</sup> water and adequate food<sup>19</sup> contained in ICESCR.<sup>20</sup> Many African countries are parties to the Covenant.

There are also several declarations, resolutions and policy documents that the AU has adopted in an effort to protect and conserve the

14 EP Amechi 'Enhancing environmental protection and socio-economic development in Africa: A fresh look at the right to a general satisfactory environment under the African Charter on Human and Peoples' Rights' (2009) 5 *Law, Environment and Development Journal* 62.

15 UNEP (Basel Convention) *Our sustainable future: The role of the Basel Convention* UNEP Geneva, Switzerland.

16 ESCR Committee General Comment 14: The Right to the Highest Attainable Standard of Health (art 12 of the International Covenant on Economic, Social and Cultural Rights) UN Doc E/C.12/2000/4 11 August 2000 para 4.

17 General Comment 14 (n 16) para 15.

18 Art 12.

19 Art 11.

20 Amnesty International *Petroleum, pollution and poverty in the Niger Delta* (2009) 12.

environment in Africa. One of these is the New Partnership for Africa's Development (NEPAD) and its environmental action plan (NEPAD-EAP) which identified rising poverty levels and deepening environmental degradation as the two major inter-related factors that presently stand as barriers to the achievement of sustainable development in Africa.<sup>21</sup> The overall objective of the Action Plan adopted by the AU in 2003 was to complement the relevant African processes with a view to addressing environmental challenges in Africa, in order to contribute to the achievement of economic growth and poverty eradication.<sup>22</sup>

Other important declarations that are relevant to African nations for the protection of the environment from pollution include the Stockholm Declaration. Principle 1 of the Declaration provides that '[m]an has the fundamental right to freedom, equality, and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations'.<sup>23</sup> Principles 2, 3, 4 and 5 all refer to our responsibility to ensure that environmental resources and biodiversity are maintained for present and future generations. Principle 6 makes direct reference to the need to control the discharge of toxic substances and other substances as well as the release of heat, in quantities or concentrations that will exceed the capacity of the environment to absorb; while Principle 7 stresses the need for governments to 'take all possible steps' to prevent pollution of the seas by substances hazardous to the marine environment or human health. It requires states to prevent or abate transboundary pollution that could cause substantial harm.

Also worthy of mention is the 1992 UN Conference on Environment and Development (Rio Conference) which recognises both the relationship between poverty and environmental degradation in underdeveloped countries. Principle 1 provides that '[h]uman beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature'.<sup>24</sup> More importantly, Principle 14 stresses that '[s]tates should effectively cooperate to discourage or prevent the relocation and transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health'.

At the regional level, the African Ministerial Conference was established on the Environment in December 1985 to ensure the promotion of regional cooperation towards addressing environmental concerns.

21 New Partnership for Africa's Development (NEPAD) *Action Plan of the Environment Initiative of the New Partnership for Africa's Development* (2003) paras 1 & 3.

22 Paras 138 & 142 NEPAD.

23 United Nations Conference on the Human Environment, Stockholm, Sweden 5-16 June 1972, Report of the United Nations Conference on the Human Environment (Stockholm Declaration) UN Doc A/CONF.48/14/REV.1 (1973).

24 United Nations Conference on Environment and Development, Rio de Janeiro, South America, 3-14 June 1992, Rio Declaration on Environment and Development, UN Doc A/CONF.151/26/REV.1, Annex I (12 August 1992).

The Conference, which is an inter-governmental body on environment and development, presently serves as the main policy-making forum that addresses and discusses Africa's environmental problems.<sup>25</sup> It has adopted several declarations relating to the promotion of environmental protection and sustainable development in Africa in order to further its objectives.<sup>26</sup> Unfortunately, in practice many African political leaders fail to respect these decisions and resolutions, and pay little attention to issues of environmental protection.

It is important to note that because most African nations are parties to the above-mentioned treaties and declarations, the government of each country is required to ensure that the environment is not polluted or degraded in such a way that it poses a threat to human rights, including the right to health and life of communities who may be exposed to it, thereby exacerbating the poverty situation of the people. Notwithstanding the adoption of these international instruments, some African countries continue to experience pollution in various forms caused by the people themselves and the multi-national corporations (MNCs) operating in most of these countries, thereby deepening the poverty situation of the host communities.<sup>27</sup>

### 3 Nature of environmental pollution in Africa

Over 70 per cent of Africa's population is rural and depends heavily on the land and the natural environment for their livelihood and well-being. Therefore, the way in which environmental goods and services are used will have serious consequences for alleviating poverty, improving human well-being, and ensuring sustained economic development.<sup>28</sup> The exploitation of environmental resources in an unsustainable manner can result in environmental degradation which in turn impoverishes the people. Conversely, the clamour for the conservation of the environment without providing for alternative means of livelihood for the vulnerable groups that solely depend on exploiting the environment will result in further impoverishment.<sup>29</sup> As a result of serious commitment to and attention given by industrialised nations to environmental pollution, industrial pollution now is of little concern to developed nations. The industrialised nations can afford to enforce high standards of environmental protection. This is not the case in developing countries, including African countries, as pollution continues to be a major source of illness, poverty and, ultimately, death. Indeed, across the developing nations pollution indiscriminately

25 Mwambazambi (n 2) 21.

26 K Mbaki *Afrique Centrale et la question environnementale* (2008).

27 See *Social and Economic Rights Action Centre (SERAC) & Another v Nigeria* (2001) AHRLR 60 (ACHPR 2001).

28 Kulindwa K; Kameri-Mbote P, Mohamed-Katerere J & Chenje M 'The human dimension' in *Africa Environment Outlook 2: Our Environment, Our Wealth* chapter 1 2.

29 EN Nwagbara et al 'Poverty, environmental degradation and sustainable development: A discourse' (2012) 12 *Global Journal of Human Social Science Sociology, Economics and Political Science* 1.

kills thousands of people, shortens lives, destroys children's growth and development, and results in chronic illnesses that impair the economic development of the country.<sup>30</sup>

### 3.1 Environmental pollution in Africa: Case studies of some countries

Environmental degradation has plagued Africa since the colonial era and is being worsened by the 'new globalisation'. The colonialists paid no attention to the ecological damage their policies and activities caused the continent. Following their total control over the various colonies, the imperialists had unreserved power to plunder and despoil Africa's vast economic resources for the benefit of their respective home countries, without showing any concern for sustainability.<sup>31</sup> Unfortunately, globalisation, which was supposed to bring about local development and improve the quality of life of the people, has brought pain, agony, misery and poverty to affected communities. Largely, in virtually all African countries MNCs are routinely granted licences to explore for natural resources without adequate consultation with the local people who own the land where these natural resources are located. This is premised on the ground that these resources belong to the nation as a whole and that the central government is acting as the national custodian to efficiently manage the revenue derived from exploitation for the benefit of the whole country.<sup>32</sup> Sadly, as events in the Nigerian Niger Delta and the Anglophone region of Cameroon have illustrated, the royalties from oil rarely are used to develop the affected communities. Rather, the communities are left to bear the pangs arising from environmental pollution.

