

CONTINENTAL CHALLENGES & CHANGE

Environmental
Determinants
of Health in Africa





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Determinants
of Health in Africa

Second Synthesis Report
On the Situation Analysis and Needs
Assessments for the Implementation
of the Libreville Declaration on
Health and Environment in Africa

January 2015

CONTENTS

Acronyms and abbreviations	4	10 Partnerships for advocacy	96
Foreword	6	11 National budgetary allocation for health and environment programmes	100
Executive summary	8	PART 4 What does each action point need	106
Introduction	12	PART 5 Conclusions	120
Methodology	14		
PART 1: The environmental burden of disease in Africa	17		
PART 2: Environmental determinants of human health and ecosystems integrity	23		
1 Major risks occurring naturally	24		
2 Major risks occurring from human activity	36		
3 Ecosystem integrity	50		
PART 3: National systems for the management of environmental determinants	53		
THE 11 ACTION POINTS			
1 Health and environment strategic alliance	54		
2 Health and environment linkages in national policies, strategies, regulations and plans	60		
3 Priority intersectoral programmes	66		
4 National capacities	70		
5 Knowledge acquisition and management	74		
6 Systems for health and environment surveillance	80		
7 International conventions	84		
8 National monitoring and evaluation mechanisms	88		
9 Assessment of health and environment risks	92		

ACRONYMS AND ABBREVIATIONS

CTT	Country Task Team
DALY	Disability Adjusted Life Year
EBD	Environmental Burden of Disease
EIA	Environmental Impact Assessment
GEF	Global Environment Facility
HELDS	Health and Environment Data Management System
HESA	Health and Environment Strategic Alliance
HIA	Health Impact Assessment
IDSR	Integrated Disease Surveillance and Response
JTT	WHO/UNEP Joint Task Team
MDG	Millennium Development Goals
MEA	Multilateral Environmental Agreement
NAPA	National Adaptation Programme of Action
NGO	Non Governmental Organisation
NIP	National Implementation Plan
NPJA	National Plan of Joint Action
PRSP	Poverty Reduction Strategy Paper
QSP	Quick Start Programme
SAICM	Strategic Approach to International Chemicals Management
SANA	Situation Analysis and Needs Assessment
SoE	State of the Environment
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WMO	World Meteorological Organization

FOREWORD

It is now six years since the first Inter-Ministerial Conference on Health and Environment culminated in the adoption of the Libreville Declaration on Health and Environment in Africa by 52 African countries. This conference demonstrated the importance of recognising the interlinkages between environment and health to achieving sustainable development. It helped to promote an integrated approach to policy-making in the health and environment sector. It also agreed on specific actions needed to leverage the required changes to institutional arrangements and investment frameworks for mitigating environmental threats to human health and ecosystems.

In the Libreville Declaration ministers agreed to establish a strategic alliance between the health and environment sectors, as a basis for shared planning and action. In 2010, in Luanda, the ministers of health and the ministers of environment reiterated their commitment to the declaration made in Libreville. At this Luanda meeting, they formalised the Health and Environment Strategic Alliance (HESA) and adopted the Luanda Commitment. The meeting culminated in a joint ministerial statement on climate change and health.

Since the first Inter-Ministerial Conference in 2008, significant efforts have been made by governments and their development partners to implement the Libreville Declaration. Indeed, valuable lessons have been learned through various initiatives and partnerships. Many governments have established multisectoral and multidisciplinary teams of experts and have undertaken analyses of the status of their risk factors.

A number of countries have prepared their national plans of joint actions and initiated resource mobilisation for their implementation. A stronger interaction between different fields has been established in order to reach consensus on the status and importance of environmental risk factors that impact on health development as well as on ecosystems preservation. At the political level, ministers of health and ministers of environment have also intensified their interactions, to facilitate joint decision-making and also to undertake joint interventions at the community level.

Although progress with the implementation of the Libreville Declaration and the Luanda Commitment is noticeable, it remains slow and limited in demonstrating a tangible impact on populations and sustainable development. Today, addressing climate change, protecting the environment, promoting transparent international energy markets and facilitating low-carbon development policies are high on the sustainable development agenda.

The intention of this second Situation Analysis and Needs Assessment (SANA) report is to establish a benchmark against which Member States and partners, including the World Health Organization (WHO) and the United Nations Environment Programme (UNEP) can track the progress of the implementation of the Libreville Declaration in the years to come. This report is also expected to become a springboard for stimulating investments in health and environment priority programmes as an essential contribution to achieving sustainable development in Africa. The report forms a solid basis for the development of regional strategic agendas. It is expected to support the development and implementation of Regional Flagship Programmes as a means to ensuring the effective application in Africa of the outcomes of the 2012 Rio+20 United Nations Conference on Sustainable Development.

“A synthesis of the outcomes from the SANA reports of 22 African countries.”

EXECUTIVE SUMMARY

The impact of the environment on human health is profound. Nowhere is this truer than in Africa. For many Africans, already precarious living situations are made more risky through changes in the climate, degradation of land, lack of safe food or water and air that is polluted. Previous assessments of the situation brought recognition that low levels of awareness and political will are hampering efforts to mitigate the impact of environmental change on human health. Clear communication on the problems and potential solutions was called for. This document represents a step by the WHO Regional Office for Africa to offer a clear and accessible assessment of the risks, and to share updates from around the continent on what the next steps should be.

In 2008, at the first Inter-Ministerial Conference on Health and Environment in Africa, in Libreville, ministers of health and environment from 52 African countries signed the Libreville Declaration. This declaration recognised the nature of, and opportunities offered by, the linkages between the health and environment sectors. The 11 priority actions of the Libreville Declaration commit countries to the establishment of a strategic alliance between the two sectors, as a basis for joint plans.

A total of 22 countries in Africa have undertaken and completed a process of Situation Analysis and Needs Assessment (SANA) for the implementation of the Libreville Declaration. This was a prerequisite for the development of national plans for joint actions. The assessments use standardised procedures and methodologies, based on technical guidelines and tools prepared jointly by the World Health Organization and the United Nations Environment Programme, and with the support of partners.

This report provides a synthesis of the outcomes of the SANA results in 22 countries and builds on the first synthesis report, published in 2010. It lays out a comprehensive situation analysis of the state of environmental determinants of human health and ecosystem integrity, and relevant management systems in Africa.

Risks associated with these determinants occur either naturally, for example soil erosion, floods, rising sea levels, volcanic eruption, earthquakes, gas release and drought, or they occur as a consequence of human activity, including deforestation, loss of biodiversity, disease vectors, drought, marine pollution, lack of sound management of chemicals, hazardous and non-hazardous wastes, organic drinking water pollution, air pollution or floods. African ecosystems are changing rapidly, mainly due to human activity, and this is impacting on human health in a variety of ways.

Many of the trends and challenges observed in the previous analysis of 12 SANA reports in 2010 remain evident in 2015. Only limited progress has been made with most action points in the Libreville Declaration. Although human health is influenced by a range of environmental factors, within governments there is little to connect the two areas. The health sector remains separate from the environment sector in many respects.

Although some countries have existing programmes and plans – as well as commitments to goals and international targets – many are still lacking the legislation, regulations and strategies that allow targets to be reached and impact to be achieved. There is a continent-wide

need for combined national frameworks with policies that relate to health and environment. Policies to address traditional risk factors effectively, such as sanitation and access to safe water, are scarce, and those that exist are seldom implemented. Likewise, policies related to emerging issues such as climate change adaptation are not always present or effective.

While Poverty Reduction Strategy Papers (PRSPs) provide useful frameworks for coordination and accountability, they lack specific mechanisms for intersectoral initiatives. In PRSPs and other national development plans, health and environment are often approached separately and possibilities for combined approaches are not explored. Intersectoral coordination mechanisms are needed to harmonise and facilitate implementation of the health and environment objectives in PRSPs.

Most countries report several ministries working in the health and environment field, and various national institutes, research centres, universities, NGOs and private companies. Many countries report difficulties in assessing national capacities in detail and the extent to which human resources are used efficiently is largely unclear.

“28% of the disease burden in the African regions is attributable to the environment.”

EXECUTIVE SUMMARY

Often institutions work separately without sharing information, which may lead to duplicating activities and overlapping mandates. Countries report underutilisation of capacities for the development and implementation of effective policies and programmes. There is a strong need for recruitment, training, development and tailored environmental health studies, both vocational and academic, at universities and as part of other courses.

A considerable amount of research and learning relating to the linkage between climate and health is taking place across Africa. Too often, research agendas unfold organically, without national guidance or orchestration. Countries generally report little or no connection between environment and health sectors in research activities. Where ad hoc linkages exist they are often scattered and uncoordinated. National coordination mechanisms are reported as the key need for improving knowledge acquisition.

SANA reports show that countries do have systems for conducting surveillance for communicable diseases, while most countries also conduct surveillance on environmental issues. The challenges are mainly found in the scope and coordination of surveillance. There is a lack of investment in techniques that can cover the linkages between the two areas, and a lack of skills and capacity to relate changes in health with changes in the natural environment. Countries see a

pressing need for a national system of coordination and improvement of surveillance networks.

Conventions and international agreements are more readily signed than acted upon. An important number of international instruments and multilateral environmental agreements remain unratified, leading to failure of implementation and enforcement, especially in the case of the Bamako Convention. Countries see the need for increased human and financial resources dedicated to the implementation of international conventions and agreements, as well as national frameworks for the development of legislations and regulations.

National performance monitoring and evaluation mechanisms for priority programmes related to health and environment are not well established in many African countries. Although several countries do have existing monitoring and evaluation mechanisms, more consistency and intersectoral collaboration is needed to ensure greater efficiency. An integrated monitoring tool for the implementation of binding and non-binding health and environment agreements is needed.

In general, countries have national systems to monitor the status of communicable and non-communicable diseases and other health indicators. Most produce a national report on the state of

the environment and have legislation that ensures they assess the environmental impact of projects. Health Impact Assessments (HIAs) are much less common than Environmental Impact Assessments (EIAs), and are generally not supported by legislation. In some countries, EIA processes have resulted in legal cases concerning environmental health damage. However, an integrated system for EIAs and HIAs is seen as an urgent need.

All countries have communication activities within their health and environment sectors. However, in the area of partnerships for advocacy, the general situation seems to be one of a great amount of potential, set against a current reality typified by many voices communicating on many issues, without an orchestrated plan. National frameworks and partnerships are needed to carry out advocacy activities jointly.

Country reports clearly show that there is consistent under-resourcing of both joint health and environment activities and individual health and environment ministries. Money for health is mainly directed towards curative programmes rather than broader public health and disease prevention activities. The greatest share of the budget for environment goes towards reacting to existing problems rather than avoiding them from the outset.

INTRODUCTION

This report presents the findings of Situational and Needs Assessments on Health and the Environment in Africa.

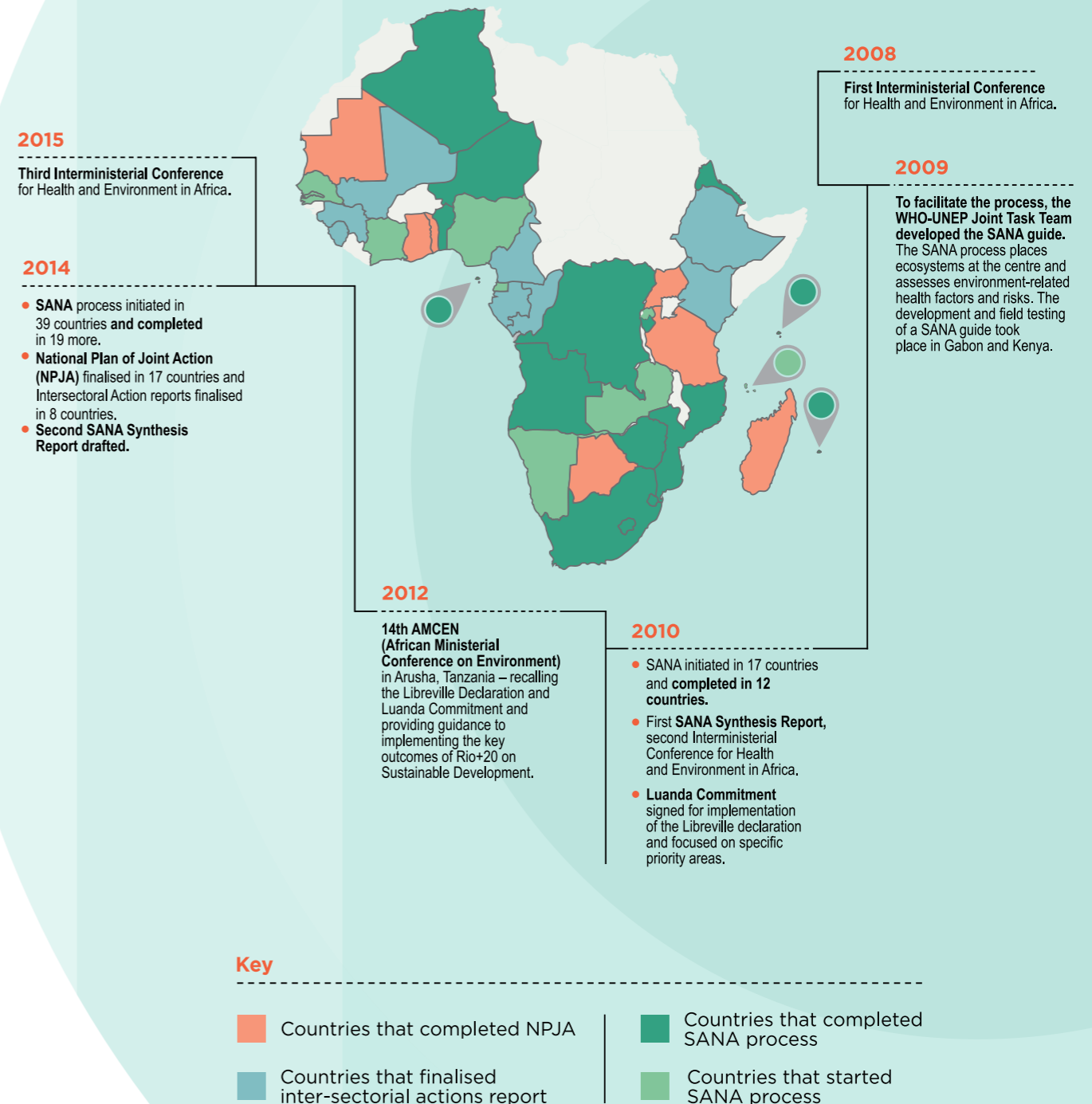


In 2008, at the first Inter-Ministerial Conference for Health and Environment in Africa in Libreville, Gabon, ministers of health and environment from 52 African countries signed the Libreville Declaration. This Declaration aims to secure the political commitment and institutional and investment changes required to reduce environmental threats to health. The 11 priority actions of the Libreville Declaration commit countries to establishing a strategic alliance between health and environment as a basis for joint plans (Annex xx).

To translate this commitment into action, several countries have begun to develop National Plans of Joint Actions (NPJAs) based on evidence generated by a Situation Analysis and Needs Assessment (SANA) process. The SANA process is one of the milestones in the World Health Organization's (WHO) strategic direction of 2010-2015.

The first synthesis of the SANA process outcomes was performed in 2010, using SANA reports from 12 African countries. Since then, many steps toward implementation have been taken, as can be seen in the timeline on the facing page. This report presents the second synthesis of the SANA process and includes information from 31 African countries. It draws together the findings for these assessments and helps outline needs and priorities relating to policy, resources, strategies and tools for management of environmental determinants of human health. This second Synthesis Report of the SANA findings will be used as reference for WHO and UNEP, in preparation for the Third Inter-Ministerial Conference for Health and Environment in Africa, to be held in 2015.

STATUS ON THE IMPLEMENTATION OF THE LIBREVILLE DECLARATION



8 The steps of the SANA process

- 
1. Inception meeting
 Training of experts and review of objectives
- 
2. Review of SANA questions
 Identification of documents needed for analysis
- 
3. Detailed review by task group
 Information needed to respond to SANA questions is extracted
- 
4. Data collection and computerisation
 Into HELDS (Health and Environment Linkages Data Management System)
- 
5. First draft of national SANA report
 After analysis of data
- 
6. National Prioritisation Workshop
 Key policy makers and national experts review SANA report and develop national priorities
- 
7. National Consensus Meeting
 Interested sectors, partners and civil society adopt and endorse SANA report
- 
8. Development of National Plan of Joint Action
 Developed by government, based on the agreed priorities

The details

- The Situation Analysis precedes the identification of needs in the second part of the process, the Needs Assessment.
- The SANA process is undertaken by a group of national experts from various government ministries (beyond health and environment), various institutions, universities, research centres, and representatives from other stakeholders such as development partners and civil society.
- The process features mainly desk analysis of already available documentation, supplemented with interviews.

THE SANA PROCESS

The analysis

Analysis of the SANA reports was undertaken by the information and design agency, Lushomo. It consisted of six steps:

- 1 Broad analysis of SANA reports and country profiles**
 Firstly, the SANA reports and country profiles were summarised in a spreadsheet to allow for easy comparison of sections between countries. This summary was then analysed for general patterns and important points were highlighted.
- 2 In-depth analysis of Situation Analyses**
 Informed by the structure of the SANA guide, data was extracted from the SANA reports (and where possible from country profiles) and imported into spreadsheets. The data was then analysed in different ways. For example, average numbers of policies were calculated and countries with or without coordination mechanisms counted. Graphs and maps were then produced using statistical and design software.
- 3 In-depth analysis of Needs Assessments**
 The broad categories of the Needs Assessment, presented in a table in most SANA reports, were extracted from the documents. Where the data did not correspond with the template from the SANA guide, the data was reorganised. Some countries were excluded from the final analysis, as their data could not be used. Visual and numerical analysis was used to look for patterns (see page xx). For example, bubble graphs and maps were made.
- 4 Background research**
 For the introductory sections (pages xx to xx), background research was done to find the latest and best data available on the different topics. This was then supplemented with information extracted from the SANA reports in step 2.
- 5 Drafting the report**
 Based on the analysis and summaries, a first draft of the Synthesis Report was created.
- 6 Final Synthesis Report**
 After feedback, the final content was produced and the Synthesis Report was designed.

The information presented in this report is useful for distilling down the bigger picture and greater patterns operating in Africa. However, several national SANA reports were found to be incomplete and the information and data presented were of mixed quality. Therefore, the result is not a fault-free synthesis, but rather a work in progress that will continue until all countries have completed and reviewed their SANA reports.

PART

1

**THE
ENVIRONMENTAL
BURDEN OF
DISEASE
IN AFRICA**





PART 1
THE ENVIRONMENTAL BURDEN OF DISEASE IN AFRICA

The environment is a primary determinant of individual and community health. Interacting with physical, chemical and biological risk factors can harm human health in various ways. The continent has long been affected by problems relating to access to safe drinking water, inadequate sanitation and poor infrastructure. Additional to these are an array of new challenges, including climate change, rapid unplanned urbanization. Indoor and outdoor pollution is already having a profound health impact, and poses more of a threat year on year. Climatic conditions and weather shape human habitats and the lived experience of all populations, especially those in already fragile conditions. They shape access to food and water, stability of rural ecosystems and the transmission, intensity and distribution of many infectious diseases. More direct impacts occur through extreme weather events, including heatwaves, droughts, floods and storms, all of which have been experienced on the continent in recent years.

“About 28 per cent of the disease burden in the African regions is attributable to the environment.”

About 28 per cent of the disease burden in the African regions is attributable to the environment. In children under the age of 14, this share reaches 36 per cent. Per year, 1.3 million preventable child deaths are attributable to the environment. Almost all diseases are affected by the environment to some extent, but the most important of these are diarrhoea, respiratory infections and malaria. Together, these three diseases are responsible for around 60 per cent of deaths and Disability-Adjusted Life Years (DALYs) attributable to the environment. Other contributors to the global disease burden with a significant environmental fraction are road traffic injuries, chronic obstructive pulmonary disease (COPD), perinatal conditions, ischaemic heart disease, drownings and HIV/AIDS, amongst others.

Exposure to traditional environmental risks is higher in the African region when compared

with global levels. The region experiences poorer conditions related to water, sanitation and hygiene and solid fuel use. Exposure to other risk factors such as outdoor air pollution, lead exposure and global climate change is similar to or lower than the world's averages.

Many people and communities in Africa live in habitats that are profoundly vulnerable to environmental change. The Millennium Development Goals and an array of international commitments emphasize the importance of protecting the health of these populations through minimizing the risks emanating from the environment. Meeting these international and regional commitments will require improved policies and programming that link environment and health, as well as an array of more specific measures as highlighted in this report.

PART 1

THE ENVIRONMENTAL BURDEN OF DISEASE IN AFRICA

Improving environmental conditions in Africa is pivotal, in order to meet the Millennium Development Goals and other internationally agreed objectives.