#### 3.1.1 South Africa

Nearly two decades after the apartheid era, South Africa has made significant progress in developing the legal framework required to prevent environmental pollution, and to act against polluters. Section 24 of the South African Constitution provides that everyone has a right to an environment that is not harmful to their health and well-being; and 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. In addition, South Africa has promulgated legislation to protect or enhance

30 Blacksmith Institute *The world's worst polluted places: The top ten* (2006) 3.

31 JM Mbaku 'The environment and the new globalisation in Africa' in GK Kieh (ed) *Africa and the new globalisation* (2008) 181-182.

32 Mbaku (n 31) 141.

environmental quality, such as the National Environmental Management and Air Quality Acts. The country also is a signatory to a wide range of international agreements and protocols, including the United Nations Framework Convention on Climate Change, the Montreal Protocol (ozone depletion), and the Basel Convention dealing with the control of trans-boundary movement of hazardous waste.<sup>33</sup>

Notwithstanding the above, many communities in South Africa continue to face exposure to environmental pollution such as polluted air or land in the form of poor air quality or contaminated land, for example, from industrial and other sources.<sup>34</sup> The country has the world's fifth largest mining sector, and this sector contributed 8 per cent of its gross domestic product (GDP) in 2017.<sup>35</sup> South Africa's mining sector significantly impacts on the environmental conditions. Pollution from mining activities perhaps is the most direct cause of ground water pollution in South Africa and, further, small waste coal dumps cause both pollution and safety problems as waste coal may spontaneously ignite.<sup>36</sup> In 2015 per capita emissions in South Africa stood at 9,5 tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e), around half of US per capita emissions but well over the world average of 6.8tCO<sub>2</sub>e.<sup>37</sup> This makes it the biggest source of emissions in Africa, and the world's fourteenth largest emitter of greenhouse gases (GHGs) due to its heavy reliance on coal.<sup>38</sup> Air pollution in South Africa is matched by ground and water pollution. The mining companies have devised ways of circumventing resistance by the community. More often than not, mining companies are situated close to poor communities<sup>39</sup> and often are granted licences to operate by these communities due to false promises of employment and bursaries for tertiary education. These communities hardly see these benefits. Unfortunately, these communities have continued to bear the consequences of these mining activities. One of these consequences is the contamination of ground water and rivers with negative effects on livestock, the ecosystem and people's access to water. This was the situation for residents of Krugersdorp in Gauteng Province, where ground water accessed via boreholes was polluted in 2005,

33 A Mathee 'Environment and health in South Africa: Gains, losses, and opportunities' (2011) 32 *Journal of Public Health Policy* S37-S43 S41.

34 Mathee (n 33) S41.

35 R McSweeney & J Timperley 'The Carbon Brief profile: South Africa' *Carbon Brief* 15 October 2018, <https://www.carbonbrief.org/the-carbon-brief-profile-south-africa> (accessed 7 July 2019).

36 Energy Information Administration, South Africa: Environmental Issues, [http://schoolnet.org.za/CoL/ACE/course/ukzncore2a/documents/core2a.south\\_africa.htm](http://schoolnet.org.za/CoL/ACE/course/ukzncore2a/documents/core2a.south_africa.htm) (accessed 7 March 2016).

37 McSweeney & Timperley (n 35).

38 As above. Indeed, South Africa is the world's seventh largest producer of coal.

39 Eskom's coal-fired power plant fleet is located in the vicinity of the highly-populated region of Gauteng, with several plants located within 100km of the region. See L Myllyvirta 'Air quality and health impacts of Eskom's planned non-compliance with South African Minimum Emission Standards' *Greenpeace* 19 March 2019, <https://storage.googleapis.com/planet4-africa-stateless/2019/03/8a84b69a-air-quality-and-health-impacts-of-eskoms-non-compliance.pdf> (accessed 7 July 2019).



including by sulphurous compounds and uranium.<sup>40</sup> There are reports of skin problems resulting from bathing or washing clothes in acidic water by borehole users, with a loss of biodiversity in the affected communities.<sup>41</sup> The Witbank area has seen more than a century of sustained coal mining with many consequences. As a result of pollution from mining operations, the water quality in the Middelburg dam is said to no longer be fit for human consumption for 40 per cent of the time. This will continue to deteriorate for the foreseeable future, and the Witbank dam is likely to experience a similar fate.<sup>42</sup> The future is bleak for Witbank coal fields once the coal reserves have been fully exploited and mining has ceased. It is predicted that, perhaps, in a century from now

all of the mines will be flooded and leaking acid water. In their upper reaches, the rivers will run red, and both river and ground water will be undrinkable. Aquatic animal life will be minimal, and only very hardy aquatic vegetation will survive. The rivers will also be choked with sediment. Extensive areas of the region will have become devoid of vegetation due to acidification of the soil, setting in motion severe erosion which will strip the soil cover and eat into the backfill of the old opencast workings. The eroded sediment will choke the rivers and all dams will be filled with sediment. In short, the region could become a total wasteland.<sup>43</sup>

After mining, the surface of the mined area generally is rehabilitated and, in principle, can be used for agriculture. However, the ground water aquifers would have been disturbed, and the ground water severely polluted, so that it will no longer be possible to obtain potable water from boreholes. Drinking water for livestock and humans in such areas therefore will have to be brought in from elsewhere. Streams draining these rehabilitated areas will also be unusable due to seepage of polluted ground water.<sup>44</sup>

Air quality legislation, called Minimum Emission Standards (MES) which came into effect in terms of section 21 of the National Environment Management: Air Quality Act<sup>45</sup> on 1 April 2010 was put in place in South Africa to protect people's lives as, among others, it mandates the Minister for Environmental Affairs or the member of the executive council (MEC) by notice in the Gazette to publish a list of activities that result in atmospheric emissions and which the Minister or the MEC of a province responsible for air quality management in the province reasonably believes have or may have a significant detrimental effect on the environment, including health, social conditions, and so forth. The MES were subsequently amended and the amendments were promulgated on

40 Africa Groundwater Atlas 'Case study: Acid mine drainage in South Africa' *British Geological Survey* 2019, [http://earthwise.bgs.ac.uk/index.php/Case\\_Study\\_Acid\\_Mine\\_Drainage\\_South\\_Africa](http://earthwise.bgs.ac.uk/index.php/Case_Study_Acid_Mine_Drainage_South_Africa) (accessed 7 July 2019).