In Africa
28% of the disease burden is attributable to the environment

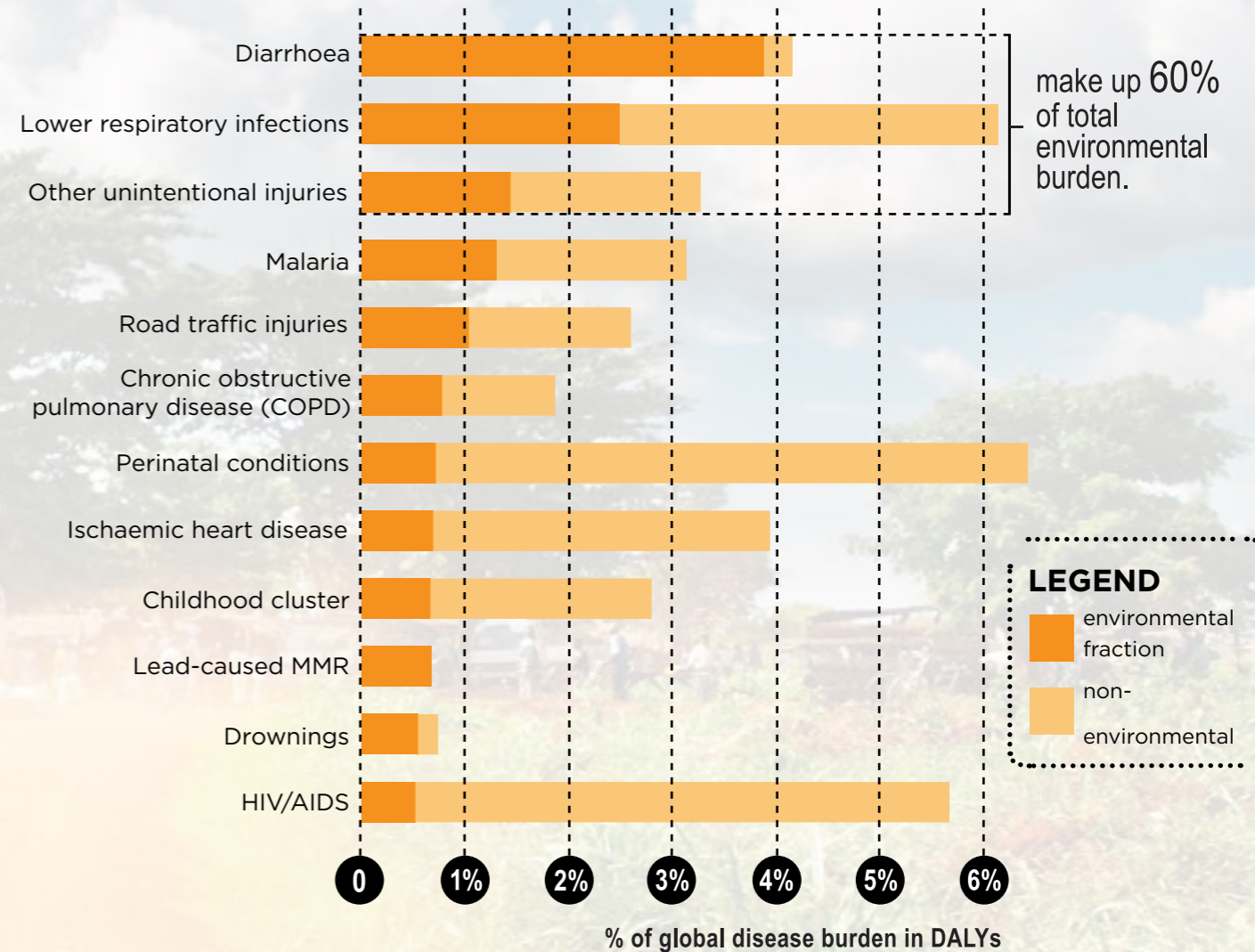


36% of disease in children younger than 14 is attributable to the environment

There are more than **1.3 million** avoidable child deaths per year attributable to the environment

SUMMARY: in pictures

The disease burden in Africa as percentage of the global disease burden, in disability-adjusted life years (DALYs).



Africa's exposure to environmental risks is substantially higher than the global average. This is partly due to:

A reliance on solid fuel

Variable access to clean water

Issues with sanitation



PART

2

**ENVIRONMENTAL
DETERMINANTS
OF HUMAN
HEALTH AND
ECOSYSTEMS
INTEGRITY**

PART 2

SECTION 1

MAJOR RISKS OCCURRING NATURALLY

In this section, environmental determinants of human health – both risks that occur naturally and those emanating from human activities – are reviewed. There is a lack of quantitative data in many African countries on the intensity of these risks and how they impact different populations. Inadequate environmental monitoring and shortcomings in research and knowledge management impede definitive assessments of environmental determinants of health. The SANA reports that provide most of the information that is shared below have an unclear subdivision of human and natural risks. As a result of these challenges, this section is mainly descriptive.

“Soil erosion is one of the the most worrying in the last 20 years of Congo’s environmental problems.”

2.1 MAJOR RISKS OCCURRING NATURALLY

The most frequently reported risks include soil erosion, floods, rising sea levels, volcanic eruption, earthquakes, gas release and drought, in the various human settings.

Soil erosion

Soil erosion is reported as an important risk factor to health and ecosystem integrity in both rural and urban settings. It is reported as a risk in 20 of 22 reporting countries. Although several African governments have put in place soil conservation programmes, all 20 of these 20 countries list soil erosion as a significant challenge. Across broad geographical areas, wind and/or water erosion cause problems. An estimated 15% of African land is prone to water erosion and 22% is prone to wind erosion.

Erosion leads to loss of the productive capacity of soils, thereby endangering food production and quality of drinking water, causing health risks such as malnutrition. Erosion can lead to the increased spread of waterborne diseases and blockages of storm water drains and sewer lines. It increases the risk of landslides and shortens the life of drinking water treatment infrastructure. Erosion can lead to the destruction of human habitats, and directly or indirectly cause disabilities and death.

The Democratic Republic of the Congo reports that soil erosion is, “one of the most worrying in the last 20 years of Congo’s environmental problems”. In Ghana, it has been calculated that the costs of erosion can amount to 1.1% to 2.4% of the GDP annually, with 23.3% of the country subject to very severe sheet and gully erosion. Other countries also report that erosion is now a chronic problem.

Flood

Flood was reported as a risk in 19 country reports. Floods can lead to contamination of drinking water sources through surface run-off, which deposits silt and other solid waste in sources such as wells or ponds. Flooding can create conditions for the spread of communicable diseases, both waterborne and vector-borne. Other risks include malnourishment through loss of food production and limited access to health facilities through destruction of infrastructure, as well as the immediate risk of drowning and injury. Additional risks include loss of shelter and the exposure of children to pneumonia and other climate-related diseases. In coastal zones, floods are also associated with rising sea levels, a development attributed to climate change.

PART 2
SECTION 1
MAJOR RISKS
OCCURRING
NATURALLY

**“More than
11 million
people have
died as a
consequence
of drought.”**

Mali reports that flooding is a disaster the authorities have to face every year, with each event affecting 10,000 to 45,000 people. The Republic of Benin reported disastrous floods in 2010, when 46 people died and many more lost their homes. Some indirect effects in the country were caused by spillages of latrines and flooding of garbage dumps, causing the spread of waterborne and diarrhoeal diseases. Mozambique and several other countries document severe challenges relating to flooding.

Drought

Africa's water resources are continually affected by persistent droughts. Drought is one of the manifestations of chronic environmental degradation. Leading to chronic food shortages and often linked to migration, drought also undermines national economic performance and depletes resources available for health. Since 1900, more than 11 million people have died as a consequence of drought, and more than two billion have been affected - more people than are affected by any other physical hazard. In the SANA reports, drought is reported to be a serious risk by 13 of 22 countries.

The main health hazards include lack of drinking water and food sources, through loss of agricultural output and animal die-offs. In Kenya, drought caused contamination of existing water supplies, reduced access to safe water, acute lack of food and dependence on sewage agriculture, leading to an exponential increase in cholera incidences in 2009. The link between drought and food is clearly visible, since an increasing trend of drought-induced disaster is reflected in the increasing number of people requiring food assistance.

Droughts are linked to desertification and loss of forest cover. As an example, in Cameroon a drying trend has been observed, accelerating desertification. In the north of the country desert is advancing at an alarming rate and communities are occasionally forced to compete with animals for water sources. In Botswana, rural droughts often lead to the government implementing drought relief programmes to ensure residents have the economic means to survive.

“Population growth in these areas will increase the vulnerability of coastal ecosystems to sea level rise.”

Rising sea levels

During the twentieth century, global sea levels rose by roughly seven inches. Climate change models predict that the rise in sea levels will increase this century. In assessments of flood risks that may arise by 2080 across a range of climate change projections, three of the five regions shown to be at risk of flooding in coastal and deltaic areas of the world are located in Africa: North Africa, West Africa and southern Africa.

Population growth in coastal areas will increase the vulnerability of coastal ecosystems to sea level rise. 40% of the population of West Africa live in coastal cities. It is expected that an entire stretch of West Africa, between Accra and the Niger Delta, will become a continuous megacity by 2020. As sea levels rise, increased salinity in groundwater could affect access to drinking water and agricultural inputs. Flooding and the destruction of infrastructure and food-producing areas is a likely result of sea level rise. In the Gulf of Guinea, rising sea levels would be likely to breach the low-level barriers that limit coastal lagoons. Lagoonal fisheries and aquaculture will be impacted in a number of countries. Coastal agriculture could be at risk of inundation and soil salination.


In the SANA reports, a total of 14 of the 15 sea-bordering countries describe sea level rise as a

risk, but the exact magnitude of the problem is largely unknown. In Mauritius, a mean rise of 2.1mm per year has been measured from 1997 to 2007. Congo reports flooding in bays, estuaries and lagoons, but lacks actual data on sea level rise, as do many other countries.

Volcanic eruption

Eruption can cause injury, fatality and social disruption. The explosion and contact with volcanic mass are a direct health hazard, while hot ash, gases and acid rain have more indirect health consequences.

There are several volcanoes in the African region, predominantly in Kenya, but they can also be found in other countries such as Cameroon or Congo. Eruptions are mentioned as a risk by seven countries, but three of them say the risk is very low. Cameroon notes that geologists expect Mount Cameroon to erupt again between 2015 and 2020. In 1992, eruption on the western side of Mount Cameroon lasted for six months, killed 100 persons and destroyed crops, railway infrastructure and human dwellings. The Rift Valley area of Kenya is an active volcanic zone and records an average of 1 000 volcanic activities a year. The Democratic Republic of the Congo (RDC) reports a historic eruption of the Nyamuragira volcano in 1977, when 600 people lost their lives.



PART 2
SECTION 1
MAJOR RISKS
OCCURRING
NATURALLY

Earthquakes

Earthquakes have direct and indirect health impacts. High levels of injury can occur as the result of falling debris or dust inhalation, including trauma and asphyxiation. Destruction of shelter and infrastructure can have secondary health consequences. Compound hazards for health include fire, landslides and tsunamis.

Earthquakes are not seen as a high risk by African countries. Only Madagascar reports earthquakes as a high risk and identifies 21 epicentres of earthquake activity. A significant earthquake occurred in the Ol Doinyo Lengai area (Tanzania) in 2007, measuring 5.2 on the Richter scale, causing destruction of human settlements.

Salinity

Salinity is a measure of the salt content of soil or water. High concentrations of salt pose hazards for the environment as well as affecting agriculture and infrastructure and therefore the wider economy. High levels of salinity in water and soil may cause native vegetation to become unhealthy or die and lead to a decline in biodiversity through dominance of salt-resistant species, potentially altering entire ecosystems. Reduced ground cover also makes soil more prone to erosion, which can pollute water with increased sediment, making it unsuitable for both human and animal consumption and threatening high value ecosystems and the plant and animal species they support.

In the SANA reports, salinity is noted as a risk by 11 of 22 countries. Direct effects are noted in Gabon, where people in coastal areas have to consume salt water, leading to health risks such as cardiovascular diseases and digestive disorders.

Other risks

Several other risks are noted in the SANA reports. Heat is reported as a risk in two countries. Extreme weather and natural disasters are seen as a risk in eight countries. These include cyclones, storms and locust invasions. Six countries report landslides as a risk, while land degradation is mentioned by six countries. In one country, Cameroon, gas release is reported as a serious risk, as Lake Nyos in Cameroon is at risk of toxic gas emissions (CO₂).

“Direct effects of salinity are noted in Gabon, where people in coastal areas have to consume salt water, leading to health risks such as cardiovascular diseases and digestive disorders.”

PART 2
SECTION 1
MAJOR RISKS
OCCURRING
NATURALLY



SOIL EROSION



is a risk in
20/22
countries



In many parts of Africa, wind and water erosion is a problem, as well as coastal erosion. The problems are floods, landslides, gully and sheet erosion.



15%
of the land is
prone to
water erosion



22%
of the land is
prone to wind
erosion

Health risks are malnutrition through loss of food production, increased spread of waterborne diseases, and destruction of human habitats through floods and landslides.

SUMMARY: in pictures

Congo reports that soil erosion is, "one of the most worrying in the last **20** years of Congo's environmental problems".

FLOOD



is a risk in
19/22
countries



Flooding leads to health risks, such as outbreaks of communicable diseases that are either waterborne or vector borne. Other risks include malnourishment through loss of food production and limited access to health facilities through destruction of infrastructure, as well as drowning mortality.

Mali reports that flooding is a disaster the authorities have to face every year, with each event affecting **10 000 to 45 000** people.

The Republic of Bénin reported disastrous floods in **2010** when **46** people died and many more lost their homes.

DROUGHT



is a risk in
13/22
countries



Since 1900, more than **11 million people** have died as a consequence of drought, and more than 2 billion have been affected by drought - more people than are affected by any other physical hazard.

Droughts can lead to lack of food, contamination of water supplies and reduced access to safe water. In Kenya, drought led to the incidence of cholera increasing exponentially in 2009.

Droughts are linked to desertification. In **Cameroon**, for example, a drying trend is observed that accelerates desertification. In Northern Cameroon, the desert is advancing at an alarming rate. It is even noted that communities sometimes have to compete with animals for water sources.

In **Botswana**, rural droughts often lead to the government implementing drought-relief programmes to ensure residents have the economic means to survive.

PART 2

SECTION 1

MAJOR RISKS OCCURRING NATURALLY



RISING SEA LEVEL

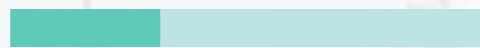


is a risk in
14/22
countries



Sea level rising is a consequence of climate change and will continue during the 21st century. Related health challenges listed in SANA reports are linked to flooding, salt intrusion and the destruction of breeding areas of marine life.

VOLCANIC ERUPTION

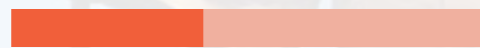


is a risk in
7/22
countries



Eruptions can cause injury, fatality and social disruption. There is a range of direct and indirect impacts, ranging from those caused by explosion and contact with volcanic mass to those caused by hot ash, gases and acid rain. They are mentioned as a risk by seven countries – with three of them saying the risk is very low.

EARTHQUAKES



is a risk in
9/22
countries



Earthquakes have direct and indirect health impacts. They can cause high levels of injury or mortality resulting from trauma, asphyxia and dust inhalation (acute respiratory distress). Compound hazards for health include fire, landslides and tsunami.

SALINITY



is a risk in
11/22
countries



Salinity is a measure of the content of salts in soil or water. Salts are highly soluble in surface and groundwater and can be transported with water movement. Excessive amounts of dissolved salt in water can affect agriculture, drinking water supplies and ecosystem health.

OTHER RISKS



2/22 Heat



8/22

Extreme weather and natural disasters
For example: cyclones, storms, locust invasions



6/22 Landslides

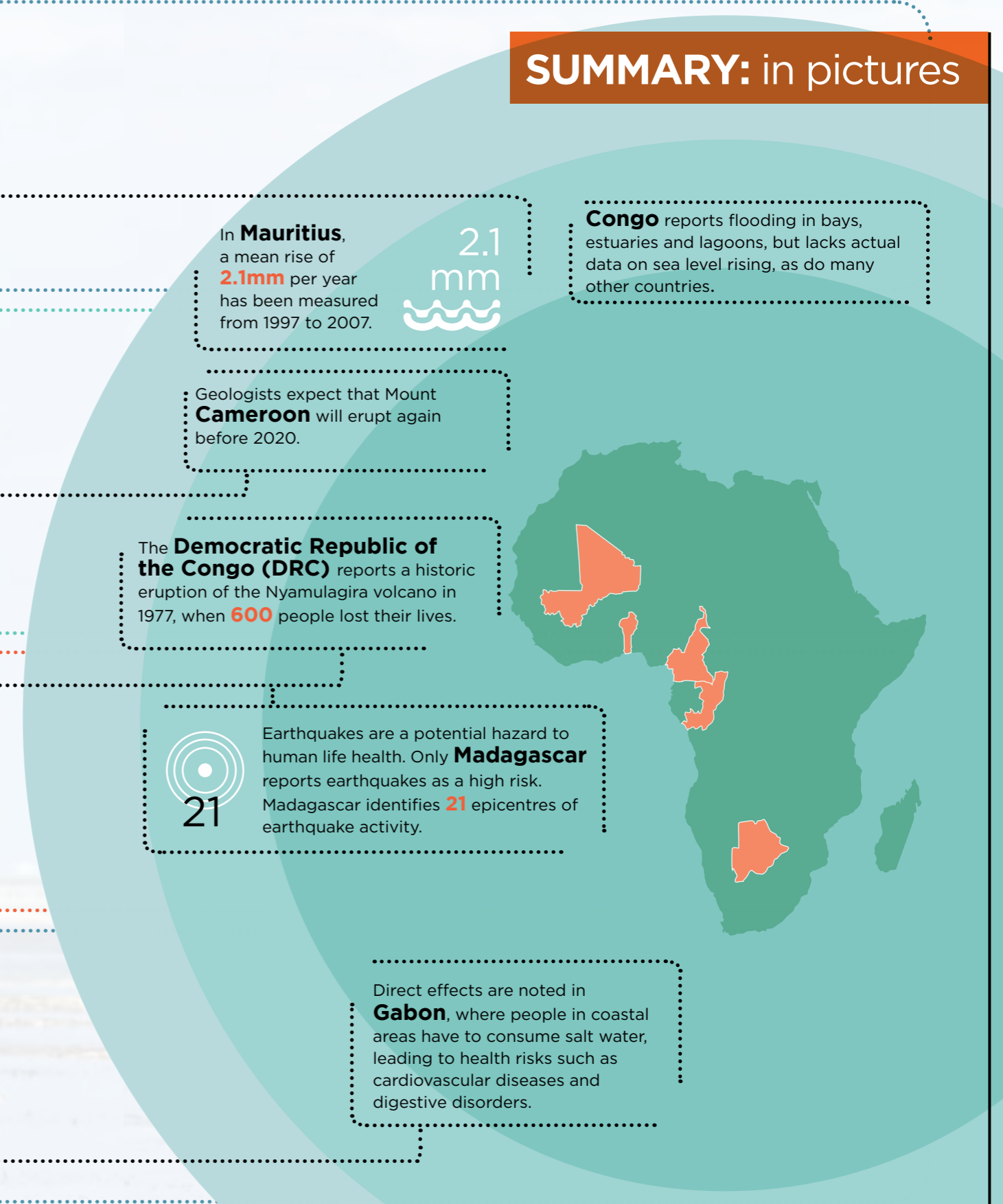


3/22 Land degradation



1/22 Gas release
Lake Nyos in Cameroon is at risk of toxic gas emissions (CO₂).

SUMMARY: in pictures



PART 2

SECTION 2

MAJOR RISKS RESULTING FROM HUMAN ACTIVITIES

2.2 MAJOR RISKS RESULTING FROM HUMAN ACTIVITIES

The most commonly reported risk factors resulting from human activity are deforestation, biodiversity loss, disease vectors, drought, marine pollution, unsound management of hazardous and non-hazardous waste, organic drinking water pollution, air pollution and floods, all of which affect both rural and urban settings.

While soil erosion, floods, drought and rising sea levels are classified in this section as major risks occurring naturally, it is very likely that global warming and sea level rising is caused by human activity. Climate change already has a measurable impact on many natural and human systems. Impacts include an increase in floods, droughts and extreme weather events.

“90% of diarrhoeal diseases are linked to a lack of safe drinking water, environmental pollution and poor sanitation.”

Water pollution

The main health risks related to water pollution are diarrhoeal diseases, parasites and waterborne diseases. In fact, 90% of diarrhoeal diseases are linked to a lack of safe drinking water, environmental pollution and poor sanitation. There are 115 deaths in Africa every hour from diseases linked to poor sanitation, poor hygiene and contaminated water. Typhoid, cholera, dysentery, polio and hepatitis can all be caused by pathogens in water.

In total, 11% of the global population does not have access to clean drinking water. Of these, 43% live in Sub-Saharan Africa. The organic pollution of drinking water is mentioned as a risk in 19 SANA reports; it is one of the main health risks in many countries. Chemical pollution of drinking water and pollution of waste water (organic and chemical) also pose substantial risks to health.

Inadequate waste management is the most commonly reported cause of water pollution; 18 countries report it as a risk. Groundwater is commonly contaminated by pit latrines and soak pits in most peri-urban and informal settlements, leading to potentially high levels of coliform counts in drinking water. This is primarily because untreated waste and waste that remains uncollected or improperly disposed of can be a source of chemical and/or organic contaminants, and can become breeding sites for disease vectors.

Other reported causes are sanitation issues, industry and agricultural run-off. A significant proportion of the urban population has poor access to proper solid waste management and sanitation. In Sierra Leone, for example, only 13% of people have access to improved non-shared sanitation facilities. In Swaziland, most rural communities drink from rivers and streams which are without treatment. In Kenya, only 32 of 174 local government authorities have sewage systems.

PART 2
SECTION 2
MAJOR RISKS
RESULTING
FROM HUMAN
ACTIVITIES

“Of the 80 countries substantially affected by land degradation, 36 are situated in Africa.”

Air pollution

Air pollution is seen as a general risk in 20 countries, with outdoor air pollution being reported in 17 countries, and indoor air pollution in 13. Air pollution has a great economic impact, with up to 5% of the GDP spent on air pollution in developing countries.

Indoor air pollution is mainly caused by the use of biomass fuels (e.g. firewood, crop residues, dung) and kerosene for cooking and heating. Many countries report a lack of data on indoor air pollution, but they state that it is a high risk, mainly in rural areas. For example, in Niger, women are known to use plastic bags to accelerate or facilitate the burning of wood. According to WHO estimates, 65 deaths per 100 000 capita in Africa are attributable to household air pollution. This form of air pollution contributes to a number of health conditions, including lung cancer, cataracts, eye irritations, skin diseases, increased acute respiratory illness and aggravation of asthma (especially in children), as well as asphyxiation with a possibility of death. Indoor air pollution exposes women and children in particular to these health risks.

Outdoor air pollution results from an elevated level of fine particulate matter (PM10 and PM2.5) in ambient air. This is mainly caused by vehicles, the burning of waste in the open air, bushfires, industry, and energy generation processes. Dust is also a serious problem in many African countries. Collectively they are associated with increased

daily and long-term illness and premature mortality, due to cardio-pulmonary diseases, acute respiratory infections and cancers.

Soil degradation and pollution

Land degradation can cause malnutrition through reduced food productivity, particularly among children under five years of age. It also contributes to desertification, impaired water supply, poor sanitation conditions and reduced water quality. The lack of waste disposal systems leading to soil degradation also leads to the proliferation of disease vectors and generates other public health concerns. Land degradation can also cause erosion and landslides.