41 As above.

42 TS McCarthy & K Pretorius 'Coal mining on the Highveld and its implications for future water quality in the Vaal River system' International Mine Water Conference Proceedings held in Pretoria, South Africa 19-23 October 2009 64, [http://www.imwa.info/\\_imwa\\_2009/IMWA2009\\_McCarthy.pdf](http://www.imwa.info/_imwa_2009/IMWA2009_McCarthy.pdf) (accessed 7 March 2016).

43 As above.

44 As above.

45 Act 39 of 2004.

22 November 2013,<sup>46</sup> replacing the 2010 regulations. These standards which were expected to come into effect in 1 April 2015 and for 'new plant' by 1 April 2020 attempt to enforce the maximum levels of emission standards that industry can release. However, South Africa's air quality legislation aimed at reducing pollution and the attendant health consequences has been under serious assault from the major polluters. Eskom has made an application for the postponements and suspensions of the company from complying with air quality legislation for 16 of its plants. It argued that the costs of complying with the law outweigh the benefits,<sup>47</sup> as it was estimated that it would cost the company R200 billion to ensure compliance at all its plants, which Eskom it said cannot afford. Eskom has also asked that Medupi, which is one of the world's largest coal power stations and its newest mega-plant, be given until 2027 to comply. It said in its application that '[i]t is not practically feasible or beneficial to South Africa to fully comply with the minimal emission standards'.<sup>48</sup> Eskom's failure to comply with the emission standards has serious air quality and health implications. Explaining the avoidable health impacts if Eskom's requests for non-compliance with the MES are fully granted, Greenpeace estimated that 16 000 premature deaths (5 600 premature deaths due to the increased risk of lower respiratory infections, including in young children; 1 500 premature deaths due to the increased risk of stroke; 1 500 premature deaths due to the increased risk of death from diabetes; 2 300 premature deaths due to the increased risk of chronic obstructive pulmonary disease; 3 000 premature deaths due to the increased risk of ischaemic heart disease; and 1 900 premature deaths due to the increased risk of lung cancer associated with chronic PM2.5 exposure; as well as 500 premature deaths due to the increased risk of death associated with acute NO<sub>2</sub> exposure) could be avoided by requiring full compliance by Eskom with the MES, representing a 40 per cent reduction in the health impact of air pollution from Eskom's power stations.<sup>49</sup> Eskom estimated that emissions from its coal-fired power stations caused 333 deaths per year.<sup>50</sup> However, data from Greenpeace International estimated that Eskom's fleet of coal stations caused the deaths of between 2 200 and 2 700 people per year because of the gases released, such as mercury and sulphur dioxide.<sup>51</sup> Notwithstanding the conflicting figures, it is clear that

46 *Government Gazette* 37054; L Burger et al 'Atmospheric impact report: Sasol Infracem, a division of Sasol Chemical Industries Limited' Report 13STL01SB September 2014 i.

47 M Steele 'Africa: South Africa's pollution laws under full assault' *AllAfrica* 7 October 2014, <http://allafrica.com/stories/201410071922.html?viewall=1> (accessed 7 March 2016).

48 *Mail & Guardian* 'Air pollution kills millions annually, says WHO' 25 March 2014, <http://mg.co.za/article/2014-03-25-7-million-killed-by-air-pollution-annually> (accessed 7 March 2016).

49 Myllyvirta (n 39).

50 M Gosling 'Eskom estimates 333 people likely to die every year from coal power station emissions' *fin24*, <https://www.fin24.com/Economy/Eskom/eskom-estimates-333-people-likely-to-die-every-year-from-coal-power-station-emissions-20181122> (accessed 7 July 2019).

51 *Mail & Guardian* 'Eskom spurns air quality controls' 14 March 2014, <http://mg.co.za/article/2014-03-13-eskom-spurns-air-quality-controls> (accessed 7 March 2016).

the emissions from Eskom unarguably have serious implications for the health of the people and lead to premature deaths.

In South Africa polluting factories and toxic waste sites are located mostly in poor neighbourhoods, with the result that the poor are made to bear the environmental costs. In a study at the lead mining town of Aggeneys in the Northern Cape province, it was shown that lead poisoning in children was more widespread in the town than in a nearby non-mining town.<sup>52</sup> More polluting is Sasol's coal-to-liquids process. It has been said that those born in Sasolburg's Zamdela township, located immediately downwind of the plant,

are less likely to get work at the plant than newcomers because, having grown up in the bad air of the Vaal Triangle, locals tend to fail the medical test. So it seems that Sasol and its big corporate neighbours rely on the fresh blood of people they have not yet contaminated.<sup>53</sup>

Another area that suffered from the polluting activities of companies in South Africa is the Mpumalanga Highveld with Sasol's second and third plants at Secunda and most of Eskom's power stations. Sasol and Eskom emit approximately two million tonnes of sulphur dioxide and one million tonnes of nitrogen oxides together with a cocktail of volatile organic compounds.<sup>54</sup> Life expectancy in Mpumalanga, South Africa, is 50,3 years for males and 51,6 years for females, as against the national life expectancy of 53,3 for males and 55,2 for females.<sup>55</sup>

Furthermore, South Africa's oil sector negatively impacts on humans and the environment. For instance, the health of the people of the south of Durban in South Africa is negatively impacted since they live in the neighbourhood of Sapref and Engen – two of South Africa's largest oil refineries. Several families live just about 20 metres from the oil refineries. A major health study in the south of Durban found high levels of respiratory ailments compared to other sites and it conservatively estimated the risk of cancer at 250 times the accepted norm,<sup>56</sup> thereby confirming the systemic violation of people's constitutional right 'to an environment that is not harmful to their health or well-being', for economic reasons.

Indoor air pollution is also prevalent in rural areas in South Africa as a result of poverty. The lack of electricity in many homes makes most rural communities of South Africa, approximately three million households, burn fuel wood and coal so as to meet their energy needs. The gathering of fuel wood not only proves unsustainable and contributes to deforestation, but the fuel wood that is frequently burned in enclosed spaces without adequate ventilation can result in harmful levels of pollutants in rural

52 YER von Schirnding et al 'A study of pediatric blood lead levels in a lead mining area in South Africa' (2003) 93 *Environmental Research* 259, cited in Mathee (n 34) S40.