Causes of soil degradation range from the use of fertilisers to dumping of industrial waste. Poor approaches to safeguarding habitats and dealing with deforestation can lead to degraded land. Unsustainable land use, including overgrazing, also reduces the quality of soil. Utilisation of crop residues for fuel and other uses hinders the natural processes of land rejuvenation and disturbs the sustainability of land resources. Soil degradation is part of a vicious circle of flooding and drought related to climate change. Of the 80 countries substantially affected by land degradation, 36 are situated in Africa. In Lesotho, for example, over 100 km² (approximately 2% of the total land area) has been degraded due to overgrazing and incorrect farming practices, as well as mismanagement of rangeland and residues from chemicals/pesticides.

“Of the top 10 countries affected by annual loss of forest land around the world, six are in Africa.”

Food contamination

Microbiological and chemical hazards in food, including mycotoxins and other naturally occurring toxins in foods represent serious threats to health within the region. The emergence of new food production processing technologies has also increased public concern about food safety. Food-borne diseases impose substantial economic costs onto individuals, households, health systems and other sectors. Economic losses as a result of food exports rejected due to shortcomings in food safety are often very significant in Africa.

Both rural and urban settings experience food contamination as a risk factor. Food contamination is often related to environmental degradation such as drinking water pollution and soil contamination with pesticides and fertilisers. Contamination from organic sources such as bacteria, fungi and parasites is most common in the African region. This creates risks of food-borne disease such as diarrhoea or cholera. Malnutrition increases the risk of food-borne diseases. Common problems associated with food contamination include inadequate or inappropriate slaughter and cold storage facilities, as well as infestation by vectors as a result of poor sanitation and personal hygiene.

Deforestation and loss of biodiversity

Deforestation and loss of biodiversity are both serious risks. Deforestation is reported as a risk in 19 countries, while biodiversity loss is reported as a risk in 20 countries.

Deforestation is mainly caused by urbanisation, harvesting for timber and fuel, slash-and-burn agriculture and bush fires. Deforestation frequently leads to loss of biodiversity, which is also linked to poaching, fires, land use change, desertification, crop intensification and other factors. Of the top 10 global countries most affected by annual loss of forest land, six are African. In Sierra Leone, less than 5% of the country's mature forest remains.

Biodiversity of flora and fauna is famously large in the African region, but is in danger due to uncontrolled exploitation and loss of natural habitats. National resources are being depleted by the increasing population and as a result, processes such as deforestation, overgrazing or soil erosion have become major threats.

Deforestation and loss of biodiversity cause a range of health effects such as undernourishment and skin diseases. They lead to loss of food and medicinal plants. Deforestation also favours fresh water snails carrying schistosomiasis, and mosquitoes carrying malaria. From the SANA reports there are many examples of the problems caused by deforestation. For instance, in Gabon, the decline of agricultural production has led to a change in dietary habits, with increased

consumption of bush meat. Several countries cite low public awareness as a constraint in stopping harmful activities that endanger biodiversity.

Disease vectors

Vector-borne diseases are illnesses caused by pathogens and parasites in human populations. The distribution of these diseases is determined by a complex array of environmental and social factors. Pollution, poor waste management, floods, general poor hygiene, urbanisation and climate change all play a role. Changes in agricultural processes due to temperature and rainfall can affect the transmission of vector-borne diseases.

Disease vectors particularly thrive where waste, including human excreta, is indiscriminately disposed of without due regard to the implications for human health. Madagascar has reported that urban planning can create breeding sites for vectors such as mosquitoes. In 16 reports, disease vectors are mentioned as a health risk.

Vector-borne diseases account for 17% of the total disease burden in Africa, the major contributor being malaria. Malaria kills over 1.2 million people annually. Other important disease vectors are tsetse flies, black flies and rodents. Besides malaria, other vector-borne diseases such as dengue, chikungunya, rift valley fever, onchocerciasis, human African trypanosomiasis and lymphatic filariasis create public health problems on the continent.

PART 2

SECTION 2

MAJOR RISKS RESULTING FROM HUMAN ACTIVITIES

Chemicals and hazardous waste

The position of African countries in global systems of economic production creates situations where the manufacture and disposal of chemicals is often situated close to African communities. Although chemical trade is prohibited under several multilateral environmental agreements, it persists and causes substantial health risks in Africa. A relocation of chemical production to developing countries and increasing urbanisation contribute to increased exposure to chemicals with associated health risks. Chemicals are a key source of air, water and soil contamination. In Africa the risks they pose are exacerbated in the many countries with burgeoning extractive industries. It is expected that by 2020, developing countries will produce 31% of all chemical substances, leading to increased exposure and health risks.

The group of chemicals which is of the greatest concern for most African countries is pesticides. Due to their importance in agriculture, they have been used for more than 40 years, particularly in Sub-Saharan Africa. The main health risks as a result of chemical waste include poisoning, cancer and skin disease. As an example, the SANA report in Kenya describes how people are known to recycle pesticides, causing serious skin diseases.

The management of waste, both hazardous and non-hazardous, is a concern in many African countries, and seen as one of the main risks related to environmental health, illustrated by the 20 countries that report a lack of management for hazardous waste. Many countries note that hospital waste is often not treated, or what happens to it is unknown.

Illegal trade of chemicals continues, despite being prohibited under several Multilateral Environmental Agreements. The adverse impacts of illegal trade are considerable: degradation of environmental resources, health dangers to inhabitants and revenue losses by governments and producers of legitimate products. Many of the transboundary shipments of electronic waste (e-waste) are illegal, and do not comply with existing multilateral environmental agreements. African countries are a frequent destination for the e-waste of developed countries. Efforts to recycle the toxic metals in e-waste endanger workers and cause environmental contamination.

Climate variability and climate change

It is now widely accepted that a warmer, more variable climate leads to increased air pollution and increased transmission of diseases, due to a variety of issues including changing disease vectors, water and food shortages, poor sanitation and inadequate hygiene. Negative health consequences include heat stress, different distribution and intensity of disease and thirst and malnutrition, as well as a range of immediate threats (injury, displacement) and long-term social issues. By current estimates, climate change is already estimated to be responsible for 3% of diarrhoea cases, 3% of malaria cases and 3.8% of dengue fever cases worldwide, with a total attributable mortality of about 0.2% of deaths, of which 85% were child deaths. It had been estimated that the global warming that has occurred since the 1970s was causing over 140 000 excess deaths annually by the year 2004.

Climate change is mentioned as a risk by many countries. Tanzania is seeing malaria prevalence in areas where it was not commonly found before. In Madagascar, natural disasters are more frequent and more severe. Moreover, Madagascar reports changes in cropping calendars, and outbreaks of malaria, dengue, chikungunya, influenza and malnutrition. Countries note that many health risks and stressors may be indirectly related to climate change.

The World Health Assembly adopted resolution WHA61.19 and a workplan on climate change and health which, inter alia, requested the Director-General to continue close cooperation with Member States and appropriate United Nations organisations, and other agencies and funding bodies, in order to develop capacity to assess the risks from climate change for human health and to implement effective response measures. Progress on this front is significant, but much more needs to be done.

Other risks

Other risks caused by human activity and listed in the SANA reports include floods, marine pollution, drought, road accidents, noise pollution, erosion, poor and crowded housing, mines, accidents at work and explosive devices. Risks that are classified as occurring naturally are reported to be sometimes linked to human activities. For example, droughts and floods are linked to deforestation and poor agricultural practices.

Marine pollution is seen as a substantial risk in 11 countries. Threats for the marine environment include pollution, overexploitation and plastic waste. The Chemu lagoon in Ghana has in fact been described as dead.

“Illegal trade of chemicals continues, despite being prohibited under several Multilateral Environmental Agreements.”

PART 2
SECTION 2
MAJOR RISKS
RESULTING
FROM HUMAN
ACTIVITIES

SUMMARY: in pictures

FOOD CONTAMINATION



Food contamination can be caused by many factors, such as pollution and the use of pesticides.

In Africa, contamination of food with **bacteria, parasites and fungi** is most common, and contributes to the high risk of food-borne disease, ranging from diarrhoeal diseases to cholera. Malnutrition, together with poor food hygiene, induces a strong vulnerability to food-borne diseases.

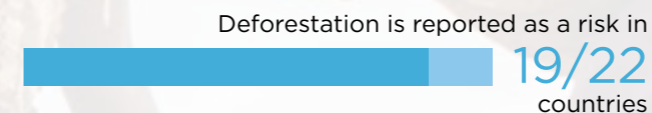


DEFORESTATION AND LOSS OF BIODIVERSITY



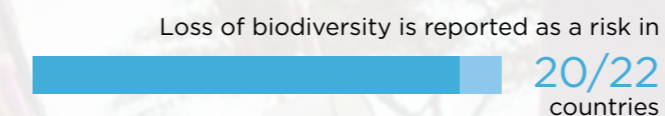
DEFORESTATION is mainly caused by urbanisation, harvesting for timber and fuel, slash-and-burn agriculture and bush fires.

Deforestation and loss of biodiversity are both serious risks.



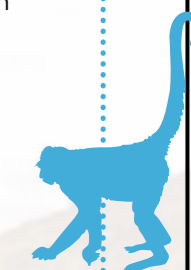
Of the top 10 countries most affected by annual loss of forestland,

6 are African.



Deforestation and loss of biodiversity cause diverse health effects such as **undernourishment** and **skin diseases**. They lead to loss of food and medicinal plants. Deforestation also favours fresh water snails carrying **schistosomiasis** and mosquitoes carrying **malaria**.

In Gabon, the decline of agricultural production has led to a change in dietary habits with **increased consumption of bushmeat**.



DISEASE VECTORS

Many reasons are listed for the proliferation of disease vectors. These include **pollution, insufficient waste management, urbanisation and climate change**. Madagascar has reported that urban planning can create breeding sites for vectors including mosquitoes.



Vector-borne diseases account for **17%** of the global disease burden... with the biggest contributor being **malaria in Africa**.

Besides malaria, **other vector-borne diseases** such as dengue, chikungunya, rift valley fever, onchocerciasis, human African trypanosomiasis and lymphatic filariasis create public health problems on the continent.



PART 2

SECTION 2

MAJOR RISKS RESULTING FROM HUMAN ACTIVITIES

WATER POLLUTION



Worldwide, **11%** of people do not have access to safe drinking water. Of these, **43%** live in Sub-Saharan Africa.

Water pollution is mainly caused by **improper waste management** and **sanitation issues**, combined with **industry and agricultural run-off**.

The **organic pollution of drinking water** is mentioned as a risk in **19/22** countries



It is one of the main health risks in many countries. **Chemical pollution of drinking water and pollution of waste water** (organic and chemical) also pose substantial risks to health.

Improper solid waste management is seen as a risk in **18/22** countries



Pit latrines are still widely used, water bodies serve as sinks for waste, and dumps become breeding sites for disease.

SUMMARY: in pictures

The main health risks related to water pollution are **diarrhoeal diseases, parasites and waterborne diseases**.

90% of **diarrhoeal disease** cases are linked to a lack of safe drinking water, environmental pollution and poor sanitation.



AIR POLLUTION



OUTDOOR AIR POLLUTION risks in Africa are mainly related to dust, the transport sector, industries and bushfires.



INDOOR AIR POLLUTION is mainly related to the use of solid fuels and kerosene for cooking, combined with lack of ventilation. Indoor air pollution particularly affects women and children.

Air pollution is seen as a general risk in **20/22** countries



Outdoor air pollution was reported as a risk in **17/22** countries



Indoor air pollution was reported as a risk in **13/22** countries



Many countries report a lack of data on indoor air pollution, but they state it is a high risk, mainly in rural areas.

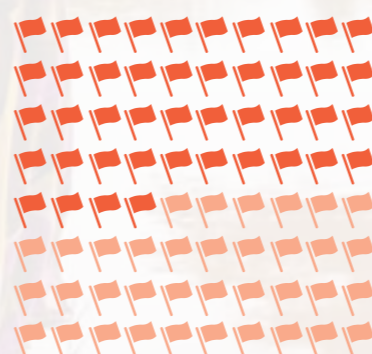
According to WHO estimates, **65 deaths per 100 000 capita** in Africa are attributable to household air pollution.

Among the many health risks of air pollution are **respiratory infections, conjunctivitis** (related to dust), **allergies, skin disease, cardiovascular disease, stroke, tuberculosis and meningitis**.

SOIL DEGRADATION & POLLUTION



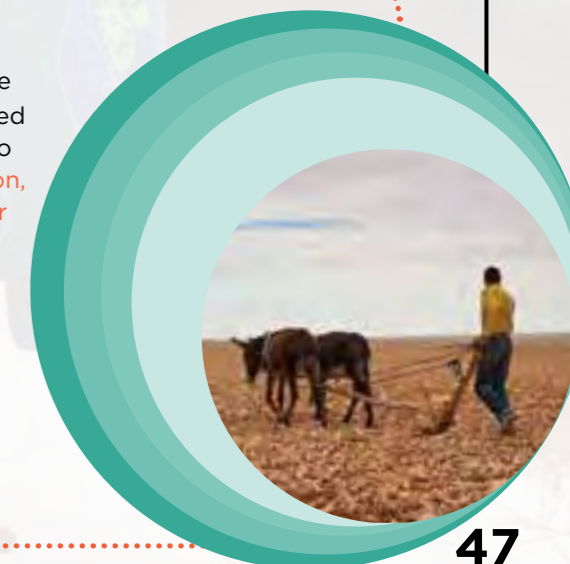
Causes of soil degradation range from the use of fertilisers, dumping of industrial waste and poor management practices to deforestation, unsustainable land use, overgrazing and other causes. Soil degradation is a key contributor to climate change and also part of a vicious cycle of flooding and drought related to climate change.



Of the **80** countries substantially affected by land degradation, **36** are situated in Africa.

Land degradation can cause malnutrition through reduced food productivity, but it also contributes to **desertification, impaired water supply, poor sanitation conditions and reduced water quality**.

Land degradation is also reported to cause erosion and landslides.



PART 2
SECTION 2
MAJOR RISKS
RESULTING
FROM HUMAN
ACTIVITIES

CHEMICALS AND HAZARDOUS WASTE



Certain health risks are related to biomedical waste, pesticide use and exposure to chemicals, such as e-waste. Although chemical trade is prohibited under several multilateral environmental agreements, it persists and causes substantial health risks in Africa.

The management of waste, both hazardous and non-hazardous, is a concern in many countries – and is seen as one of the main risks related to environmental health.



Many countries note that hospital waste is often not treated, or it is not known what happens to it.

SUMMARY: in pictures

The many health risks related to hazardous waste include poisoning, cancer, skin diseases and lead contamination. In Kenya, people are known to recycle pesticides, causing serious skin diseases.

Furthermore, it is expected that by 2020, developing countries will produce

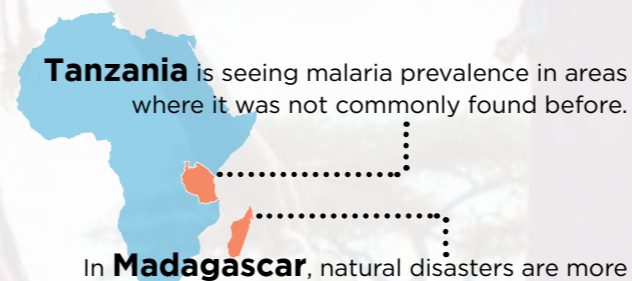
31% of all chemical substances, leading to increased exposure and health risks.

CLIMATE VARIABILITY & CLIMATE CHANGE



It is now widely accepted that a warmer, more variable climate leads to increased air pollution and increased transmission of diseases due to contaminated water, poor sanitation and inadequate hygiene. In the countries most vulnerable to climate change, we can expect an overall increase in negative health consequences.

Climate change is mentioned as a risk by many countries. It is also generally noted that many health risks and stressors may be indirectly related to climate change.



The main health risks are related to heat stress, expanding of mosquito habitats and water stress due to shortages and decreased water quality.

By current estimates, climate change is already estimated to be responsible for

- 3% of diarrhoea
- 3% of malaria and
- 3.8% of dengue fever

deaths worldwide, with a total attributable mortality of about 0.2% of deaths

- of which 85% were child deaths.

OTHER RISKS



Other risks caused by human activity and listed in the SANA reports include floods, marine pollution, drought, road accidents, noise pollution, erosion, poor and crowded housing, mines, accidents at work and explosive devices. For example, droughts and floods are linked to deforestation and poor agricultural practices.

Marine pollution is seen as a substantial risk in 11 countries. Threats for the marine environment include pollution, overexploitation and plastic waste. The Chemu lagoon in Ghana has in fact been described as dead.

Limited awareness of health risks is also noted. In Sierra Leone, a survey shows that some Sierra Leoneans drink petrol to rid themselves of tapeworms.



PART 2

SECTION 3

ECOSYSTEM INTEGRITY

In Africa, the ecosystem integrity can be addressed through the assessment of forest, humid and dry savannah, arid and semi-arid areas, wetlands, highlands and mountainous ecosystems.



FOREST DEGRADATION

As shown on the previous pages, deforestation is a major problem for many African countries. It is mainly caused by growing populations, driving land use change, consumption and production.

The most important human effects caused by forest ecosystem degradation are the loss of water catchments, reduction of capacity for climate moderation, acceleration of soil erosion and degradation, increased air pollution and increased incidence of water- and vector-borne disease. Forest degradation also disturbs global carbon cycles and is indirectly linked to increased respiratory diseases through higher carbon levels in the air.



DEGRADATION OF HUMID AND DRY SAVANNAHS

Humid and dry savannahs cover two-thirds of Africa, and are therefore the characteristic ecosystem of the continent. Degradation of humid savannahs is mainly caused by poor land use practices, resulting in habitat and biodiversity losses. Dry savannah degradation is associated with overgrazing and over-cultivation, which leads to loss of vegetation and increased levels of dust. It also helps to facilitate further disease transmission.



DEGRADATION OF ARID AND SEMI-ARID AREAS

Arid and semi-arid areas cover 30% of the global land surface and are very vulnerable to desertification. In 2000, **25%** of the arid and semi-arid land in Africa was already degraded, due to soil erosion, pollution, salinisation and loss of soil nutrients. The same areas are also under threat of overgrazing and encroachment. In Togo, desertification is linked to the impoverishment of rural populations, rural exodus and increasing problems in cities.



WETLAND AND COASTAL ZONE DEGRADATION

Degradation of wetlands is linked to unplanned and unsustainable reclamation, encroachment on riparian reserves, utilisation of swamps and mangrove forests, unprecedented infrastructural development and informal settlement. The most important consequences of wetland degradation are flooding, loss of fisheries, drying of seasonal rivers and loss of potable water sources. These areas are also subject to erosion and sedimentation, as well as chemical, organic and domestic waste pollution. Health consequences of wetland degradation are increased cases of malaria, diarrhoeal diseases and perennial cases of other water- and vector-borne diseases.

Coastal zone degradation is associated with unplanned development projects and uncontrolled urbanisation. The most important factors are poor waste disposal, pollution from land-based sources and insufficient viable wastewater treatment and solid waste management. Beaches are affected by erosion.



DEGRADATION OF HIGHLANDS AND MOUNTAIN REGIONS

In countries such as Madagascar, Ethiopia and Lesotho, a large proportion of the population lives in highlands and mountain zones. Major threats to these areas include deforestation for fuel and timber, conversion of grasslands for agriculture and livestock use, soil degradation, overgrazing and population growth. Degradation of these ecosystems causes reduced food production and capacities, decreased water catchment functions and changes in vector-borne disease transmission patterns. In some rural settings, for example in Kenya, mountainous areas are still relatively intact, and campaigns to protect them are ongoing.

In October 2014, the first African Mountains Regional Forum was held in Arusha, Tanzania. It brought together researchers, civil society, private stakeholders and senior officers from government institutes. The aim is to enhance collaborations and to develop a regional African Mountain Development Agenda.



PART

3

NATIONAL SYSTEMS FOR THE MANAGEMENT OF ENVIRONMENTAL DETERMINANTS

The 11 priority actions in the Libreville Declaration address the elements of national systems for the management of environmental determinants and their associated threats to human health and ecosystem integrity. In this section, the information generated from the SANA process on the status of these elements is reported.

ACTION POINT **1**
**ESTABLISH
A HEALTH AND
ENVIRONMENT
STRATEGIC
ALLIANCE
(HESA)**

“Of 22 participating countries, 20 report having focused working groups, committees or ad hoc initiatives working across both health and environment.”

The overall picture is characterised by a disconnect between those working in health and those working in environment. There is no systematic joint planning process between environmental and health sectors in any of the participating countries. Only one country, Mozambique, reports having intersectoral coordination mechanisms for health and environment. In the other countries, the two sectors operate under separate legislative frameworks, although there is cooperation on specific issues, based on ad hoc arrangements.

Of 22 participating countries, 20 report having focused working groups, committees or ad hoc initiatives working across both health and environment. These linkages fall short of overall joint planning or full integration and are mostly based around discrete issues such as sanitation, water, disease vectors, pesticides or waste management. Four countries – South Africa, Kenya, the Republic of the Congo and Mozambique – have a department, directorate or committee specifically focused on environment and health.

Some countries have established bodies to mitigate the impact of environmental issues on health. As an example, South Africa's Directorate of Environmental Health within the Department of Health is responsible for environmental health matters, such as environmental management reports. Mozambique has a Department of

Environmental Health that monitors environmental determinants that pose a risk to health. In Kenya, there is a Department of Environmental Health and Sanitation that falls under the Ministry of Public Health and Sanitation. Swaziland has several health and environmental programmes under the Ministry of Health, including the National Malaria Control Programme, the Environmental Health Programme, the School Health Programme, the Health Promotion Unit and the Epidemiology and Surveillance Unit. Congo has a National Committee on Environment and Health and 11 other committees linking health and environment. Madagascar has had a working group on climate change and health since 2008. Ethiopia also has a working group, but it needs to be strengthened. Similar projects are under way in Burkina Faso, Mali, Niger and Mauritania.

National plans in countries within Africa lack evidence of integrated approaches to tackling health and environment issues. These plans generally address concerns in isolation, or from the perspective of either health or environment, rarely taking a genuinely combined approach.

National health development plans tend to focus on medical issues and health risks. In these health

plans, environment-related topics may include sanitation, disease vectors, waste management, food contamination and pollution. Efforts that extend beyond areas traditionally associated with health, for example management of environmental risks, are largely neglected in the plans.