53 D Hallows *Unpacking climate change: Background notes to the catastrophe groundwork* (2013) 69.

54 As above.

55 L McDaid *The health impact of coal groundwork* (2014).

56 Hallows (n 53).

homes, leading to respiratory health problems and other ailments.<sup>57</sup> In Soweto there is excessive smoke pollution owing to the burning of coal and, according to ESKOM, pollution levels in Soweto are 2,5 times higher than anywhere else in South Africa. Medical studies reveal that Soweto's children suffer from asthma and chest colds and take longer to recover from respiratory diseases than do youngsters elsewhere in the country.<sup>58</sup>

In addition, children and women in these communities have to spend several hours a day, which they could have spent on other profitable ventures, collecting wood for cooking, thus further deepening poverty. The daily burden of firewood collection contributes to gender inequality, as it prevents women and girls from spending time at school or being engaged in productive economic activities while at the same time exposing them to a higher risk of sexual violence.<sup>59</sup>

### 3.1.2 Nigeria

Unlike the Constitution of South Africa, the Constitution of the Federal Republic of Nigeria does not have any direct provision for environmental protection or sustainability. Section 20 of the Constitution of the Federal Republic of Nigeria, 1999 provides that '[t]he State shall protect and improve the environment and safeguard the water, air, and land, forest and wildlife of Nigeria'. While this section refers to an environmental objective for the Nigerian state, the fact that it is under the notorious section 6 on fundamental objectives and directive principles of state policy under chapter II of the Constitution subjects the provision to the lame-duck status of non-justiciable.<sup>60</sup> In addition, there are different legislations and policies in place in Nigeria to deal with environmental pollution.

The Niger Delta in Nigeria, which is home to some 31 million people, is one of the 10 most important wetland and coastal marine ecosystems in the world. Yet, the majority of the population in the oil-rich region lives in poverty. This region has been described by the United Nations Development Programme (UNDP) as suffering from 'administrative neglect, crumbling social infrastructure and services, high unemployment, social deprivation, abject poverty, filth and squalor, and endemic conflict'.<sup>61</sup> The entire lives of the people in the region depend upon land and the resources therein. Their subsistence economy is based on land and water resources since

57 Energy Information Administration, South Africa: Environmental Issues, [http://schoolnet.org.za/CoL/ACE/course/ukzncore2a/documents/core2a.south\\_africa.htm](http://schoolnet.org.za/CoL/ACE/course/ukzncore2a/documents/core2a.south_africa.htm) (accessed 7 March 2016).

58 Quoted in M Kidd *Environmental law* (2011) 299.

59 World Bank 'On thin ice: How cutting pollution can slow warming and save lives' Joint Report of the World Bank and the International Cryosphere Climate Initiative, Washington DC, October 2013 55.

60 O Oke-Samuel & O Oluduro 'Re-inventing environmental governance towards effective emission control in South Africa and Nigeria' (2012) 14 *Journal of Sustainable Development in Africa* 194.

61 UNDP *Niger Delta Human Development Report* (2006).

they are predominantly fishers and farmers. Therefore, any adverse impact of pollution on land is bound to affect the social, economic, cultural and spiritual well-being of the people. The entire stage of oil exploration in Nigeria is characterised by pollution, that is, from the point of seismic and exploration activities, through production, to transportation. It 'makes water unsuitable for fishing and render many hectares of land unusable. Brine from oil field contaminates water formations and streams, making them unfit as sources of drinking water.'<sup>62</sup>

Water has been polluted leading to poor access to drinkable water. For instance, the Niger Delta Environmental Survey (NDES) Report (2000) which covered the states of the Niger Delta region, except Cross River State, found that most communities rely on untreated surface water and wells, leading to health problems from waterborne diseases.<sup>63</sup> Many of the cases of illnesses in developing countries are linked to environmental conditions that lead to water contamination. Water pollution leads to reduced water usability and increased water-borne diseases. The increased cost of obtaining clean water, increased water treatment costs, reduced farm production due to decreasing water usability, increased medical costs, thus resulting in decreased incomes.<sup>64</sup> Issues on environmental management therefore are germane to development and to any poverty reduction strategy for the Niger Delta region, where nearly 60 per cent of the population depends on the natural environment for their livelihood.<sup>65</sup>

It is estimated by the World Bank (2005) that Nigeria flares approximately 75 per cent of the gas it produces owing to the lack of a local market and infrastructure. The method of gas flaring by the oil companies operating in the Niger Delta area is the 'open-pipe flare' which has no provision for pollution abatement and is very damaging to the environment.<sup>66</sup> Thus, the flames generate serious environmental problems, including the formation of acid rain, visibility impairment, a negative impact on agriculture and animal life, air quality impairment, and other health challenges. While the exploration and mining activities continue to generate wealth for the nation and the MNCs, it has continued to aggravate the poverty of many. In his study on the impact of gas flaring on the environment, Ibaba disclosed that 'there is about 100 per cent loss in yield of all crops cultivated about 200 metres away from Izombe station (a flare site), 45 per cent loss for about 600 metres away and about 10 per cent loss in yield of crops about one kilometer away from the flare'.<sup>67</sup> The

62 O Ibeanu 'Affluence and affliction: The Niger Delta as a critique of political science in Nigeria' inaugural lecture, University of Nigeria, Nsukka, 20 February 2008 182.

63 Quoted in *Niger Delta Human Development Report* (n 61) 28.

64 D Smith 'Poverty and environmental links: Examples from Africa' UNDP-UNEP Poverty Initiative, Nairobi, Kenya.

65 Smith (n 64) 74.

66 JC Ebegbulem et al 'Oil exploration and poverty in the Niger Delta region of Nigeria: A critical analysis' (2013) 4 *International Journal of Business and Social Science* 279 287 282.

67 S Ibaba *Understanding the Niger Delta crisis* (2001) 28, quoted in Ebegbulem et al (n 66) 282.

flared gas caused the withering away of economic trees such as oil palm trees, cotton trees, and so forth.

Instances of pollution in the Niger Delta region of Nigeria were mentioned by Imobighe: In 1979, a storage facility at the West Niger Delta, Shell-operated Forcados terminal collapsed, and spilled an estimated 560 000 barrels into surrounding land, mangrove swamps and the Atlantic; another major blowout occurred in 1980 which spewed out some 200 000 barrels of crude oil into the Atlantic ocean and destroyed nearly over 840 acres of Niger Delta mangrove; in 1998, a 24-inch crude oil pipeline linking the Idoho offshore platform with the Mobil-operated Qua Ibeo terminal ruptured and spilled an estimated 40 000 barrels of crude into Atlantic ocean, polluting the coastline from Eket to Lagos and beyond the Nigerian Western border to Ghanaian shores, over 960 kilometres away Eromosele (1998); and in 1998 there was the Jesse fire incidence where more than 1 500 lives were lost and several hectares of farmland and plantations were razed by fire.<sup>68</sup> In the Niger Delta, the once fertile ecosystem has become messy as a result of pollution. The environmental pollution arising from the oil exploration activities in the region has destroyed farmlands and fishing grounds, and this seriously affected the traditional occupations of the people such as fishing, farming, lumbering, and so forth. The polluted environment seriously impairs the ability of the people to produce enough to meet their basic needs. If the degradation of cultivated land by environmental pollution continues at the present rate in the Niger Delta, it will seriously reduce the soil fertility and reduce crop yields, thereby negatively impacting on the food security in the country and exacerbating poverty. As observed by Naanen:<sup>69</sup>

To appreciate the social effect on the area of this environmental degradation and land alienation one has to have some idea of the demography and economy of Ogoniland. With a mainly rural population of 500 000 concentrated within 404 square miles of territory, Ogoni's population density is exceptional. The population is densest in the Gokana area, precisely the area where oil exploitation has had the most damaging impact. *The population is historically depended on a peasant farming and fishing economy. The destruction of the aquatic culture and much of the limited farmland through oil spillage has caused grave economic distress. The most conspicuous aspects of life in contemporary Ogoni are poverty, malnutrition and disease. The death rate is high even by the Third World standards.*

As is evident from above, the long-term effects of oil spills on soil will undoubtedly undermine the livelihood of the people and will lead to poverty for rural farmers who rely on the proceeds from sales as income for survival. Unfortunately, despite the several billions of dollars generated from oil exploration by the Nigerian government, the Niger Delta, which

68 MD Imobighe 'Paradox of oil wealth in the Niger-Delta region of Nigeria: How sustainable is it for national development?' (2011) 4 *Journal of Sustainable Development* 160 168 162.

69 B Naanen 'Oil-producing minorities and the restructuring of Nigerian federalism: The case of the ogoni people' (1995) 33 *Journal of Commonwealth and Comparative Politics* 66 (my emphasis).

is the oil and gas-rich wetland and which firmly established Nigeria 'as a major world producer of oil', has encountered mainly the negative effects of this oil exploitation.<sup>70</sup> This has continued to create political tension between the people in the region and the government with regard to the money received not being used to uplift these communities who are in a worse off position because of the source of the money – the oil.

#### 4 Nexus between pollution and poverty

Since the 1970s it has universally been agreed that there is an inextricable link between poverty and environmental degradation. This nexus appears to be a two-way relationship – poverty causes environmental degradation and, in turn, the degradations in environment exacerbate poverty.<sup>71</sup> As noted by Jehan and Umama, environment affects poverty situations in three different ways: 'by providing sources of *livelihoods* to poor people, by affecting their health and by influencing their vulnerability'.<sup>72</sup> Poverty, on the other hand, also affects the environment in several ways: 'by forcing poor people to degrade environment, by encouraging countries to promote economic growth at the expense of environment, and by inducing societies to downgrade environmental concerns, including failing to channel resources to address such concerns'.<sup>73</sup> Similarly, it was observed by the World Commission on Environment and Development<sup>74</sup> that '[p]overty is a major cause and effect of global environmental problems. It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality.' The Commission further noted that '[m]any parts of the world are caught in a vicious downwards spiral: Poor people are forced to overuse environmental resources to survive from day to day, and their impoverishment of their environment further impoverishes them, making their survival ever more difficult and uncertain.'<sup>75</sup> Fabra further is of the view that 'poverty and environmental degradation are often bound together in a mutually reinforcing vicious cycle, and thus human rights abuses related to poverty can be both the cause and effects of environmental problems'.<sup>76</sup>

Conversely, the protection of the environment also helps to achieve

70 See O Oluduro *Oil exploitation and human rights violations in Nigeria's oil producing communities* (2014) 3.

71 A Rahman 'Environment-poverty nexus: A global overview' in A Chakraborty (ed) *Poverty and environment: An introduction* (2006) 40.

72 S Jehan & A Umama 'The environment-poverty nexus' (2003) *Development Policy Journal* 53.

73 Jehan & Umama (n 72).

74 Brundtland Commission 1987.

75 Quoted in T Forsyth & M Leach *Poverty and environment: Priorities for research and policy* (1998) 5.

76 A Fabra 'The intersection of human rights and environmental issues: A review of institutional development at international level' Background paper prepared for Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment, Geneva, Switzerland, 14-16 January 2002, <http://www2.ohchr.org/english/issues/environment/enviro3.htm> (accessed 13 March 2016).

poverty reduction in Africa. This is because the poor in Africa, particularly those living in rural areas, largely depend on the natural resources from their immediate environment for sustenance, the protection of which will help guarantee their means of livelihood. For example, oil pollution remains one of the biggest challenges to the economic survival of the people. It affects their key occupation – fishing and farming – and renders such useless. It contributes to poverty through worsened health and by reducing and/or hindering the productivity of those resources upon which the poor rely, and poverty restricts the poor to acting in ways that are destructive to the environment.<sup>77</sup>

In several ways the poor are more exposed to environmental pollution. They are more vulnerable to pollution in the sense that their locations are often environmentally degraded and also their poverty hinders them from avoiding the impacts of environmental pollution. It was observed by actionAid that villages situated on gold deposits within the Obuasi concession area in Ghana experienced biting poverty – a lack of permanent health facilities and poor social amenities.<sup>78</sup>

The nexus between environmental pollution and poverty is evident from how environmental pollution contributes to poverty and *vice versa*.

#### 4.1 Environmental pollution leads to diversion of labour

Environmental pollution can reduce the labour productivity of the people, notwithstanding that they are healthy. For example, where there is water pollution, this may cause the local inhabitants to spend increasing time finding water from distant neighbouring communities. The time spent looking for water at the expense of other income-generating activities, such as agriculture or socially-beneficial activities, household and child-rearing responsibilities, the pursuit of education or physical rest to preserve the health of women, can result in lower incomes. Environmental degradation in the form of pollution can impact the access to education of children, especially the girl child, who is made to spend more time collecting firewood and fetching water instead of attending school. For example, in Malawi, where more than 90 per cent of households use firewood as their main source of energy, children in communities with a scarcity of fuel wood are 10 to 15 per cent less likely to attend secondary school.<sup>79</sup> Besides, the long distances travelled by women carrying a load of approximately 20 kilograms pose serious long-term health risks for them, including spine and pelvic deformities that can lead to complications during childbirth.<sup>80</sup>

77 SD Mink *Poverty, population and the environment* (1994) 1.

78 ActionAid *Gold rush: The impact of gold mining on poor people in Obuasi in Ghana* (actionAid: Johannesburg, South Africa, 2006) 23.