Similarly, national environmental plans focus mainly on environmental risks, such as land degradation, erosion, deforestation, biodiversity and agriculture. Some environmental plans do include specific health issues, but not within a broader integrated framework. Health-related plans may include addressing individual disease vectors, waste management and pollution.

Many plans have indirect links between environment and health, but these are rarely systematically applied or comprehensive. Combining plans and efforts would greatly improve efficiency, particularly in areas covered by both health and environment plans.

Policy responses are generally weaker in the national health plans than in the national environment plans. However, across the board, policy responses to health and environment challenges need to be strengthened.

ACTION POINT 1

ESTABLISH A HEALTH AND ENVIRONMENT STRATEGIC ALLIANCE (HESA)

Most countries analysed do not have formal intersectoral coordination mechanisms linking environment and health. The issues are not being addressed concurrently and the ministries of health and environment operate largely independently. This has to change in order to effectively tackle environmental health challenges in Africa.

HEALTH SECTOR

NO COORDINATION

Only **Mozambique** reports having intersectoral coordination mechanisms for health and environment. In other countries ministries of health and environment operate largely separately.

SOME COORDINATION

20 countries report having working groups, committees or ad hoc initiatives linking health and environment. These linkages are mostly based around issues such as sanitation, water, disease vectors, pesticides and waste management.

Of these, **4 countries** – **South Africa, Kenya, the Republic of the Congo and Mozambique**

– have a department, directorate or committee specifically focused on environment and health. However

44% of countries have a National Plan of Joint Action (NPJA). The NPJA is the final step in the SANA process. The NPJAs are government approved documents that spell out for each of the 11 action points (including the 10 top priorities in the Luanda Commitment) the related specific objectives, activities, resource requirements, stakeholders and timelines.

44% of countries have a National Plan of Joint Action

ESTABLISHED HEALTH AND ENVIRONMENT LINKAGES

South Africa's Directorate of Environmental Health within the Department of Health is responsible for environmental health matters, such as environmental management reports.

Mozambique's Department of Environmental Health monitors environmental determinants that pose a risk to health.

SUMMARY: in pictures

ENVIRONMENT SECTOR

Kenya's Department of Environmental Health falls under the Ministry of Public Health and Sanitation.

Swaziland has several health and environment programmes under the Ministry of Health, including the National Malaria Control Programme, Environmental Health Programme, School Health Programme, Health Promotion Unit and the Epidemiology and Surveillance Unit.

Congo has a National Committee on Environment and Health and **11** other Health and Environment linked committees.

ACTION POINT 1

ARE THERE NATIONAL DEVELOPMENT PLAN LINKAGES FOR ENVIRONMENT AND HEALTH?

Health and environment linkages are not in place within national development plans. These plans generally address issues in isolation, but linkages need to be established for impact to be achieved.

HEALTH AND ENVIRONMENT LINKAGES

Many plans have indirect links between environment and health, but these are rarely systematically applied or comprehensive. Greater efficiency and impact could be achieved by combining efforts and plans, mainly in areas covered by both health and environment plans.

NATIONAL HEALTH DEVELOPMENT PLANS

Strategic frameworks for health only focus on the environment in so far as it relates to medical issues and health risks.

For example:

- Sanitation
- Disease vectors
- Waste management
- Food contamination
- Pollution



SUMMARY: in pictures

Integrated policy responses are generally weaker in the national health plans than in national environment plans. For both sectors the majority of plans need to have their policy responses strengthened.

NATIONAL ENVIRONMENT DEVELOPMENT PLANS

These mainly focus on environmental risks, such as land degradation, erosion, deforestation, biodiversity and agriculture. Health related plans may include information on:

- Disease vectors
- Waste management
- Pollution



ACTION POINT **2**
**DEVELOP
OR UPDATE
NATIONAL
FRAMEWORKS**

Although some countries have existing programmes and plans, as well as commitments to goals and international targets, many are still lacking the legislation, regulations and strategies that allow targets to be reached and impact to be achieved.

There are varying degrees of linkage between health and environmental issues within policies, strategies and regulations. Broadly, national policies and frameworks are focused on either environment or health. Increasing amounts of legislation exist for building linkages between the two sectors, yet the work of building joint approaches has been slow to begin.

“Three countries report having an environmental health policy: Sierra Leone, Swaziland and South Africa.”

There is a continent-wide need for combined national frameworks with policies that relate to and regulate both sectors.

Policies tend to be reasonably comprehensive, containing most of the required elements. When it comes to the practicalities of implementation, gaps and weaknesses are apparent. Most countries have a national health policy and a national environment policy. In the health sector, policies relate mainly to sanitation, waste, pollution, pesticides and disease vectors.

Policies related to the environment are in areas such as biodiversity, climate change, deforestation, pollution and other environmental risks. In several of these policies, health and environment linkages occur, for example in policies regarding pollution. However, an overarching framework is still lacking and to date only three

countries report having an environmental health policy: Sierra Leone, Swaziland and South Africa. Legal documentation focuses on assessments such as Environmental Impact Assessments (EIAs), pollution management regulations and laws derived from international conventions.

There is less emphasis in the legislation on the human or financial resources required, on other national guidelines that should be shaping local efforts, or on the resources available to those trying to implement plans or policies. Perhaps as a result of this lack of emphasis, countries report insufficient means to enforce and monitor compliance with rules that have been applied.

The same disconnect and siloed approaches that are found in policies and plans are found in national strategies and strategic frameworks. Most countries have separate strategies for environment and for health. There is a prevalence of strategies that work on specific areas that cut across the health and environment sectors. As an example, there is a specific National Strategy on Hygiene and Sanitation in Niger but no broader environmental health strategy.

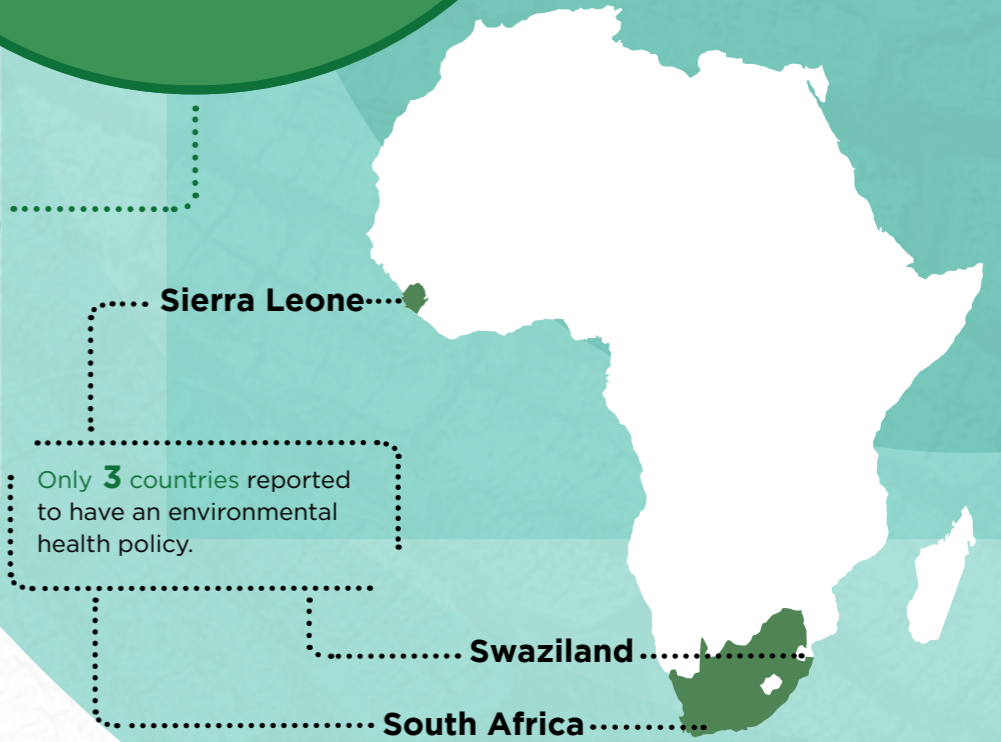
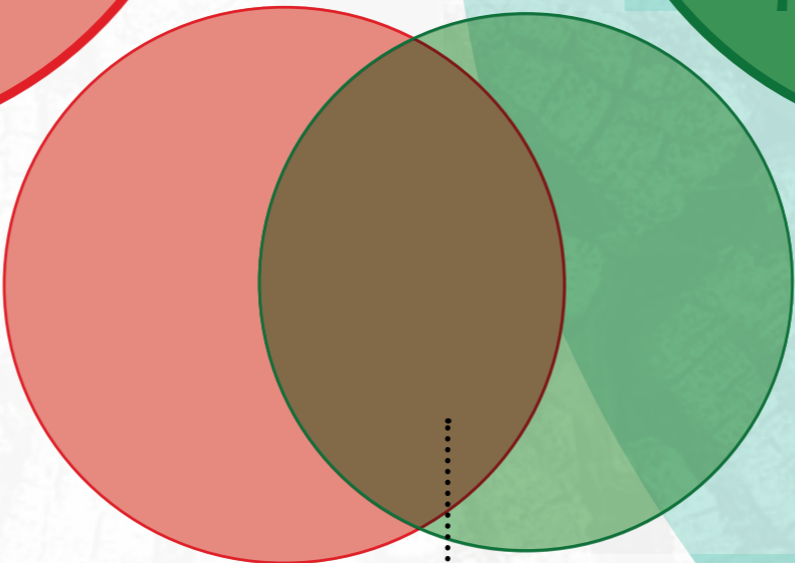
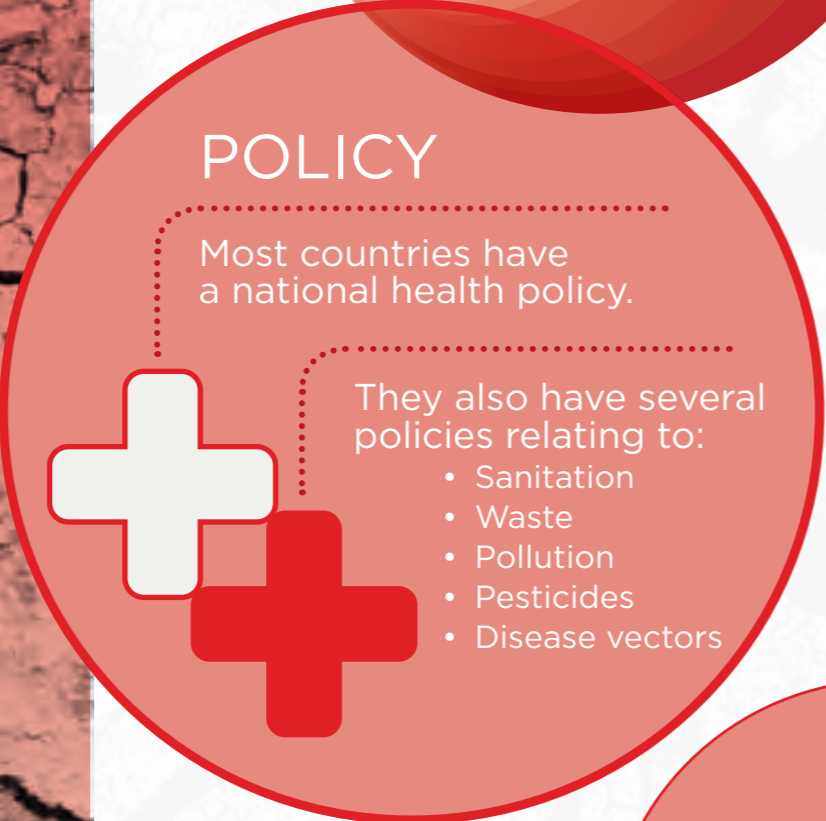
The goals and targets described in regulatory documents are rarely accompanied by detailed descriptions of how they will be achieved. Moreover, intervention capacities are generally insufficient. Contradictions and duplication of efforts are reported often because regulatory frameworks are segmented.

ACTION POINT **2**

DEVELOP OR UPDATE NATIONAL FRAMEWORKS

National policies and frameworks are generally focussed on either environment or health. There is a continent-wide need for combined national frameworks with policies that relate to and regulate both.

SUMMARY: in pictures



ACTION POINT 2

WHAT IS STILL MISSING FROM NATIONAL FRAMEWORKS?

Although there may be existing programmes and plans – as well as commitments to goals and international targets – many countries are still lacking the legislation, regulations and strategies that allow targets to be reached and impact to be achieved.

SUMMARY: in pictures



LEGISLATIONS

- Legislations and regulations consist mainly of guidelines for impacts, including Environmental Impact Assessments, pollution management regulations and laws derived from international conventions.
- However, most are fragmented and in many countries there are insufficient means to enforce and monitor compliance.

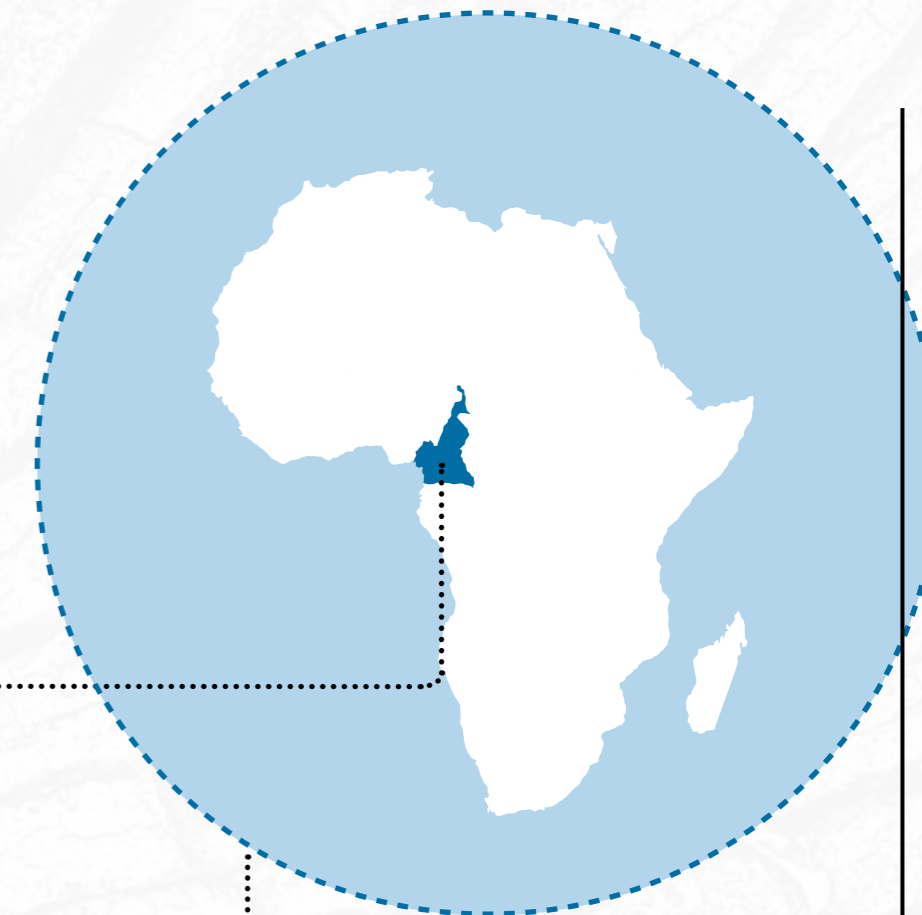


REGULA-

PLANS AND PROGRAMMES

Plans and programmes are generally more specific and often contain environment and health linkages, although these are mostly indirect.

For example, **Cameroon's Programme on Water, Health and Environment.**



GOALS AND TAR-

- The goals and targets described in regulatory documents are often not reached.
- Many of these documents have not been updated and resources are scarce.

STRATE-

- Of the 14 countries that list their strategies, an average of 6 strategies are related to environment and/or health.
- However as with policies, many countries have separate strategies for environment and health.
- Some countries have more focused strategies that zoom in on specific issues.

Niger, for example, has a **National Strategy on Hygiene and Sanitation.**

IMPACT

- Intervention capacities are generally insufficient.
- Contradictions and duplication of efforts are reported often because regulatory frameworks are segmented.



ACTION POINT **3**
**INTEGRATE
OBJECTIVES
INTO POVERTY
REDUCTION
STRATEGY
PAPERS
(PRSPS)**

“Countries generally report that poverty-related health and environment linkages are possible, but are not being exploited.”

In the spirit of the first Millennium Development Goal (MDG) to “eradicate extreme poverty and hunger”, many of the countries that submitted SANA reports have PRSPs. Generally, the countries report that there are many possible and necessary linkages between environment and health within the MDGs. In reality, the two areas are often approached separately, and possibilities for combined approaches are not explored. While PRSPs provide useful frameworks for coordination and accountability, they lack specific mechanisms for intersectoral initiatives.

Of the 22 SANA reports, 19 include information about PRSPs. Of these, 84% (or 16) of the countries report that they have a PRSP. The other 16% (or three) of the countries report that they have similar strategy papers. Furthermore, two countries report that they are currently updating their PRSPs. The first PRSP in Kenya was adopted in 1995, while the first PRSP in Togo was adopted in 2007. The remaining countries published their first PRSP between 1995 and 2007. Updates are not always regular: the most recent were carried out between 2004 and 2012.

Countries generally report that poverty-related health and environment linkages are possible, but are not being exploited. However, an average of 16 national health and/or environment programmes are listed, in 14 country reports. Many reports mention that their lists are not exhaustive.

There are limited examples of PRSP objectives in the reports that link health and environment, which is one reason why so few joint actions are taking place between the two sectors. Specific and limited objectives have been developed in some countries. The Republic of the Congo has an objective in its PRSP to enhance indigenous people’s knowledge and expertise on environmental protection. In Mali, there is an objective in the PRSP to improve productivity and protect the environment through sustainable management of natural resources. The Republic of Benin has a PRSP objective to strengthen the management of biomedical waste in hospitals. The Republic of Guinea has a National Action Plan for Adaptation to Climate Change derived from its PRSP.

Where poverty reduction strategies do exist to promote cross-sectoral collaboration towards shared outcomes, national sectoral plans tend to be developed and implemented in parallel, with little joint action evident. As described in one SANA report, even where intersectoral programmes are under way, funded by the various new international funding instruments, there can be rivalry amongst stakeholders for positions such as who controls the money. Implementation of these programmes in a country has often been unsuccessful. Across the board, intersectoral initiatives described in PRSPs are often not associated with any clear source of funds.

ACTION POINT **3**

INTEGRATE OBJECTIVES INTO POVERTY REDUCTION STRATEGY PAPERS (PRSPS)

Countries report that although there are many possible and necessary linkages between environment and health within the MDGs, in reality they are often approached separately and these possibilities are not explored.

POVERTY REDUCTION STRATEGY PAPERS IN AFRICAN COUNTRIES

16 countries* have PRSPs. **3** countries* have similar strategy papers.

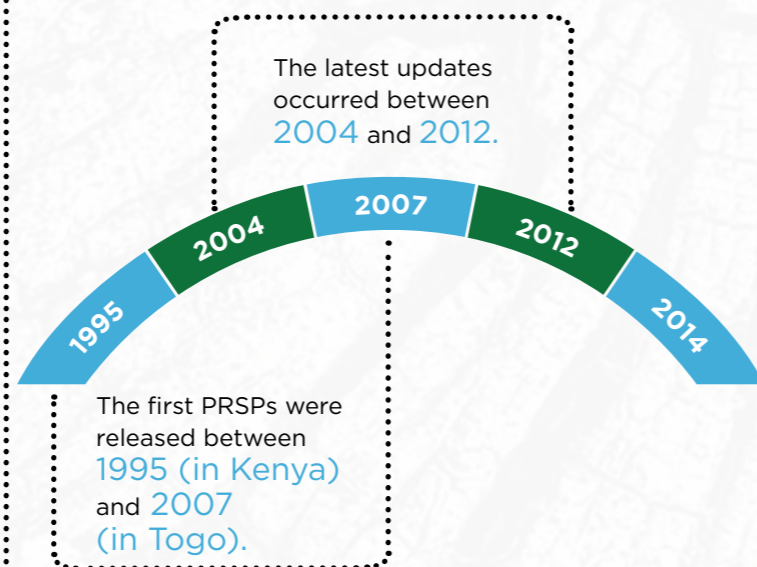


2 countries report they are currently updating their PRSPs.



*19 countries included this information in their SANA reports.

PRSP TIMELINE

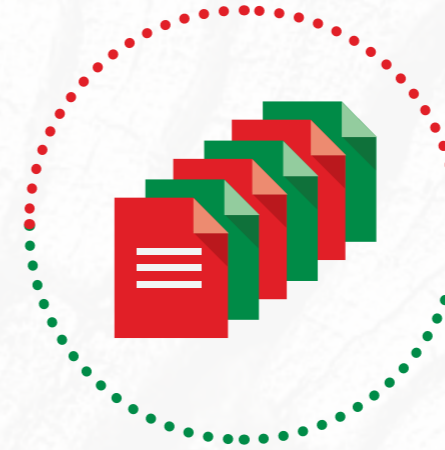


SUMMARY: in pictures

HEALTH AND ENVIRONMENT IN PRSPS

An average of **16*** national programmes on health and/or environment are listed in **14** country reports.

However, countries generally report that poverty-related health and environment linkages are possible, but not being exploited.



EXAMPLES OF HEALTH AND ENVIRONMENT LINKAGES IN PRSPS

Mali has an objective in its PRSP to improve productivity and protect the environment through sustainable management of natural resources.

The **Republic of Guinea** has a National Action Plan for Adaption to Climate Change derived from the PRSP.

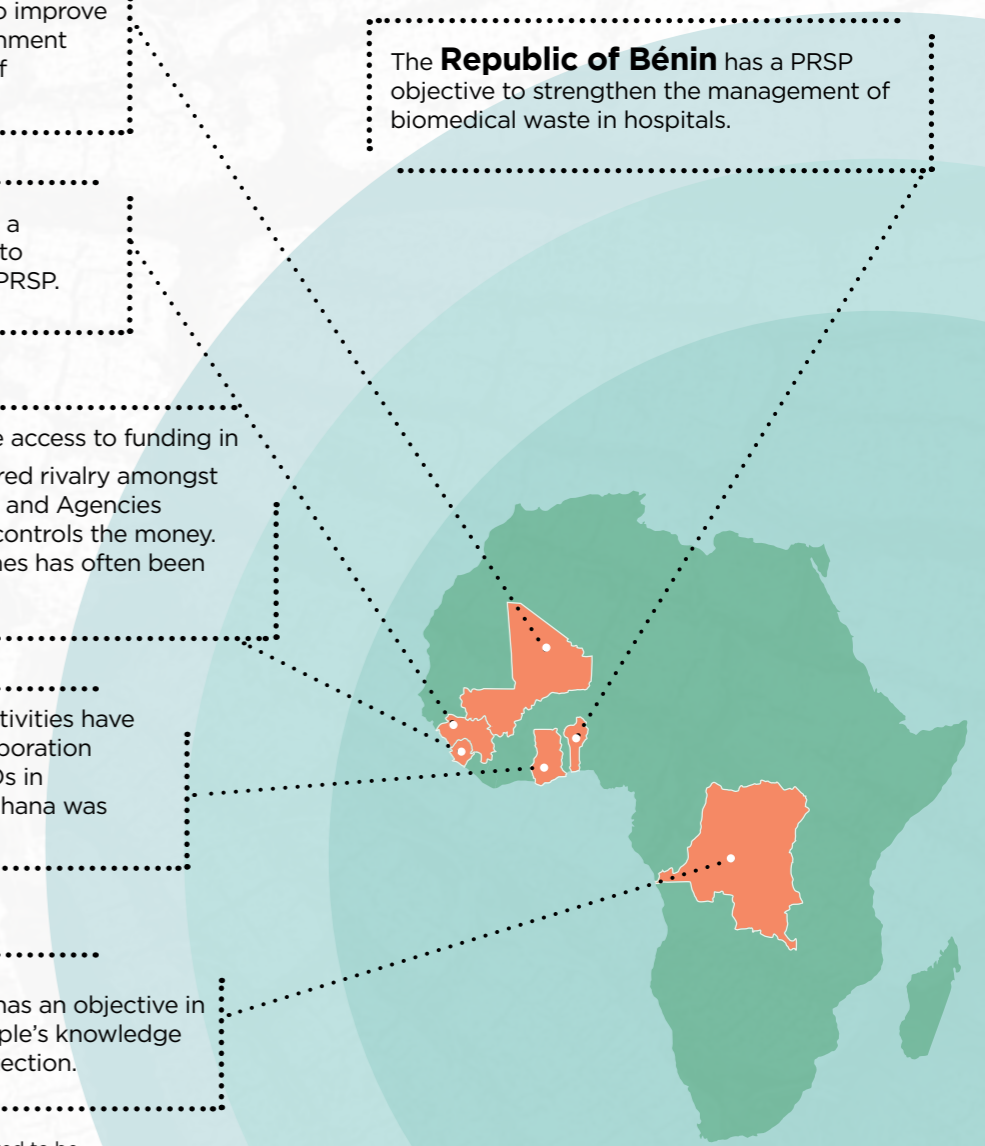
Intersectoral programmes that have access to funding in **Sierra Leone** have often triggered rivalry amongst stakeholder Ministries Departments and Agencies (MDAs) for positions, such as who controls the money. Implementation of these programmes has often been unsuccessful.

Ghana's guinea worm control activities have been highly successful due to collaboration between the water sector and NGOs in the health sector. The last case in Ghana was reported in May 2010.

The **Republic of the Congo** has an objective in its PRSP to enhance indigenous people's knowledge and expertise on environmental protection.

The **Republic of Bénin** has a PRSP objective to strengthen the management of biomedical waste in hospitals.

*In many SANA reports these lists are reported to be not exhaustive.



ACTION POINT **4**
**STRENGTHEN
HEALTH AND
ENVIRONMENT
INSTITUTIONS**

**“In Ethiopia,
38% of
institutions lack
capacity in both
environment
and health.”**

“Most countries report several ministries working in the health and environment field, and various national institutes, research centres and universities.”

The analysis shows that most countries have assessed their national capacities for addressing health and environmental issues. Most countries report several ministries working in the health and environment field, and various national institutes, research centres and universities. There are also several reports that list NGOs and private companies working in these sectors. In many SANA reports, these lists of institutions are reported as not exhaustive. For this reason, a comprehensive numeric overview cannot be produced.

Several countries give specific examples of institutions and other national capacities that specifically apply to the environment and health linkages. Tanzania’s Muhimbili University of Health and Allied Sciences (MUHAS) has a Department of Environmental and Occupational Health with an environment and health programme. In South Africa, environmental health studies are offered at several universities. Throughout Ethiopia, 1 657 people work in the field of environmental health. Cameroon lists six private companies that are working in waste management, and many other countries indicate that they too have private businesses functioning in this area.

Many countries report difficulties in assessing national capacities in detail. In Kenya for example, inadequate data was gathered from institutions, which means that a detailed overview of human and financial resources is not possible.

Although countries list a number of capacities and training institutions, problems are reported in human resources as well as financial resources and institution-building. For example, in Ghana, human resources are reported to be inadequate, especially in the health sector. In Ethiopia, 38% of institutions lack capacity in both environment and health. In many countries, the talent, experience and skills exist, but they are not mobilised within the areas of climate and health. The extent to which human resources are used efficiently is unclear. Often institutions working in climate and health work separately, without sharing information or lessons learned. Because of this, agencies in some countries may have overlapping mandates. Some may be duplicating activities.

Financial resources available within countries for working on linkages tend to be absorbed by recurring costs, including staff costs, building costs and so on. This leaves little money for implementation and project costs. Resources for practical activities tend to be lacking.

ACTION POINT 4

STRENGTHEN HEALTH AND ENVIRONMENT INSTITUTIONS

The analyses show that most countries have assessed their national capacities for health and environment. The following graph presents institutions* from eight countries.

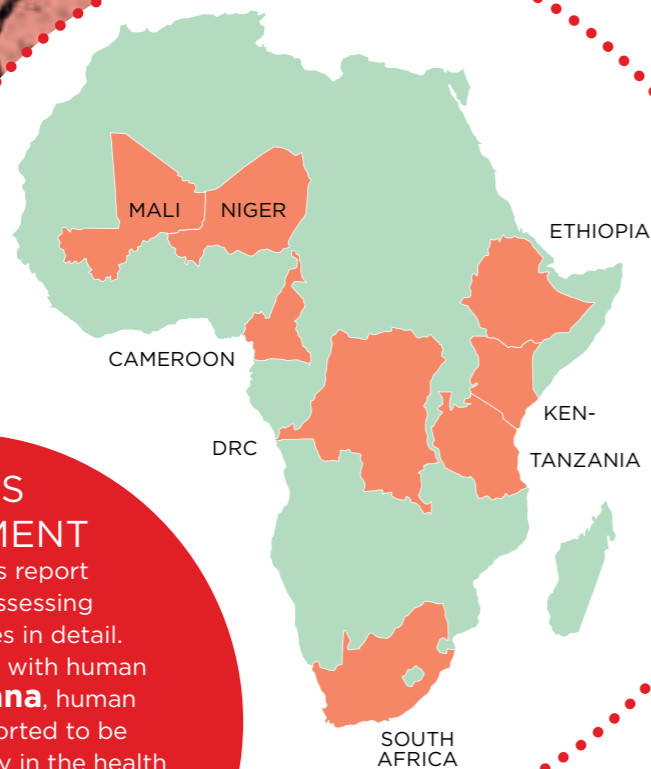
*In many SANA reports these lists are reported to be not exhaustive.

SUMMARY: in pictures

Cameroon's has six private listed companies that are working in waste management. Many countries report having private companies at work in this area.

In **South Africa**, environmental health studies are offered at several universities.

Throughout **Ethiopia**, **1657** people work in the field of environmental health.



MINISTRIES NATIONAL INSTITUTES UNIVERSITIES RESEARCH CENTRES NGOs PRIVATE COMPANIES

	MINISTRIES	NATIONAL INSTITUTES	UNIVERSITIES	RESEARCH CENTRES	NGOs	PRIVATE COMPANIES
TANZANIA	10	10	4	0	6	2
CAMEROON	14	6	8	0	0	5
SOUTH AFRICA	8	10	12	0	0	0
ETHIOPIA	10	4	8	6	12	0
KEN-	8	6	4	2	4	4
NIGER	12	4	4	6	10	5
DRC	6	2	1	1	0	2
MALI	12	10	4	0	10	0



NEEDS ASSESSMENT

Many countries report difficulties in assessing national capacities in detail. There are problems with human resources (in **Ghana**, human resources are reported to be inadequate, especially in the health sector), as well as with financial resources and institution building (in **Ethiopia 38%** of institutions lack capacity in both environment and health).

“Only four countries report having a working coordination mechanism for research.”

A considerable amount of research and learning relating to the linkage between climate and health is taking place across Africa. While knowledge acquisition could be much faster, research papers and similar products are amassing in most settings. The failing is the management of this learning. Countries generally report little or no connection between environment and health sectors when it comes to research. Ad hoc linkages do exist in certain research activities and mechanisms, but these are often scattered and uncoordinated. This lack of coordination increases the challenge.

Four countries report having a health research agenda, while two countries report having none. A similar pattern is found for the environmental sector. Four countries report having an environment research agenda and one country specifically states that it does not. However, in many of the SANA reports, this information is not included.

From the 22 SANA reports, 18 countries report having no combined research agenda for environment and health. Only one country (Mozambique) reports having a combined research agenda in operation at the time of publication of their SANA report.

Only four countries report having a working coordination mechanism for research, usually in the

form of the Ministry of Science or a research council. Nine countries report having no method of coordinating their research on a national level.

Countries do note the necessity of improved coordination. Ethiopia notes that research is very scattered and lacks prioritisation and coordination, leading to cost-ineffective research activities. The number of publications related to health and/or environment per country varies widely. While the number of reports listed in the SANA documents is probably not exhaustive, Ghana reports 58 publications, while the Republic of Benin reports five. Mali published at least 67 papers on health and environment between 2007 and 2009.

Certain countries have reported examples of coordinated research into environment and health. For example, in the Seychelles a joint research project on the impact of climate change on health was conducted by the Ministry of Health and Department of Environment, with funding from the Global Environment Facility/United Nations Development Programme. Madagascar has regular knowledge-sharing sessions and communicates its research efforts intensively online. Its environmental office has a website for sharing research and environmental assessments (www.pnae.mg). The Republic of Benin reports

that researchers are often members of steering committees of major sectoral programmes, and work in organised clusters.

In terms of education, three countries report having specific environmental health study programmes in place: Tanzania, South Africa and Mauritius.

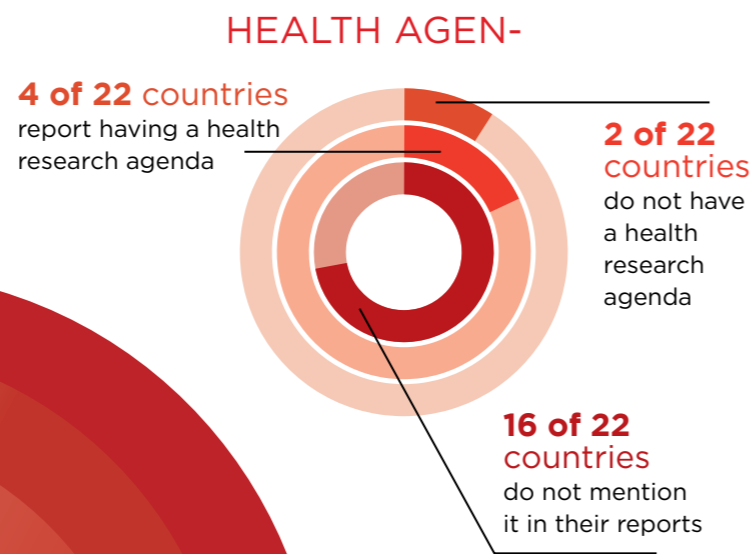
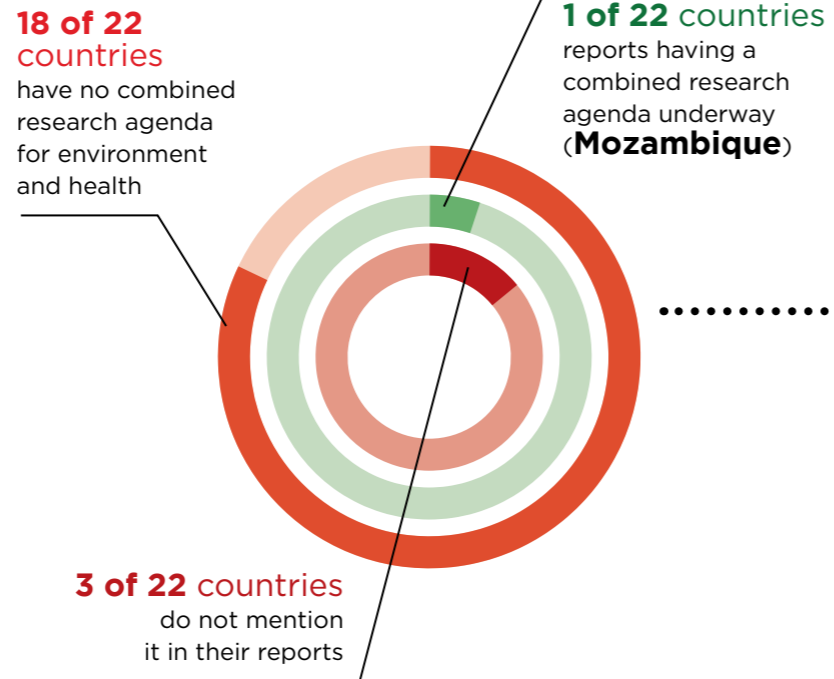
In Tanzania, the Muhimbili University of Health and Allied Sciences (MUHAS) has an intensive health and environment programme, but the SANA report mentions that more programmes of this kind are needed. This report also lists the Clarence Phoenix Memorial Library, which was founded in 2001, as a resource centre for environmental health. While currently underused, it could possibly become the main environmental health centre in East Africa. Other isolated examples for managing the acquisition and management of knowledge are evident in the SANA reports, for example the University of Mauritius has an environmental health cluster. However, examples of broader-reaching coordination in research and knowledge management are less easily found. Additionally, the review reveals that there are limited human and financial resources available for research in the interlinked areas of health and environment.

ACTION POINT 5
SUPPORT KNOWLEDGE ACQUISITION AND MANAGEMENT

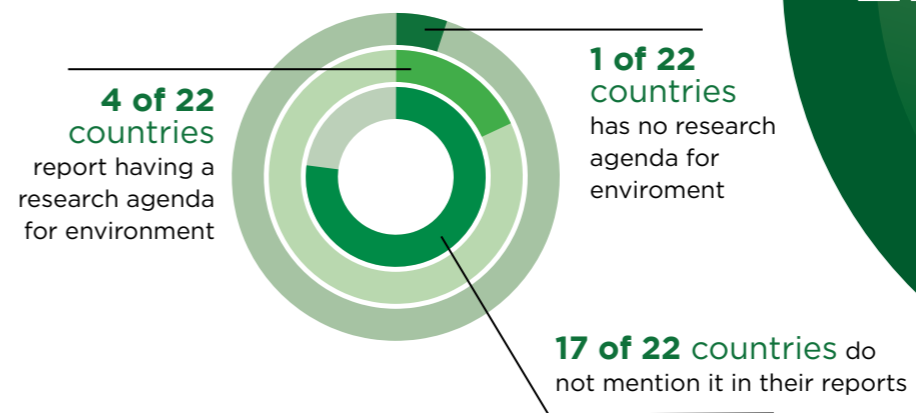
In the area of research, countries generally report little or no connection between environment and health sectors. Ad hoc linkages do exist in certain research activities and mechanisms, but these are often scattered and uncoordinated. This lack of coordination increases the challenges.



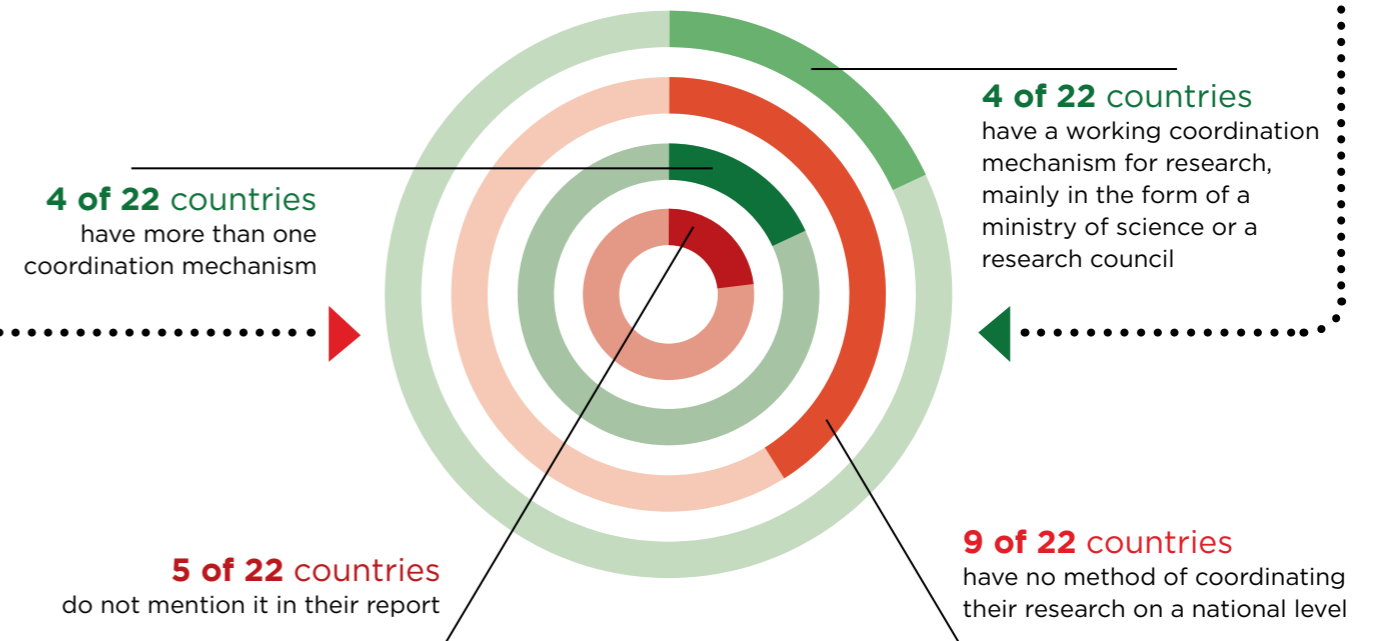
RESEARCH AGENDAS AND COORDINATION



ENVIRONMENT AGEN-



COORDINATION MECHANISM



SUMMARY: in pictures

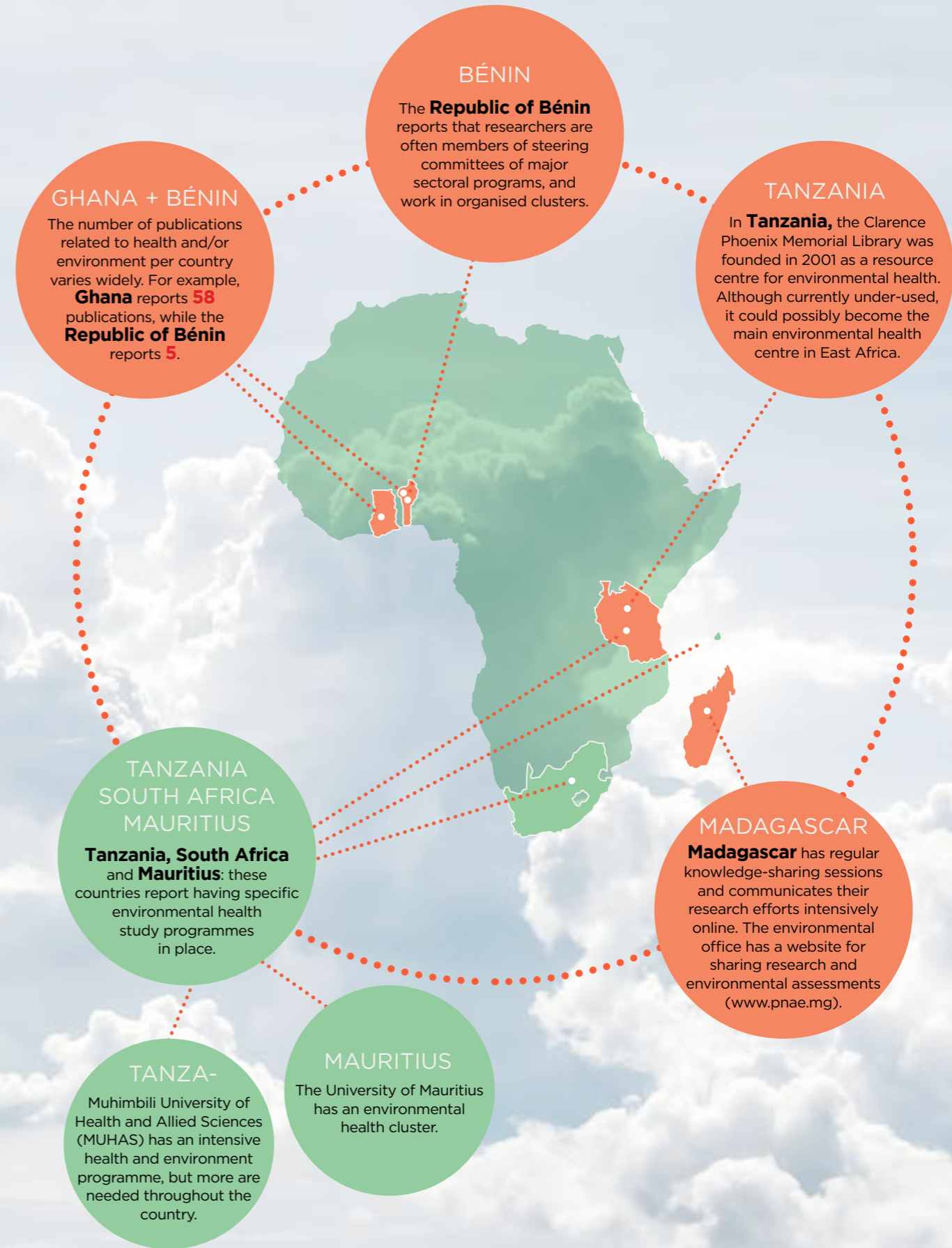


WHERE DO RESEARCH AND EDUCATION LINK ENVIRONMENT AND HEALTH?

Certain countries have reported examples of coordinated research into environment and health. Others are showing education linkages between the two fields.