79 K Kulindwa et al 'The human development' in *Africa Environment Outlook 2: Our environment, our wealth ch 1* 12.

80 WaterAid 'Women's issues' Issue Sheet, November 2009, cited in S Karekzi et al 'Energy, poverty, and development' UNEP 181.



All these factors have serious implications for the well-being of the local inhabitants.

## 4.2 Increased burden of disease in poor countries

Environmental degradation in the form of pollution has serious health implications. Up to one-fifth of the total burden of disease in the developing world – and up to 30 per cent in sub-Saharan Africa – may be associated with environmental risk factors.<sup>81</sup> Studies carried out by UNDP and the Department for International Development (DFID) of the United Kingdom and Northern Ireland showed that about 30 per cent of all African countries' disability-adjusted life year losses are caused by environmental problems,<sup>82</sup> such as land, air and water pollution. It was also estimated that while Africa suffers 84 million disability-adjusted life years as a result of environment-related health problems, including waterborne diseases and indoor air pollution, indoor air pollution is estimated to cause 18 million disability-adjusted life years annually in sub-Saharan Africa or 44 per cent of the global total of indoor air-pollution disability-adjusted life years.<sup>83</sup> A 2012 Global Burden of Disease study found that indoor air pollution kills between 3,5 million and a follow-up study by the World Health Organisation in 2014 increased each year, which is more deaths than those caused by HIV/AIDS (around 1,6 million per year) and malaria (around 627 000), combined.<sup>84</sup> It is the poor, particularly women and children that is mostly affected by environmental health problems caused by a lack of safe water and sanitation, indoor air pollution, among others, all of which affect their ability to rise above poverty. It is the poor that more often fall sick as they live in neighbourhoods where the land, air and water are polluted, that regularly go to hospital for treatment. This not only drives up the health care costs and medication for the nation but further exacerbates poverty among the locals as they have to use their few resources to take care of their health.

## 4.3 Problem of food security

The right to food is closely linked to the dignity of human beings and

81 The International Bank for Reconstruction and Development/The World Bank *Linking poverty reduction and environmental management: Policy challenges and opportunities* (2002) 15.

82 African Ministerial Conference on the Environment 'Managing Africa's natural capital for sustainable development and poverty reduction' 15th session, Hurghada, Egypt, 8-12 September 2014, AMCEN/15/3 para 23.

83 African Ministerial Conference on the Environment (n 76); United Nations Environment Programme (UNEP) 5th Global Environment Outlook Report, Nairobi, Kenya, UNEP (2012).

84 B Plumer 'The deadliest environmental problem today is indoor air pollution: Killing 4 million a year' *Vox* 15 September 2014, <http://www.vox.com/2014/9/15/6150713/the-deadliest-environmental-problem-today-is-indoor-air-pollution> (accessed 13 March 2016).

is imperative for the enjoyment of other rights such as health, work and even life. The right to food is firmly entrenched in international and regional instruments. The Universal Declaration of Human Rights (Universal Declaration) provides that everyone has the right to a standard of living adequate for his or her health and well-being and his or her family, including food.<sup>85</sup> Also, ICESCR recognises that every person has a right to be free from hunger.<sup>86</sup> Similarly, the Universal Declaration on the Eradication of Hunger and Malnutrition is another important step taken by the international community for the protection of the right to food.<sup>87</sup> The African Commission has further stated that the right to food is implicit in the African Charter, in such provisions as the right to life,<sup>88</sup> the right to health<sup>89</sup> and the right to economic, social and cultural development.<sup>90</sup> The ESCR Committee in its General Comment 12 has explained the meaning of the right to food as stated in ICESCR.<sup>91</sup> The right to adequate food is realised when every man, woman and child alone or in community with others has physical and economic access at all times to adequate food or the means for its procurement.<sup>92</sup> States have a core obligation to respect and protect this right and to fulfil and facilitate its enjoyment by ensuring adequate conditions for that purpose. As part of their obligations to protect people's resource base for food, the ESCR Committee has stated that state parties 'should take appropriate steps to ensure that activities of the private business sector and civil society are in conformity with the right to food'.<sup>93</sup> The minimum core of the right to food requires that African governments should not destroy or contaminate food sources and should not allow private parties to destroy or contaminate food sources, thereby preventing people's efforts at feeding themselves.<sup>94</sup> However, the fulfilment of this right in several African countries has been jeopardised by the activities of oil companies and the government due to the negative impacts resulting in environmental pollution. For example, it was reported that large areas of land in Obuasi previously used for cultivation are believed to have been contaminated through gold mining activities and toxic water pollution by Anglo-American's subsidiary, AngloGold Ashanti (AGA) and its predecessor, Ashanti Goldfields Corporation (AGC), thereby undermining poor people's food security and right to food.<sup>95</sup> When oil

85 Art 25 Universal Declaration.

86 Art 11 ICESCR.

87 Adopted on 16 November 1974 by the World Food Conference convened under General Assembly Resolution 3180 (XXVIII) of 17 December 1973; and endorsed by General Assembly Resolution 3348 (XXIX) of 17 December 1974; see KP Poudyal 'The protection of socio-economic rights with special reference to the right to food, right to education and the right to health', [http://www.interights.org/doc/WS2\\_Poudyal\\_final.doc](http://www.interights.org/doc/WS2_Poudyal_final.doc) (accessed 7 March 2016).

88 Art 4 African Charter.

89 Art 16 African Charter.

90 Art 22 African Charter. See *SERAC* (n 27) para 64.

91 ESCR Committee General Comment 12 (1999), art 11 of the International Covenant on Economic, Social and Cultural Rights, E/C.12/1999/5.

92 General Comment 12 (n 91) para 6.

93 General Comment 12 (n 91) para 27.

94 See *SERAC* (n 27) para 65.

95 *actionAid* (n 78) 18.

spills occur on agricultural farmlands, the crops in the ground do not survive as any crop that comes into contact with the oil is destroyed. The oil on the soil results in water-logging, which decreases soil aeration, and decimates soil organisms such as the worms that are necessary for soil fertility and nutrient-rich topsoil formation.<sup>96</sup>

#### 4.4 Right to safe drinking water

Water is important in ensuring the continuance of life, and is closely linked to other fundamental rights. Water is essential for securing livelihoods (the right to gain a living by work); for enjoying certain cultural practices (the right to take part in cultural life); ensuring environmental hygiene (the right to health); to sustain life (the right to life); to produce food (the right to adequate food), and so forth. A failure to fulfil the right to water, in terms of ensuring that there is access to sufficient quantity of safe and clean water may jeopardise the fulfilment of other rights. The ESCR Committee declared that 'the human right to water entitles everyone to sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic uses'.<sup>97</sup> When oil pollution occurs, it leaches into the soil and groundwater in the affected area, which may have a negative impact on the right to safe drinking water, as witnessed in the Niger Delta communities in Nigeria. A spill can cause severe harm to the population dependent on these streams and creeks as a source of their water. It was reported that following the major Texaco spill of 1980 in Nigeria, 180 people died in one community as a result of the pollution.<sup>98</sup> Litigation against the oil companies for compensation in the event of environmental harm includes claims for the deaths of children caused by drinking polluted water.<sup>99</sup>

It is worth noting that African countries face several challenges in addressing environmental pollution. Some of these include a lack of access to justice by the poor because of the costs of appointing a lawyer, procuring expert witnesses and scientific evidence, travel, court fees; a lack of knowledge at the local level regarding the impacts of pollution on human health and the environment; fragmented approach to environmental legislation and/or policies; a lack of adequate policies; a weak institutional framework for environmental protection; and a lack of effective sanctions for pollution and environmental damage.