COUNTRIES WITH HEALTH AND ENVIRONMENT EDUCATION



ACTION POINT 6

ESTABLISH OR STRENGTHEN SYSTEMS FOR ENVIRONMENT SURVEILLANCE

The analyses show that **11** countries have systems for environmental surveillance, **3** countries have several systems in place. Conversely, **5** countries do not have established systems and most of their surveillance is of an ad hoc nature.

“The analyses show that **11 countries have systems for environmental surveillance.**”

SANA reports show that countries do have systems for conducting surveillance for communicable diseases. Most countries also conduct surveillance on environmental issues. As with the other Action Points, the challenges are mainly found in scope, coordination and investments in techniques that can cover the linkages between the two areas.

The analyses show that 11 countries have systems for environmental surveillance, while three have several systems in place. Conversely, five countries do not have established systems. Within these five, most surveillance is of an ad hoc nature. Marked differences exist in national approaches to environmental surveillance. Often this tends to be performed by ministries of environment, by producing State of Environment Reports (SoE). These are published with varying degrees of frequency, ranging from two to five years. In many cases, the SoE reports are not produced at the intended frequency due to a lack of capacity, coordination or resources. When the reports are produced they often take a broad view of the environment, including coverage of socioeconomic and cultural factors. If health issues are highlighted at all, it is within these more general areas, and little detail or focus is given.

Priority environmental surveillance areas include fresh water (groundwater, rivers, drinking water, wastewater), marine water (marine pollution, sea levels), air (indoor and outdoor air quality, greenhouse gas (GHG) emissions, ozone, dust levels) and soil (erosion, land degradation), biodiversity (deforestation, ecosystems). Countries vary on the focus of their surveillance areas outside of the SoE reports, and they also vary on the periodicity of research.

All countries report some systems for health surveillance. Seventeen countries report having implemented the Integrated Disease Surveillance and Response (IDSR), while only two countries have not. Priority areas for health surveillance include life expectancy, morbidity and mortality due to malaria, tuberculosis and cholera (among others), diarrhoeal diseases in children under five years, availability of drugs and vaccines, and food safety. In Gabon, monitoring is not limited to diseases in humans. Animal mortality is also surveyed to monitor transmissible diseases from wildlife, such as Ebola.

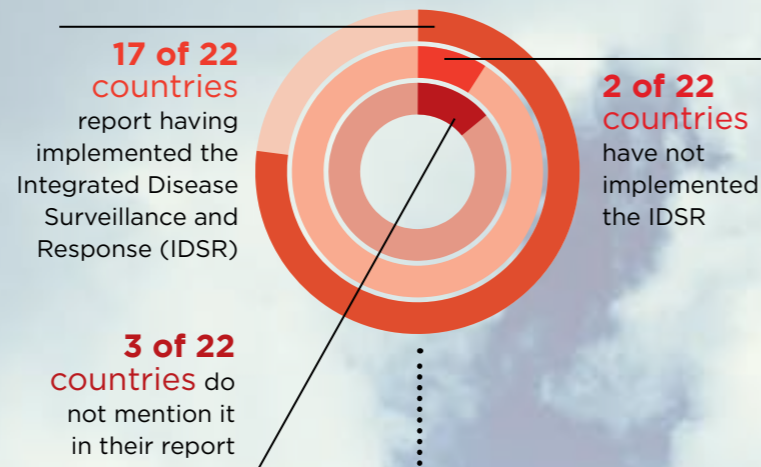
In only two countries is the IDSR linked to environmental surveillance. In the SANAs of 12 countries, linkages in the surveillance systems are noted as weak or non-existent. The main reason for this shortcoming is cited as a lack of awareness, coordination and resources. Several countries do monitor environmental health determinants, most commonly water quality, radioactive materials, air quality, disease vectors, chemicals and medical or biological waste. Kenya has a linked environment and health surveillance system that monitors determinants in both areas.

Broadly, however, in most countries these efforts are rarely coordinated well and this results in duplication of efforts, and data not being shared at all.

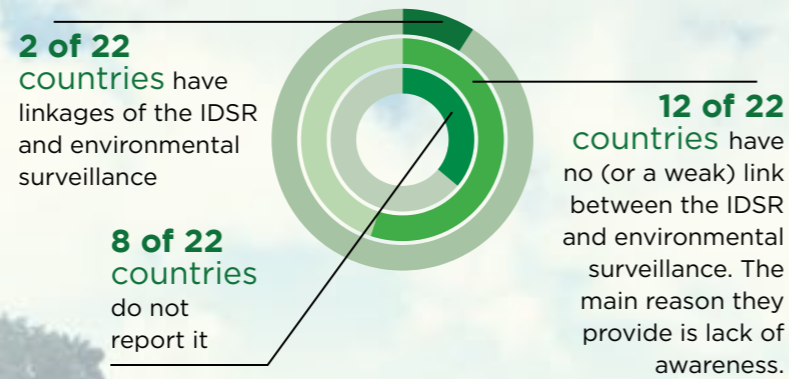
ACTION POINT 6
ESTABLISH OR STRENGTHEN SYSTEMS FOR ENVIRONMENT SURVEILLANCE

SUMMARY: in pictures

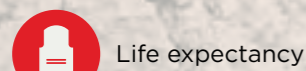
HEALTH SURVEILLANCE



IDSR AND ENVIRONMENTAL LINKAGES



PRIORITY AREAS FOR HEALTH SURVEILLANCE INCLUDE:



Life expectancy



Morbidity and mortality due to malaria, tuberculosis, HIV/AIDS, cholera, etc.



Diarrhoeal diseases in children under 5 years



Availability of drugs/vaccines



Food safety

In , monitoring is not limited to diseases in humans. Animal mortality is also surveyed to monitor transmissible diseases from wildlife, such as Ebola.



PRIORITY AREAS FOR ENVIRONMENT SURVEILLANCE

Marked differences exist in national approaches to environmental surveillance. Some countries monitor routinely whereas others focus on monitoring specific events. Periodicity for reports is almost always stated, but in many cases not reached due to lack of capacity, coordination or resources. Priority surveillance areas include...

- FRESH WATER** Ground water, rivers, drinking water, waste water
- AIR** Indoor and outdoor air quality, greenhouse gas (GHG) emissions, ozone, dust levels
- OTHERS** Waste, climate change
- BIO-DIVERSITY** Deforestation, ecosystems
- SOIL** Erosion, land degradation
- MARINE WATER** Marine pollution, sea levels, coastal areas

PRIORITY AREAS FOR ENVIRONMENTAL SURVEILLANCE INCLUDE:

Several countries monitor environmental health determinants, most commonly:



Water quality



Radioactive materials



Air quality



Availability of drugs/vaccines



Chemicals and medical or biological waste

However, these efforts are rarely coordinated well and this results in duplication of efforts and data not being shared.

Kenya has a linked Environment and Health surveillance system that monitors determinants in both areas.



IMPLEMENT MECHANISMS FOR ENFORCING INTERNATIONAL CONVENTIONS AND NATIONAL REGULATIONS

There are over **30** agreements, protocols and conventions relating to health and environment in Africa. The problem is not so much in ratifying multilateral environmental agreements, but more in implementing them. Legal obligations are often not met as a result of lack of capacity, lack of political commitment, or organisational structures unable to deliver change.

“Twenty countries list the international conventions they have signed, resulting in an average of 21 conventions per country.”

Conventions and international agreements are more readily signed than acted upon. There are more than 30 conventions, protocols and agreements that have a direct relevance to health and environment in Africa. Most countries have ratified the Multilateral Environmental Agreements. The extent to which countries have the necessary formats for action plans for these MEAs varies.

SANA documents note that the human and financial resources dedicated to the implementation of international conventions and agreements are limited. This is the main reason given for countries not being able to prepare their national plans. Few efforts are apparent to access resources within the international financing mechanisms. Especially for the Global Environment Facility and the Strategic Approach to International Chemicals Management (SAICM) Quick Start Programme (QSP) Trust Fund, technical and financial resources are available but are rarely sought.

Having national action plans prepared is no guarantee of implementation. Financial and technical limitations are still cited as major obstacles. Resources from the international financing mechanisms appear to drive efforts. Countries note that national government resources are not directed towards international agreements for health/environment.

Overall, there is an apparent lack of commitment by countries with regard to the implementation of

these conventions and agreements. Many of these are not domesticated or translated into action. Where legal frameworks have been developed in the area of health and the environment, there are problems with measuring and enforcing compliance.

Marked differences exist in relation to which countries have shared about their engagement with international conventions. Twenty countries list the international conventions they have signed, resulting in an average of 21 conventions per country. The Seychelles is the country with the fewest conventions: it has signed only six, while Ghana lists 45.

The United Nations Framework Convention on Climate Change (UNFCCC) is a particularly important convention. All African countries, except for Western Sahara, have signed the UNFCCC. Of the countries that discuss this convention in their SANA report, 10 have a national implementation plan, while three countries do not. Furthermore, 11 countries have instated a focal point for the UNFCCC and eight countries have allocated resources, although some report a lack of resources (usually financial). Government funding is generally low, with most countries reporting 10 to 30%. Exceptions include Botswana, where the government fully funds the UNFCCC and Kenya, where the government funds 90%.

The Libreville Declaration has specifically asked African countries to ratify the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa. Little information is given on this convention in the SANAs, but 14 countries report having signed it, while six countries have not. Only three countries report having an implementation plan and four countries have put focal points in place. Resources and funding for this convention are generally low.

In cases where countries have signed and are implementing the conventions, there is little effort at developing synergies among the pursuant programmes. Those acting as focal points for conventions, often in government posts, have many other competing responsibilities and priorities. Efforts around implementing or promoting a convention may be limited to a specific government office, with those working in other departments or other parts of government remaining unaware and uninvolved. In the absence of mainstreaming the work and advocacy for more collaborative efforts, broad national action is rare. As an example, in Cameroon, a national strategy and action plan to integrate health and environment was developed in 2004 by the Ministries of Health and Environment under the auspices of WHO. Unfortunately, due to lack of funding, implementation has not been effective.

ACTION POINT **7**
IMPLEMENT MECHANISMS FOR ENFORCING INTERNATIONAL CONVENTIONS AND NATIONAL REGULATIONS

UNFCCC
 UNITED NATIONS FRAMEWORK
 CONVENTION ON CLIMATE CHANGE

All African countries, except for Western Sahara, have signed the UNFCCC. Of the countries that discuss this convention in their SANA report:

- **10 countries** have a national implementation plan, while **3 countries** do not



- **11 countries** have instated a focal point for the UNFCCC
- **8 countries** have allocated resources, although some report a lack of resources (usually financial)
- Government funding is generally low. Most countries report that the government contributes **10-30%** to the total UNFCCC funding.
- Exceptions include Botswana, where the government fully funds the UNFCCC and Kenya, where the government funds **90%**.

THE BAMAKO CONVENTION
 ON THE BAN OF THE IMPORT INTO AFRICA AND THE CONTROL OF TRANSBOUNDARY MOVEMENT AND MANAGEMENT OF HAZARDOUS WASTES WITHIN AFRICA

The Libreville Declaration has specifically asked African countries to ratify the Bamako Convention. Not much detailed information is given on this convention, but so far:

- **14 countries** have signed it, while **6 countries** have not



- Only **3 countries** report having an implementation plan
- **4 countries** have focal points
- Resources and funding for this convention are generally low.

SUMMARY: in pictures

IMPROVEMENTS NEEDED

Much is needed in this area. In general, government contributions for implementing international conventions are low. Many are not domesticated or translated into action. The focal points for conventions often have many other responsibilities and the convention may not be their priority. Activity is often limited to a specific government office.

In addition, the development of regulations and legislations is a slow process. Where legal frameworks are in place there are problems with measuring and enforcing compliance.

Marked differences exist between countries' engagement with international conventions. **20 countries** listed the international conventions they have signed.



The **Seychelles** is the country with the least conventions - it has signed only **6**.



SET UP NATIONAL MONITORING AND EVALUATION MECHANISMS

Some countries do have existing monitoring and evaluation mechanisms, but more consistency and intersectoral collaboration is needed to ensure greater efficiency.

“Eight out of the 22 responding countries have an overarching monitoring and evaluation mechanism in place.”

Performance monitoring is a continuous systematic and critical review of a project/programme with the aim of checking progress. National performance monitoring and evaluation mechanisms for priority programmes related to health and environment are not well established in many African countries. Peer review mechanisms, which are helpful to validate information and to share best practices, are also rare.

Interpretation of what constitutes an overarching monitoring and evaluation mechanism for health and the environment may differ from country to country. Most countries report having no overarching and functioning system, but outline the different levels of monitoring and evaluation that exist within national sectoral activities, including those associated with health and the environment. Only eight out of the 22 responding countries have an overarching monitoring and evaluation mechanism in place. Seven countries report having several mechanisms that are either project-based or sectoral.

Often mentioned by countries are the State of the Environment Reports or various health surveillance measures such as the Integrated Disease Surveillance and Response System. Also mentioned are more specific areas like the annual State of Air in South Africa report. Periodicity for the various reports and evaluation systems varies greatly between countries. Some countries have a functioning systematic

publishing method, but many others miss years and publish reports only occasionally.

Several countries reported specific examples of performance indicators for health. In Botswana, malaria cases are monitored systematically and a report is published, the Malaria Programme Performance Review. As a way of monitoring the tsetse fly eradication programme in Ethiopia, the number of sterile flies released per square kilometre is measured. In Kenya, the ratio of doctors to general citizens is evaluated regularly. In the Seychelles, the coverage of immunisations for different diseases is monitored.

Similar examples were given of measuring performance indicators for environment. In Tanzania, there is systematic monitoring and evaluation of many priority areas, such as the status and management of wetlands. The response to climate change in South Africa is assessed by the National Climate Change Response Monitoring and Evaluation system. In Ghana, measures of biodiversity, species loss, deforestation and degrading of ecosystems are monitored. In the Republic of Benin, diseases related to environmental pollution are monitored.

Although several countries do have existing monitoring and evaluation mechanisms, more consistency and intersectoral collaboration is needed to ensure greater efficiency.

SET UP NATIONAL MONITORING AND EVALUATION MECHANISMS

SUMMARY: in pictures

NATIONAL MONITORING AND EVALUATION MECHANISMS

8 of 22 countries report an overarching national monitoring and evaluation mechanism to assess performance priority programmes.



Several countries report having project-based or sectoral mechanisms.

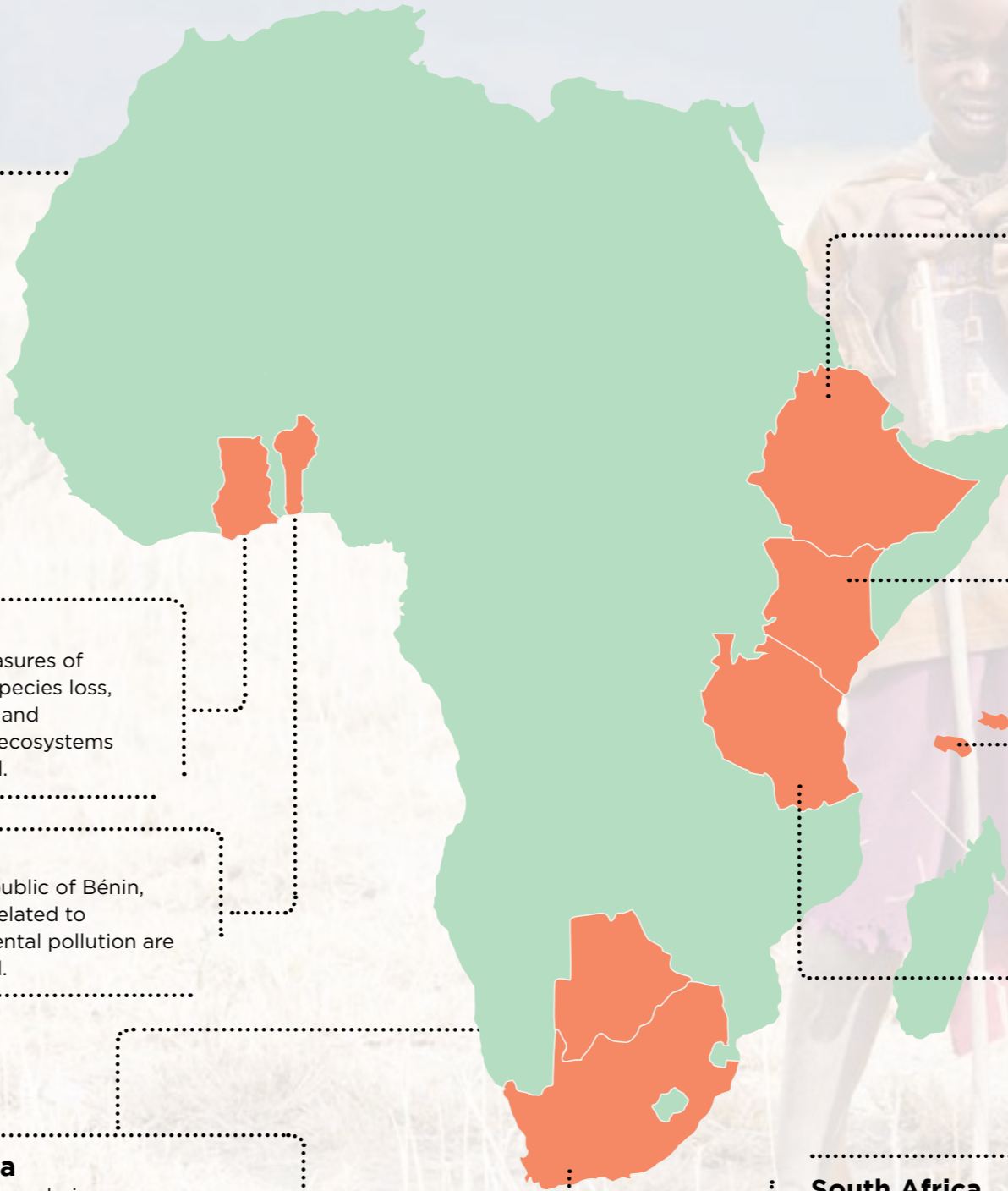


In terms of functionality, most countries use reports to assess performances. The reports range from State of Environment reports (SoE) and Health Statistics, to reports on specific priority areas, such as the Annual State of Air report in South Africa.



PERIODICITY

Periodicity of reports varies widely between countries. Some countries have a functioning systematic publishing method. Many others miss years and only publish reports occasionally.



Ghana

In Ghana, measures of biodiversity, species loss, deforestation and degrading of ecosystems are monitored.

Bénin

In the Republic of Bénin, diseases related to environmental pollution are monitored.

Botswana

In Botswana, malaria cases are monitored systematically and a report is published: the Malaria Programme Performance Review.

Ethiopia

As a way of monitoring the tsetse fly eradication programme in Ethiopia, the number of sterile flies released per square kilometre is measured.

Kenya

In Kenya, the ratio of doctors to general citizens is evaluated regularly.

Seychelles

In the Seychelles, the coverage of immunisations for different diseases is monitored.

Tanzania

In Tanzania, there is systematic monitoring and evaluation of many priority areas, such as the status and management of wetlands.

South Africa

The response to climate change in South Africa is assessed by the National Climate Change Response Monitoring and Evaluation system.



ACTION POINT 9

SYSTEMATIC ASSESSMENT OF HEALTH AND ENVIRONMENT RISKS

Integrating Health and Environmental Impact Assessments (HIAs and EIAs) is essential. In the SANA report for Niger, the necessity for HIA-EIA integration is illustrated by examples such as pollution from engines and effluent during constructions. It is also noted that building activities can cause the onset or aggravation of diseases like malaria and schistosomiasis.

“EIAs are in place in 16 out of 22 countries, 14 of which have accompanying legislation.”

Countries generally have national legislation that ensures they assess the environmental impact of projects. There is far less legislation to support assessing the health impacts of development projects.

In most countries, an Environmental Impact Assessment (EIA) is required for development projects, for example large construction projects. EIAs are in place in 16 out of 22 countries, 14 of which have accompanying legislation. An EIA is most commonly executed by private experts, the Ministry of Environment, or a department thereof, and stakeholder engagement is required in nine countries. Most of the EIAs also require information disclosure and complete transparency. This is the case in at least six countries: Madagascar even posts the processes on a public website. Some countries use a Strategic Environmental Assessment (SEA) to identify major environmental or social consequences of policies or plans. However, none of these reports includes the health impacts of these policies or plans.

Health Impact Assessments (HIAs) are much less common than EIAs and are generally not supported by legislation. Only one country reports having a functional, stand-alone HIA process in place, while three countries report conducting their HIAs on an ad hoc basis. Where HIAs are integrated with EIAs, eight countries note that the integration is not to a satisfactory degree: often the health portion of the assessment is not done by experts and has a more “social” character than a scientific one. Only Sierra Leone reports having an Environmental, Social and Health Impact Assessment (ESHIA), a fully integrated assessment process where EIA and HIA come together.

This kind of integration is important, as shown by the SANA report for Niger that documents how pollution from engines and effluent during construction can jeopardise the environment while also causing the onset or aggravation of diseases like malaria and schistosomiasis.

In some countries, EIA processes have resulted in legal cases against environmental health damage. For example, in Cameroon, several fines were reported for cases that include pollution, illegal exploitation of resources, spills and/or failure to conduct an EIA. In Niger, a trial has been in progress over the proposed disposal of waste oil from Soraz on landfill, and for failure to perform an impact assessment. In Madagascar, a trial was held concerning the establishment of a tobacco factory in the middle of a crowded city.

Thirteen countries publish a State of the Environment report (SoE) or similar, but four countries report that they regularly exceed periodicity goals for reports, which normally range from one to five years. Eight countries report the inclusion of health in these environmental reports, but to a varying extent. For example, the South African State of the Environment report includes a section on the relationship between human settlement and the environment. However, coverage of health issues was often found to be lacking in detail.

ACTION POINT **9**
SYSTEMATIC ASSESSMENT OF HEALTH AND ENVIRONMENT RISKS

SUMMARY: in pictures

13 of 22 countries publish a State of the Environment report (SoE) or similar.

8 of 22 countries report the inclusion of health in these environmental reports, to a varying extent.

4 of 22 countries report that they regularly exceed periodicity goals for reports - these range from 1 to 5 years.

For example, the **South African** State of the Environment report, includes a section on the relationship between human settlement and the environment.



ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs)

EIAs are usually conducted either by private experts or the Ministry of Environment (or a department). In most countries, an EIA is required for development projects, for example large construction projects.

16 of 22 countries report having instated EIAs.

14 of 22 countries report that legislation for EIAs is in place.

DETAILS AND

- Stakeholder engagement is required in most countries - **9 countries** report it being part of their EIA.
- Most of the EIAs also require information disclosure and complete transparency. This is the case in at least **6 countries** - Madagascar even posts the processes on a public website.
- Besides EIAs, many countries have Strategic Environmental Assessments (SEAs), conducted to assess risks in policies, programmes and plans.

HEALTH IMPACT ASSESSMENTS (HIAs)

HIAs are much less common than EIA and are generally not supported by legislation.

- Only **1 country** reports to having a functional, stand-alone HIA process in place.
- **3 countries** report conducting their HIAs on an ad hoc basis.
- Where HIAs are integrated with EIAs, **8 countries** note that the integration is not to a satisfactory degree - often the health portion of the assessment is not done by experts and has a more "social" character than a scientific one.

HEALTH AND ENVIRONMENT ASSESSMENT

Sierra Leone reports having an Environmental, Social and Health Impact Assessment (ESHIA), a fully integrated assessment process where EIA and HIA come together.

ENVIRONMENTAL HEALTH DAMAGES

EIA processes have resulted in legal cases against environmental health damages.

- In **Cameroon**, several fines were reported for cases that include pollution, illegal exploitation of resources, spills and failure to conduct an EIA.
- In **Niger**, a trial has been in progress over the proposed disposal of waste oil from Soraz on landfill, and for failure to perform an impact assessment.
- In **Madagascar**, a trial has been in progress over the establishment of a tobacco factory in the middle of a full quarter of the city of Antananarivo.

DEVELOP PARTNERSHIPS FOR TARGETED ADVOCACY

Most of the advocacy plans are sectoral and focus mainly on either environment or on health. Partnerships are needed because linkages are currently indirect and often ministries or departments do not work together.

“Consolidated national plans for communication and advocacy on the linkage of health and environment are rare, and partnerships for advocacy very limited.”

Governments are communicating to populations about a range of health or environment issues. All countries have communication activities within their health and environment sectors. In the SANA reports, seven countries documented national communication and advocacy plans. Such plans are generally sectoral and focus mainly on either environment or health. Partnerships are needed because linkages are not made between the two areas and often ministries, departments or supporting agencies do not work together.

Ministries of health tend to advocate on subjects such as hygiene and sanitation, or prevention of the proliferation of disease vectors, without taking environmental concerns into account. Similarly, ministries of environment undertake advocacy and communications on environmental issues without necessarily articulating the possible outcomes or impacts on health.

A wide range of communication and advocacy activities are reported in the SANA reports. Ghana has a national Desertification Day and its Environmental Protection Agency has an educational unit that deals with communication of impacts of the environment on health. Tanzania reports that it supports World Environment Day. There is no direct link with the Ministry of Health, but engagement in national cleanness competitions has been seen to peak during this day. In Botswana, there is an advocacy and communication strategy for malaria. Cameroon has a radio programme called Update on the Environment. Mozambique supports World Car-free Day. The Democratic Republic of Congo organizes health and environment education programmes in schools, covering factors such as disease, nutrition and immunisation. In the Seychelles, a local project is run by members of the private sector (such as hotels) to help improve general health and

the environment. Many ad-hoc communication initiatives occur on themes related to health and the environment, but shared national platforms for communication on linkages for health and environment are much less in evidence.

Consolidated national plans for communication and advocacy on the linkage of health and environment are rare, and partnerships for advocacy very limited. Opportunities to develop such focused communications activities have been identified but are not properly utilised yet, including parliamentarians' networks, NGOs, school programmes and social and environmental impact assessments of development projects.

However, several countries list opportunities. Cameroon reports that a Ministry of Communication exists, but that it does not have an advocacy plan yet. The Republic of Guinea mentions that meetings and sharing sessions could be held for parliamentarians, while Mali has a plan to target civil society. The country reports that the media can be used to communicate health and environment matters. Niger notes that local communities could be empowered through decentralisation of powers, while Kenya sees opportunities for the targeting of youth through theatre, sports competitions and environment or health clubs. Ghana reports that the private sector could be included through clean-up activities or sponsorships of group programmes for women and youth. In Cameroon, one idea is to embed environmental health into school curricula through the ministries of education.

In the area of partnerships for advocacy on health and environment linkages, the general situation seems to be one of many opportunities and a great amount of potential, against a current reality typified by many voices communicating on many issues, without an orchestrated plan.

ACTION POINT **10**
DEVELOP PARTNERSHIPS FOR TARGETED ADVOCACY

7 of 22 countries report having national communication and advocacy plans.



Mali
 The plan is to target civil society. The media can be used to communicate health and environment matters.

Guinea
 Meetings and sharing sessions could be held for parliamentarians.

Ghana
 The private sector could be included through clean-up activities, or sponsorships of group programmes for women and youth.

Ghana
 Desertification Day. The Environmental Protection Agency also has an educational unit that deals with communication on impacts of the environment on health.

Botswana
 Advocacy and communication strategy for malaria.

POSSIBLE AND EXISTING ADVOCACY EXAMPLES

— Solid line: Existing advocacy examples
 Dotted line: Possibilities and plans for advocacy

Niger
 Local communities could be empowered through decentralisation of powers.

Cameroon
 Radio programme called "Update on the Environment".

Cameroon
 A Ministry of Communication exists, but does not have an advocacy plan yet. Environmental health must be embedded into school curricula through the ministries of education.

DRC
 The **Democratic Republic of the Congo** has health and environment education programmes in schools, that covers factors like disease, nutrition and immunisation.

Kenya
 Youth could be targeted through theatre, sports competitions and environment or health clubs.

Seychelles
 A local project is run by members of the private sector (such as hotels) to help improve general health and environment.

Tanzania
 World Environment Day. There is no direct link with the Ministry of Health, but engagement in national cleanliness competitions has been seen to peak during this day.

Mozambique
 Organizes World Day without a Car.

SUMMARY: in pictures

ACHIEVE A BALANCE IN BUDGETARY RESOURCE ALLOCATION FOR PRIORITY PROGRAMMES

Since health and environment are still governed separately, their budgets are allocated in a similar manner. Most countries report their budgetary resource allocations for health and environment, but just a few report joint allocations.

“The funds allocated to the individual health and environment ministries are generally less than required.”

Country reports clearly show that there is consistent under-resourcing of joint health and environment activities, despite the very substantial burden of disease and related economic and social consequences that could be averted.

The funds allocated to the individual health and environment ministries are generally less than required. On average, countries allocate 6.4% of the national budget to their ministries of health. The allocation ranges from 1.9% in Guinea to 12.4% in the Seychelles, but all countries are below the Abuja Declaration target of 15%. A much smaller average of only 0.9% is allocated to the ministries of environment. It ranges from 0.005% in Cameroon to 3.2% in The Republic of Benin. The Seychelles reports an allocation of 6%, but the Ministry includes transport and home affairs.

Money for health is mainly directed towards curative programmes rather than broader public health and disease prevention activities. Health funds going to disease prevention range from 0.12% in Madagascar

to 97% in Congo. Programmes include control of malaria, prevention of AIDS, leprosy or other communicable diseases, sanitation activities and school health programmes.

The environment receives less than 1 to 2% of total government spending. As with health, the greatest share of the budget goes to reacting to existing problems rather than avoiding them from the outset. Environmental legislation and regulation enforcement takes more funding than addressing the economic and social root causes of environmental degradation and human illness. An average of 36% of the environment spend is used for environmental preservation, ranging from eight per cent in Botswana, to 83% in Mali. Programmes include fighting deforestation, wastewater treatment, climate change adaptation and management of chemicals.

Because of the focus on legislation and regulation enforcement, joint health and environment

initiatives that are funded jointly by the health and the environment sectors are scarce. There are a few examples however, such as the projects on the demonstration of the cost-effectiveness of alternatives to DDT for disease vector control which are being implemented by the ministries of health of some countries, but funded by the Global Environment Facility.

Most countries do not have linkages between environment and health and therefore do not report allocating combined resources for the sectors. However, environmental health allocations are present in certain countries. In Swaziland the budget for environmental health exceeds the one for the Malaria Programme. In Cameroon, a health and environment concept was developed in 2003 in partnership with WHO. However, a lack of funding has interfered with implementation.

ACHIEVE A BALANCE IN BUDGETARY RESOURCE ALLOCATION FOR PRIORITY PROGRAMMES

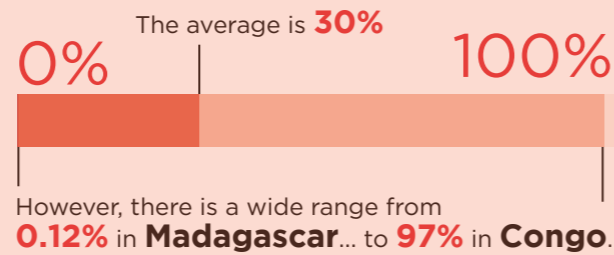
HEALTH ALLOCATIONS

On average, countries allocate **6.4%** of the national budget to their ministries of health.



SPECIFIC ALLOCATIONS FOR HEALTH

Disease prevention receives a significant proportion of the health budget.



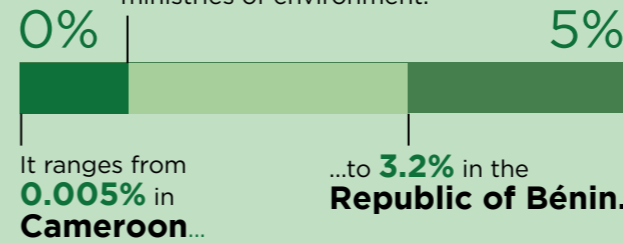
Programmes funded under the ministries of health include:

- Malaria control programmes
- Control programmes for AIDS, leprosy, tuberculosis and other communicable diseases
- Sanitation activities
- School health programmes

In general, health ministries focus on curative programmes in terms of both professional training and existing institutional structures, rather than on primary prevention and promotion of health.

ENVIRONMENT ALLOCATIONS

On average, only **0.9%** is allocated to the ministries of environment.



The **Seychelles** reports an allocation of **6%**, but the ministry includes transport and home affairs.

SPECIFIC ALLOCATIONS FOR ENVIRONMENT

An average of **36%** of the Environment spend is used for environmental preservation.



Programmes funded under the Ministries of Environment include:

- Fighting deforestation
- Waste water treatment
- Climate change adaptation
- Management of chemicals

In general, environment ministries tend to be most active in the areas of legislation and regulation enforcement rather than addressing economic and social root causes of environmental degradation and human ill health and achieving the necessary behavioural changes.



Swaziland
In Swaziland the budget for environmental health exceeds the one for the Malaria Programme. UNICEF.

Cameroon
In Cameroon environment developed partnership WHO. However funding has i. implementatio

Kenya
Kenya is home to a programme called "Environmental Health Services", which is 100% funded by UNICEF.

ENVIRONMENTAL HEALTH ALLOCATIONS

Most countries do not have linkages between environment and health and therefore do not report allocating combined resources for the sectors. However, environmental health allocations are present in certain countries.



PART 4

WHAT DOES EACH ACTION POINT REQUIRE?

The needs assessments show that, in general, each of the 11 Libreville action points requires certain changes and developments to occur more than others. Here is a look at the action points and their most high-priority needs.

PART 4 WHAT DOES EACH ACTION POINT REQUIRE?



The needs assessments show that, in general, each of the 11 Libreville action points requires certain changes and developments to occur more than others. The following is a look at the action points and the three highest priority needs for each one.

1. Establish a Health and Environment Strategic Alliance (HESA)

A void remains between the health and environment sectors. The most pressing need is to improve intersectoral coordination, by establishing formal alliances between environment and health. Ideally, formal and continuously functioning coordination mechanisms will be put in place to oversee health and environmental issues. This alliance should incorporate each country's respective environmental risks selectively within health sector plans. The two sectors need to undertake shared activities on intersectoral environmental risk factors, while operating under joint mandates.

Advocacy is needed to raise awareness on environmental and health issues. This advocacy can emphasise the need for strategic alliances and the development of joint action plans. Joint communication programmes are required to conduct awareness and advocacy activities on intersectoral issues of mutual concern.

Lastly, environmental health policies are required for strategic alliances to function well. In many countries each sector is operating under its own legislation and legal mandate. The ideal is the existence of integrated policy for joint programmes, shared between the health and environment sectors.

2. Develop or update national frameworks

As a top priority, health and environment need to be integrated on all levels within overarching national frameworks. In many countries there is no established formal framework for intersectoral collaboration, with each sector planning and implementing its own activities. Intersectoral frameworks need to be established or regularly updated. Many countries suggest the establishment of a national intersectoral coordination mechanism with clear accountability structures.

Next, institution building needs improvement, by developing new programmes, plans, regulations and legislations, or by combining overlapping ones. To ensure the implementation of environmental health strategies, intersectoral organisations and working groups are needed. In most countries there are numerous environment policies and health policies, but little overlapping policy.

Intersectoral coordination is needed to develop and implement environmental health policies.

Lastly, skilled staff are required for successful intersectoral coordination, enforcement and monitoring. While in many countries the expertise and skills exist, there are often no dedicated personnel responsible for ensuring integration of policies and plans. Officials, including at senior levels, must be appointed from health and environment sectors and should be supported in the effective integration of policies with detailed plans and viable institutional sectors.

3. Integrate objectives into poverty reduction strategy papers (PRSPs)

Currently, health and environment have their own national frameworks and plans. Integration of these strategies is required. Intersectoral coordination mechanisms are needed to harmonise and facilitate implementation of health and environment objectives in PRSPs. In some countries this might be through technical working groups for health and environmental coordination.

Institution building was the second priority mentioned under this action point. Objectives need to be integrated, and plans and programmes developed based on these linkages. Training,

PART 4
WHAT DOES
EACH ACTION
POINT
REQUIRE?

“The most pressing need is to improve intersectoral coordination, by establishing formal alliances between environment and health.”

funding and improved systems are needed for agencies working on national development objectives that aim to improve the linkages between environment and health.

Countries are communicating on health and environment separately, with little or no communication on the importance of shared objectives within PRSPs. Existing policies, strategies and legislation should be popularised and understood by the relevant policymakers, institutions and other stakeholders. An institutional framework for coordinating the integration is desirable. Advocacy is necessary on the importance of health and environment linkages, and the need for including environmental health in PRSPs and other national development plans.

4. Strengthen health and environment institutions

The number of existing personnel and their skills are inadequate for specialist work in the area of environment and health. Many countries report staff retention difficulties, lack of skilled personnel and ageing of current experts. There is a strong need for recruitment, training and development, and specific environmental health studies at universities and on other courses. Retaining current

staff and making sure they have the appropriate training and support is an important priority. Countries report a shortage of financial resources and a lack of clarity on what is required in terms of spending to tackle health and environmental challenges. Financial information about both needs and spending in this area needs to be more finely disaggregated and shared. For example, in Swaziland, retention of staff is difficult due to lack of incentives. Funding is needed to intensify and diversify human resources for environmental health programmes and to strengthen and integrate institutions. Lastly, there is a need to improve institution building.

Countries also report that the appropriate institutions lack capacity in environment and health matters. Some countries report health and environment linkages in some national institutes, but most are still working in a siloed manner. A revision of tasks and structures within institutions is needed, as well as more effective joint overarching plans to guide activities. Transfer of powers to local authorities is seen as a potential useful improvement on current structures.

Part 4
WHAT DOES
EACH ACTION
POINT
REQUIRE?

“National
health and
environment
research
agendas are
needed.”

5. Support knowledge acquisition and management

Countries outline weak agendas on health and environmental risk factors. There are weak research and learning coordination structures, and often few publications or other channels where research in these areas can be shared. National health and environment research agendas are needed. Scattered and fragmented research could be better guided by combined research agendas, the existence of local channels for sharing research on environmental health, and strong national coordination mechanisms.

The second priority countries identified responds to the lack of financial resources for conducting research and collecting and disseminating reports. Financial resources are required to improve research coordination, human resources and effective sharing of research.

Thirdly, there are inadequate numbers of researchers in the intersecting area between health and environment. Those who exist often lack the requisite skills. Bodies to support the research community are important. Incentives could be increased for research, with tailored health and environment training offered.

6. Establish or strengthen systems for environment surveillance

Intersectoral coordination is a priority need, as countries see the need for a national system of coordination and improvement of surveillance networks. Often health and environment indicators are monitored separately. Environmental health indicators do not track health impacts or risk factors. Coordinated and collaborative surveillance systems are required. The establishment of integrated databases was suggested and sharing of research should be increased by strengthening or developing mechanisms.

The second need is for institution building, to undertake broad intersectoral monitoring and surveillance. This would help to allow national indicators to be standardised and to link environment and health surveillance. Capacities need to be built and strengthened, including databases, observatories, equipment, staff, and information and alert systems.

The third need is for more trained staff to better organise, manage and operate surveillance systems. Countries report a lack of technical skills to set up and run surveillance systems. Similar problems affect the analysis of information, the translation of information into findings and the adapting of information for decision-making purposes. Highly skilled human resources are needed, working across different levels within an integrated surveillance and response system.

7. Implement mechanisms for enforcing international conventions and national regulations

Regulations and legislation are a priority for this action area. The overall situation outlined by the SANA reports is of countries being signatory to many national, regional and international environmental conventions and agreements and not being able to turn these commitments into action. Improvement is needed in the domestication of conventions and in creating national frameworks for the development of legislation and regulations.

Intersectoral coordination is also a priority need. Frameworks are required to develop and integrate implementation plans. Where national action plans are prepared, their implementation is constrained by a lack of intersectoral collaboration. The InforMEA website from UNEP (informea.org) might be a good platform for international and national coordination.

PART 4 WHAT DOES EACH ACTION POINT REQUIRE?

Advocacy is another priority mentioned. There are low levels of awareness in government and other implementing institutions of the existence and importance of environmental conventions. There is a need to conduct advocacy and awareness programmes to inform implementers, stakeholders and decision makers.

8. Set up national monitoring and evaluation mechanisms

Intersectoral coordination was the top priority mentioned. Separate monitoring and evaluation frameworks fail to act in unison. Integration of these different systems will require a functional system that integrates environment and health issues and communicates key findings across sectors. This system would strengthen and guide priority intersectoral programmes.

Financial resources were mentioned as the second priority. Increased funding is required to ensure systematic reports containing quality data and with regular periodicity. What is being currently spent on integrated monitoring and evaluation systems needs to be assessed, and this will help guide budget developments for future action. Finally, a national structure is needed to coordinate national level monitoring and evaluation.

9. Systematic assessment of health and environment risks

National environmental reports and health reports are undertaken with varying frequency and rigour. HIAs are currently being undertaken in a limited and fragmented manner, and EIAs often give only cursory attention to health issues. Countries note the importance of establishing an instructional and organisational framework to coordinate health and environmental assessments.

An integrated system for EIAs and HIAs is seen as an urgent need. Skilled staff and overarching institutions are required for successful integration of assessments. Improved communication systems to link health and

“Advocacy is cited as both an end and a means in reports.”

environmental sector agencies are also cited under the theme of institution building for the systematic assessment of health and environment risks.

The regulatory framework for HIAs needs to be developed, factoring in shared assessments for environmental impact where possible. Environmental and health reports could be developed with improved quality and periodicity.

10. Develop partnerships for targeted advocacy

Countries report that little work has been done to establish the importance of joint advocacy on health and the environment. Current communication measures are scattered and generally insufficient. Advocacy is cited as both an end and a means in reports. They note that groups of agencies involved in advocacy and communication need to come together around a common advocacy agenda, starting with the principle that advocacy itself should be a key priority for action.

Intersectoral coordination is needed to ensure joint outreach and awareness programmes are conducted in collaboration. Advocacy should be targeted at a range of stakeholders at national and local government level, to raise awareness of the need for a national framework for health and environment.

Lastly, a strong and integrated policy for advocacy on environmental health is required, to promote

synergy across sectors. Currently, public awareness and advocacy plans are developed in a fragmented way, often on a project or programme basis. Communication plans should be developed and adopted by national governments in order to galvanise intersectoral action.

11. Achieve a balance in budgetary resource allocation for priority programmes

Most importantly, financial resources need to be mobilised to develop intersectoral coordination mechanisms. Currently, the importance of health and environment linkages is underestimated and so funds are not allocated on a sufficient scale. Advocacy is required to increase the allocation of national budgets for environmental health.