96 JE Okeagu et al 'The environmental and social impact of petroleum and natural gas exploitation in Nigeria' (2006) 23 *Journal of Third World Studies* 199.

97 ESCR Committee General Comment 15 (2002) The right to water (arts 11 & 12 of ICESCR) 29th session, Geneva, Switzerland, 11-29 November 2002 E/C. 12/2002/11.

98 F Fekumo 'Civil liability for damage caused by oil Pollution' 268, quoted in Human Rights Watch *The price of oil: Corporate responsibility and human rights violations in Nigeria's oil producing communities* (1999) 61.

99 Eg, *SPDC v Chief Caiphas Enoch & 2 Others* (1992) 8 NWLR (Pt 259) 335, in which five children were alleged to have died as a result of drinking oil-contaminated water. See Human Rights Watch (n 98).

## 5 Protecting the environment to fight poverty and achieve the Sustainable Development Goals

The United Nations (UN) General Assembly, all 191 UN member states, in September 2000 developed a Millennium Declaration pledging a ‘new global partnership to reduce extreme poverty’.<sup>100</sup> This Declaration contains eight development goals to be achieved by 2015: goals one (eradicating extreme poverty and hunger); two (achieving universal primary education); three (promoting gender equality and empowering women); four (reducing child mortality); five (improving maternal health); six (combating HIV/AIDS, malaria and other diseases); seven (ensuring environmental sustainability); and eight (developing a global partnership for development).

The Millennium Development Goals (MDGs) expired in 2015. To accelerate progress beyond the MDGs, the Sustainable Development Goals (SDGs) laid the foundations for supporting sustainable global development through 2030 and beyond. Thus, the international community adopted a post-2015 development agenda and came up with a new set of SDGs to replace the expiring MDGs at a UN Summit in September 2015<sup>101</sup> by 193 member states. The overarching goal of the SDGs, as in the case of its predecessor, is to end poverty. The SDGs aimed to build on the foundation laid by the MDGs, desire to complete the unfinished business of the MDGs, and respond to new challenges. In a bid to increase the chances of success of the main goal of SDGs, there are 17 SDGs<sup>102</sup> (with 169 targets) compared to eight MDGs. As part of the measures to end poverty and build global prosperity and sustainability, the SDGs incorporated issues not addressed in the MDGs such as dealing with natural disasters, connecting people to a market economy through better access to infrastructure, reducing the impact of climate change, among

100 Office of the United Nations High Commissioner for Human Rights United Nations Millennium Declaration 8 September 2000, <http://www.ohchr.org/english/law/millennium.htm> (accessed 17 March 2016).

101 International Monetary Fund Factsheet *The IMF and the Millennium Development Goals* 15 April 2015, <https://www.imf.org/external/np/exr/facts/mdg.htm> (accessed 17 March 2016).

102 Goal 1 (End poverty in all its forms everywhere); Goal 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture); Goal 3 (Ensure healthy lives and promote well-being for all at all ages); Goal 6 (Ensure availability and sustainable management of water and sanitation for all) including to improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse globally; Goal 7 (Ensure access to affordable, reliable, sustainable, and modern energy for all); Goal 11 (Make cities and human settlements inclusive, safe, resilient and sustainable); Goal 12 (Ensure sustainable consumption and production patterns); Goal 13 (Take urgent action to combat climate change and its impacts); Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development); Goal 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss).

others, because an integrated agenda is so critical to end poverty.<sup>103</sup>

Land, water and air pollution and proximity to mining, toxic waste sites, among others, affect poor people more in terms of access to natural resources and livelihoods, leading to their further impoverishment and vulnerability. These factors, in particular, adversely affect the achievement of the goal of halving extreme poverty by 2015 which represents the heart of the MDGs.<sup>104</sup> A failure to address pollution in all its ramifications will further exacerbate poverty, which inevitably will slow down the process of achieving the SDGs. If Africa is to achieve the growth rates and a more sustainable future as being proposed by the SDGs, there is a need for policy interventions to tackle the problems of environmental degradation associated with environmental pollution.

## 6 Recommendations

There undoubtedly is an inextricable link between poverty and environmental pollution. As discussed, environmental pollution is both a contributory factor to poverty and the result of poverty. We now discuss some steps African governments can take towards protecting the environment, including reducing poverty-related activities that continue to damage the environment.

### 6.1 Political commitment

In most African countries much progress has been made in building the legal and institutional framework needed to prevent environmental pollution, and to deal with polluters. African leaders must move beyond the mere crafting of environmental laws. Several communities, for example, in South Africa, continue to experience hazards such as polluted air, lead and mercury from industrial and other sources.<sup>105</sup> These exposures could have been avoided if there is a strong political will and institutional capacity on the part of the government to enforce the extant laws and policies aimed at preventing environmental pollution and ensuring a quality environment. African governments must ensure the full implementation of such laws with clear monitoring, reporting and verifiable mechanisms if the continent is to address environmental pollution and other environmental challenges facing the region.<sup>106</sup> For example, Zimbabwe is reported to have comprehensive environmental legislation that covers all the most

103 A Bhattacharya & H Kharas 'Worthy of support, our piece on the Sustainable Development Goals' *The Economist* 8 April 2015, <http://www.economist.com/blogs/freexchange/2015/04/our-piece-sustainable-development-goals> (accessed 17 March 2016).

104 Rahman (n 71).

105 Mathee (n 33) S41.

106 See S Ogalla, quoted in I Banda 'Legislation alone will not address Africa's climate challenges' *Global Issues* 2 June 2014, <http://www.globalissues.org/news/2014/06/02/18768> (accessed 17 March 2017).

important areas relating to environment. Zimbabwe has nearly 20 Acts and almost 40 statutory laws<sup>107</sup> on environmental issues, yet faces serious problem of implementation to meeting its REDD+ commitments, among others.