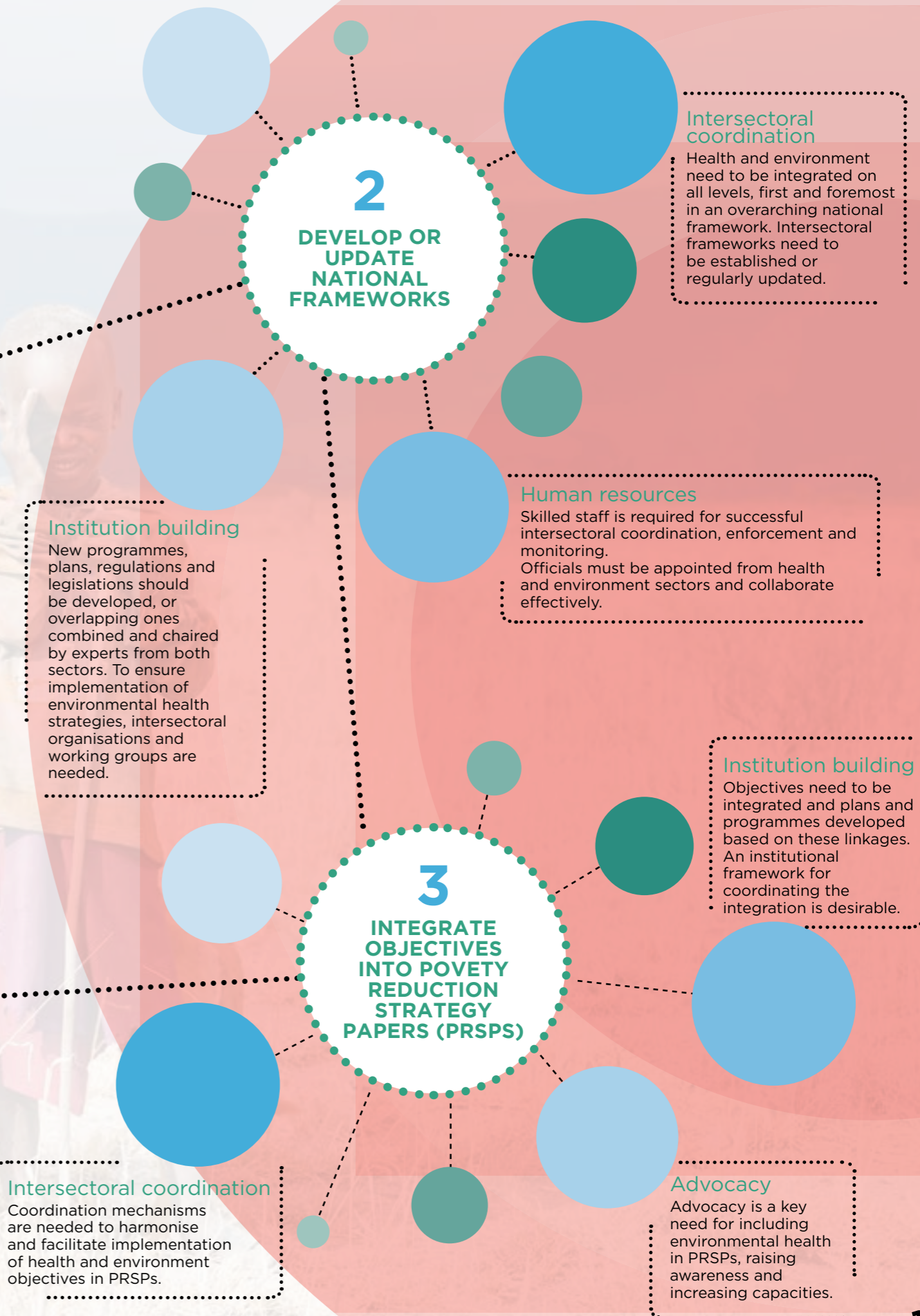
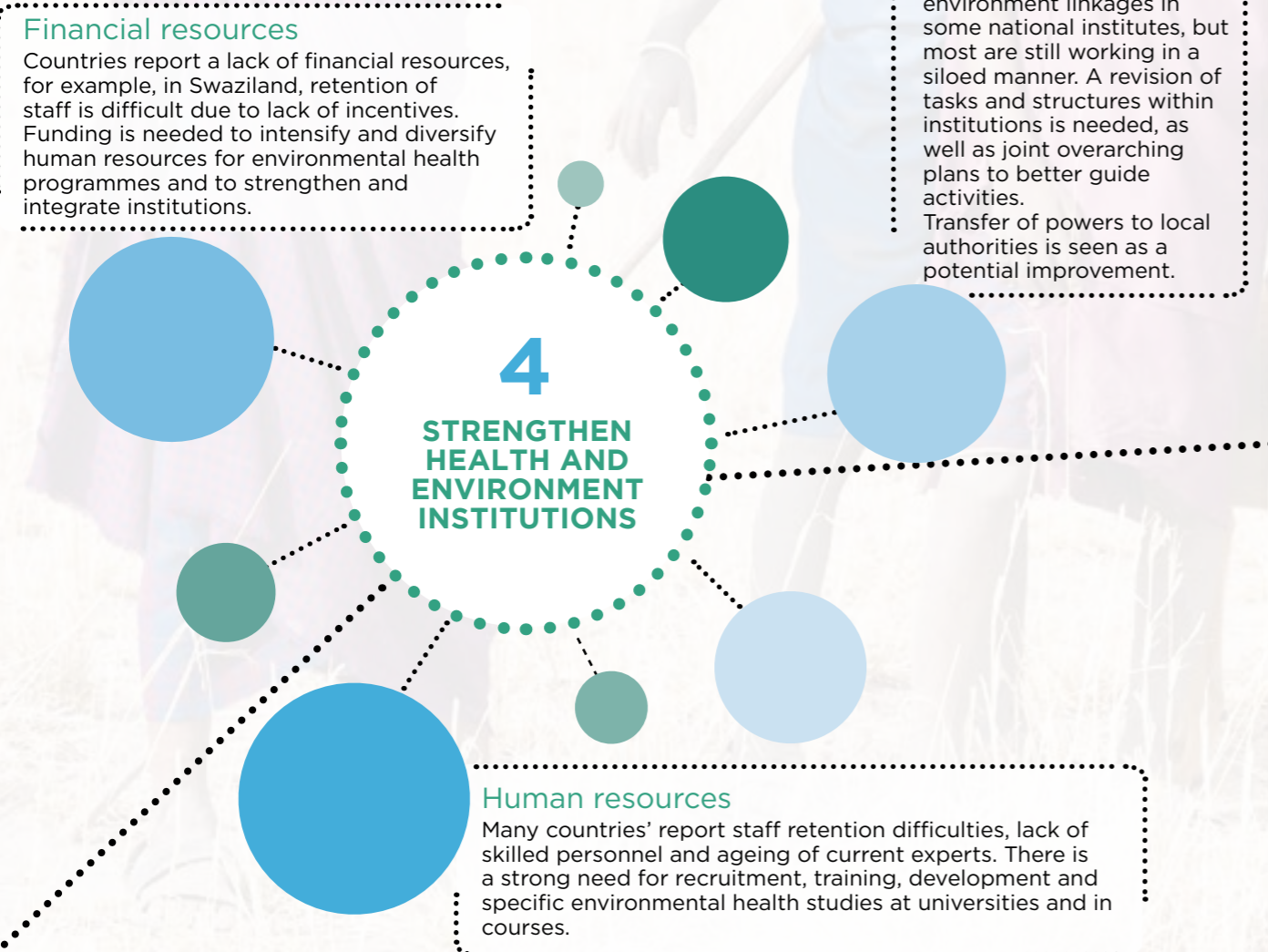
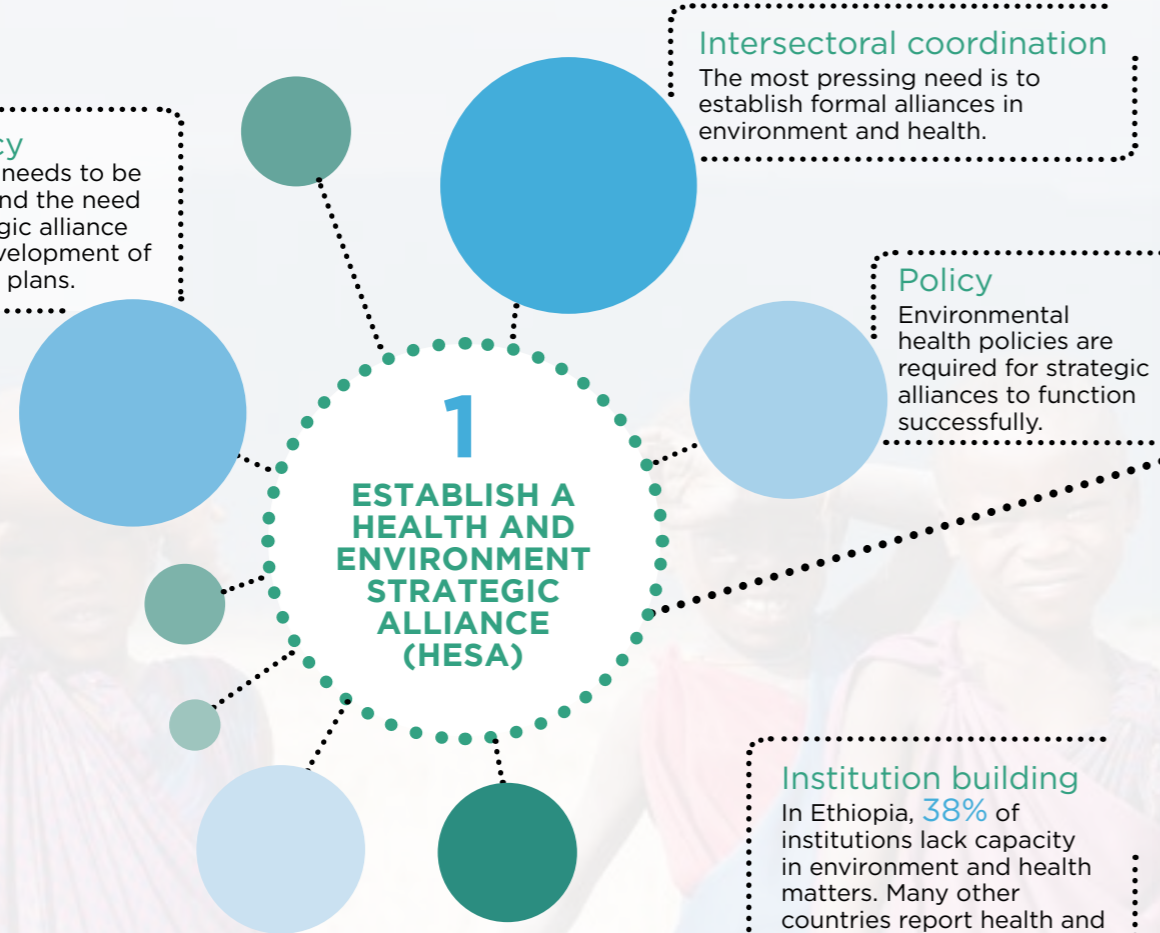
Current financial systems constrain the development of shared activity that spans the sectors of health and environment. Intersectoral coordination is required to ensure that financial systems for sectoral programmes can run on intersectoral programmes.

Overall, budgets allocated to the environment must be increased. The ideal would be the existence of dedicated funding, at sufficient levels, for joint health and environment programmes. This would require political will, appropriate implementation systems and shared financial accountability systems.

SUMMARY: in pictures

VERY IMPORTANT

LEAST IMPORTANT



PART 4

SUMMARY: in pictures

VERY IMPORTANT

LEAST IMPORTANT

5 SUPPORT KNOWLEDGE ACQUISITION AND MANAGEMENT

Research
National health and environment research agendas are needed. Scattered and fragmented research could be better guided by national coordination mechanisms.

Human resources
Specific health and environment training and studies are needed to increase quality personnel.

Financial resources
Investments are required to improve research coordination, human resources and effective sharing of research.

Institution building
A national structure is needed to coordinate national-level monitoring and evaluation.

Financial resources
More funding is required to ensure systematic reports with quality data and correct periodicity.

8 SET UP NATIONAL MONITORING AND EVALUATION MECHANISMS

Intersectoral coordination
An overarching mechanism is needed to coordinate monitoring and evaluation - one that links environment and health and strengthens priority intersectoral programmes.

6 ESTABLISH OR STRENGTHEN SYSTEMS FOR ENVIRONMENT SURVEILLANCE

Institution building
National indicators should be standardised and link environment and health. Capacities also need to be built and strengthened, including databases, observatories, equipment, staff, information and alert systems.

Human resources
More trained staff is required to better structure and operate surveillance systems.

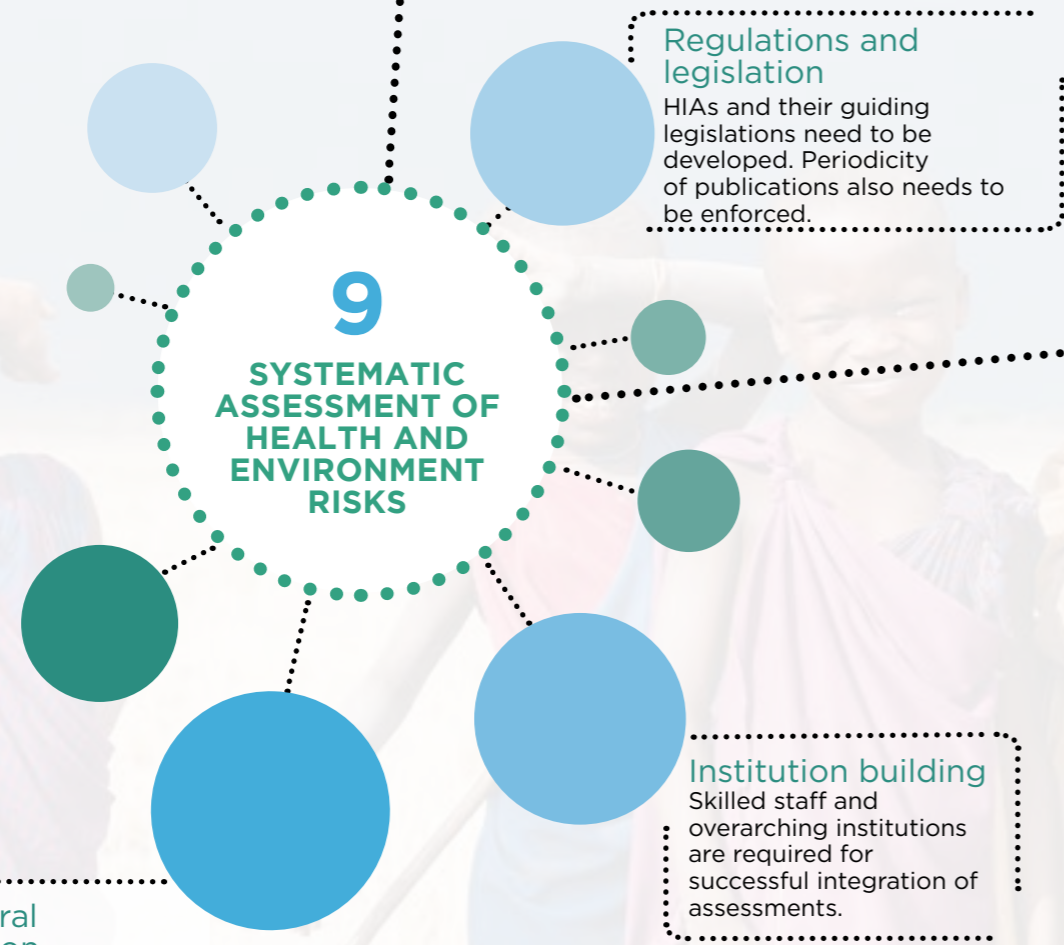
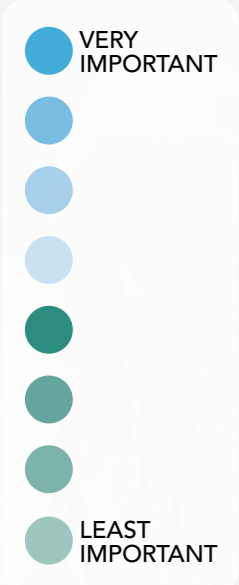
Intersectoral coordination
Countries see the need for a national system of coordination and improvement of surveillance networks. The establishment of integrated databases was also suggested. Sharing of research should be increased and mechanisms strengthened or developed.

Intersectoral coordination
A framework is required to integrate implementation plans. The Infor MEA website from UNEP might be a good platform for international and national coordination.

7 IMPLEMENT MECHANISMS FOR ENFORCING INTERNATIONAL CONVENTIONS AND NATIONAL REGULATIONS

Advocacy
Awareness needs to be created, mainly within the general public.

Regulations and legislations
Improvement is needed in the domestication of conventions, such as creating national frameworks for development of laws.



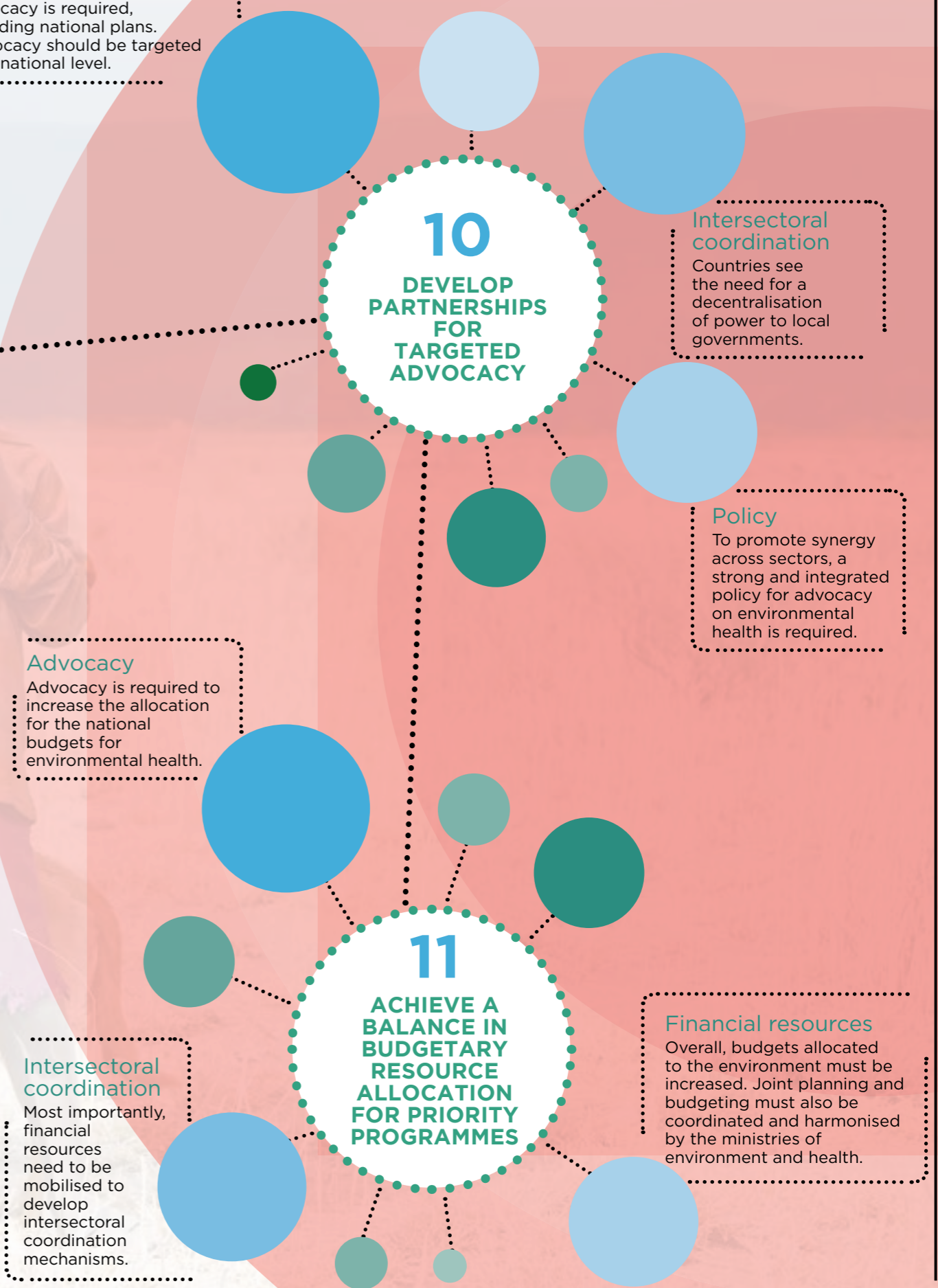
Intersectoral coordination
An integrated system for EIAs and HIAs is seen as an urgent need. HIAs are currently being undertaken in a limited and fragmented manner.

Regulations and legislation
HIAs and their guiding legislations need to be developed. Periodicity of publications also needs to be enforced.

Institution building
Skilled staff and overarching institutions are required for successful integration of assessments.

Advocacy
A national framework for health and environment advocacy is required, including national plans. Advocacy should be targeted on a national level.

SUMMARY: in pictures



Advocacy
Advocacy is required to increase the allocation for the national budgets for environmental health.

Intersectoral coordination
Countries see the need for a decentralisation of power to local governments.

Policy
To promote synergy across sectors, a strong and integrated policy for advocacy on environmental health is required.

Intersectoral coordination
Most importantly, financial resources need to be mobilised to develop intersectoral coordination mechanisms.



Financial resources
Overall, budgets allocated to the environment must be increased. Joint planning and budgeting must also be coordinated and harmonised by the ministries of environment and health.

PART 5 CONCLUSION



This report provides an account of the findings of the SANA process in 22 African countries – the most in-depth assessment of environment and health linkages of its kind. In this account there are many promising examples of initiatives that operate between the sectors of health and environment.

However, the overall picture is one of disconnection and lack of coordination. Health programmes may address some environmental risks, but they originate within larger health development plans or strategies, where objectives are defined by traditional health goals. Often their focus is curative rather than preventative, and the elements which do seek to mitigate the environmental determinants are often specific and focused, unable to engage with the policy and programming sectors traditionally associated with ministries of environment. Environmental plans and programmes have a similar partial nature in the way they address health. Health is treated as one aspect of a broader array of social and economic considerations in the management and protection of environmental resources.

“Coordination mechanisms are cited as a principle need for all 11 action points of the SANA process.”

“In Africa, freedom from illness and physical strength can no longer be separated from the state of the physical environment within which people live their lives.”

In Africa, freedom from illness and physical strength can no longer be separated from the state of the physical environment within which people live their lives. Health and environment sectors have often evolved in isolation from one another. This institutional arrangement is rapidly becoming outdated. Environmental factors remain important determinants of the disease burden in the African region, according to analysis by the Situation Analysis and Need Assessment (SANA).

What is needed is an array of structures and processes that intersect with both health and the environment, and which respond to how the one is determined by the other. This includes shared plans, ideally as part of national development plans for intersectoral collaboration. These plans will need to be supported by people who have the skills, knowledge and motivation to bridge the two sectors and to devise new ways of working. Coordination mechanisms are cited as a principle need for all 11 Action Points of the SANA. Research, knowledge management, implementing international agreements, undertaking surveillance and monitoring and evaluation all require overarching coordination mechanisms that involve both the health and environment sectors.

Financial resources are cited as a key need for many of the Action Points. What financial resources do exist for health and environment, for example as part of international funding mechanisms, are not sufficiently accessed. Political commitment appears to be lacking, both because the funding that is available is not accessed, and because it is not complemented by domestic contributions.

Advocacy and communication clearly play an important role in the next steps for tackling the linkages between environment and health. Motivation, commitment and action have not yet reached the level that is required for changes to start taking place. New financing mechanisms and vertical programmes will not have sufficient impact until stakeholders at every level take note of the challenges and start looking for solutions. Communicating why this is important will take a broad alliance of advocacy and communication initiatives working inside and outside government. It is to be hoped that soon a collective voice can be heard at national and local level, and that it calls for broad and immediate collaboration and action on environment and health.



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