## 6.2 Promotion of education and information sharing

Given that the lack of education has been linked to environmental damage, the provision of information about the environmental and economic costs of pollution may contribute to attitudinal change. Environmental education about the negative environmental externalities through changes in school curricula, and the use of local media should be part of any long-term strategy towards addressing poverty as a major cause and consequence of environmental degradation. Educational programmes may help increase appreciation for and, indeed, the value attributed to the environment and natural resources which in turn may encourage more environmentally-friendly behaviour.<sup>108</sup> Research done in China and Indonesia suggests that education reduces pollution damage because when a community is better educated, they will be more willing and able to organise the control of polluters.<sup>109</sup> 'Naming and shaming' corporations that generate the most pollution by establishing a website where their names are regularly published will also force the actors to change their behaviour by adopting environmentally-friendly technologies rather than having their image destroyed.

## 6.3 Eliminating poverty

If a population lives in dire poverty, they care less about environmental concerns and do not concern themselves with environmental sustainability. Poverty condemns half of humanity to dependence on polluting household energy practices such as the inefficient burning of solid fuels on an open fire or traditional stoves indoors, creating a dangerous cocktail of hundreds of pollutants.<sup>110</sup> It is estimated that worldwide more than 1,2 billion people still lack access to electricity. This includes approximately 550 million people in Africa, and the number of people without access to energy in sub-Saharan Africa is projected to rise to 90 to 100 million

107 UNFCCC 'Environmental legislation in Zimbabwe', <http://unfccc.int/resource/ccsites/zimbab/legislat/legislat.htm> (accessed 17 March 2016).

108 United Nations Environment Programme (UNEP) *Africa environment outlook. Policy analysis guidelines for integrated environmental assessment and reporting (UNEP: Nairobi, Kenya)* 27.

109 S Dasgupta et al 'Where is the poverty-environment nexus? Evidence from Cambodia, Lao PDR, and Vietnam' (2005) 33 *World Development* 617.

110 World Health Organisation *Fuel for life: Household energy and health* (2006) 8.

individuals in 2030.<sup>111</sup> A lack of access to energy services will result in the poor being deprived of the most basic of human rights and economic opportunities to improve their standard of living; will inhibit people from accessing modern hospital services; food cannot be refrigerated; and businesses cannot function.<sup>112</sup> Therefore, all efforts must be put in place by African countries towards addressing poverty. In China, decreasing poverty has allowed several of Chinese population to avoid indoor air pollution. In 1990 it was estimated that almost 2,6 million people died from air pollution in China, but the number declined to 2,3 million people in 2010 despite an 18 per cent increase in the population.<sup>113</sup> There is a drastic reduction in indoor air pollution because an increasing number of people having overcome poverty can now afford to cook by using modern energy (improved access to cheap electricity) rather than burning charcoal, twigs and dung inside their homes.<sup>114</sup> Once a country continues to develop economically, it can start to channel resources into environmental protection and pollution reduction as has been done in China. An estimated 80 per cent of China's coal-fired power plants now are equipped with pollution-reducing scrubber technology, and the nation's sulphur emission rates have also since 2006 been steadily reducing.<sup>115</sup> Also, cheap wood-burning stoves in East Africa and *plancha* stoves in Latin America reduce pollution levels by as much as 50 and 90 per cent respectively.<sup>116</sup> Thus, making cleaner fuels and improved stoves available to millions of poor people in developing countries will go a long way towards reducing child mortality, improve women's health; and can help raise families out of poverty and accelerate development progress.<sup>117</sup>

Other recommendations include improved public transport; the inclusion of the right to a clean and decent environment as a justiciable right in the constitutions of African states; the empowerment of civil society organisations; ensuring that African nations take full advantage of accessing international funding assistance through the Clean Development Mechanism (CDM) to promote the development of environmentally-sustainable economic projects and reduce poverty; strengthening of the public health programmes; strengthening the environmental institutions at the national level for effective delivery; and the implementation of international treaties on environmental protection and making the MNCs accountable for environmental pollution.

111 E Wadongo 'A personal approach to tackling energy poverty in Africa', <http://www.one.org/us/2013/06/10/a-personal-approach-to-tackling-energy-poverty-in-africa/> (accessed 6 March 2016).

112 As above.

113 B Lomborg 'Fight poverty to reduce pollution' *China Daily*, [http://africa.chinadaily.com.cn/weekly/2014-08/08/content\\_18272044.htm](http://africa.chinadaily.com.cn/weekly/2014-08/08/content_18272044.htm) (accessed 17 March 2017).

114 As above.

115 'Pollution solutions: Understanding the link between poverty and pollution' 17 October 2014, [http://www.pollutionsolutions-online.com/news/air-clean-up/16/breaking\\_news/understanding\\_the\\_link\\_between\\_poverty\\_and\\_pollution/32158/](http://www.pollutionsolutions-online.com/news/air-clean-up/16/breaking_news/understanding_the_link_between_poverty_and_pollution/32158/) (accessed 17 March 2016).

116 World Health Organisation (n 110) 28.

117 L Jong-wook 'Foreword' in WHO (n 110) 4.

## 7 Conclusion

Environmental threats in the form of climate change, deforestation, air and water pollution are among the major barrier towards lifting human development. The 2013 Human Development Report warned that the number of people living in extreme poverty could increase by up to 3 billion by 2050 unless urgent action is taken to tackle environmental challenges. The longer action is delayed, the higher the cost will be.<sup>118</sup> I have in this chapter considered the various links between environmental pollution and poverty and have been able to show that environmental pollution is both a contributing factor to poverty and the result of poverty. Indeed, the environmentally-unsustainable use of natural resources reduces incomes, increases costs and worsens poverty,<sup>119</sup> while environmentally-sustainable use of resources can help to promote a healthy environment, decrease costs and reduce poverty. The failure by African governments to prevent widespread pollution arising from human and industrial activities has in no small measure affected the living conditions of the affected communities. With the wealth of natural resources, including minerals, biodiversity, wildlife, forests, fisheries and water with which that Africa is endowed, the continent has the potential for social and economic growth provided it is able to address the problem of environmental pollution, population growth and rising levels of poverty besetting it.

118 'Environmental threats could push billions into extreme poverty, warns UN' *The Guardian* 14 March 2013, <http://www.theguardian.com/global-development/2013/mar/14/environmental-threats-extreme-poverty-un> (accessed 17 March 2017).

119 D Smith 'Poverty and environment links: Examples from Africa' UNDP-UNEP Initiative, Nairobi, Kenya, <http://www.wilsoncenter.org/sites/default/files/Smith1.pdf> (accessed 14 March 2017).



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