

# GREEN BUSINESS

G A Z E T T E

ISSUE 14 | 2022 | \$1000 | GBG.CO.ZW



ISSN 0270-837X



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The increase in human population putting pressure on resources

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Is Africa Ready for the Coming Of a Circular Economy?





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# WELCOME

...to the 14th Issue of the Green Business Gazette.



**GREETINGS** to the avid followers of the Green Business Gazette as well as those who have discovered the publication. We are here to serve you. Issue 14 of the Green Business Gazette recognises the increasing population and how it threatens resources.

Climate change is affecting communities, people, flora and fauna. The choice for humanity is either to act or wait for something catastrophic. A wait-and-see approach is risky to the success of humanity. Food security, health and livelihoods are at stake of climate change is not addressed.

We also delve into the fossil fuel arena and we encourage African countries to take charge of their resource endowments for the benefit of communities whilst at the same time adopting cleaner fuels and renewable energy.

The issues relating to sustainable development are greatly dissected in this issue. Until when shall we continue to see chemical management ignorance in Small to Medium Sized Enterprises? We delve into the issue of sustainable management of chemicals, labelling as well as proper disposal of hazardous waste. We urge companies to use environmentally friendly chemicals.

The Environmental Impact Assessment is assessed as a key strategy for promoting sustainable development for development projects. Furthermore, the issue also delves into hydroponics. Growing plants in alternative media other than soil. An attempt to save the environment and enhance food security. A thorough analysis of the benefits of hydroponics is articulated.

A Circular Economy is being promoted across Africa, and we give focus on the circular economy. We implore you to continue with the green ambassadorship and being able to recycle waste. Both young and old people have a role to play. Today and tomorrow have no guarantee if we do not adopt novel ways of dealing with environmental challenges. Until the next issue. Let's go green!

**Tawanda Collins Muzamwese**  
EDITOR-IN-CHIEF

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## ON THE COVER

↓  
Getting Ready  
for A Circular  
Economy

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# THE POPULATION CRISIS WORSENS ENVIRONMENTAL THREATS

■ Calvin Manika

*The increase in human population is putting an unprecedented pressure on the available natural resources. The population boom has led to an increased demand for food and space as consumption and habitation are now priorities. Vast tracts of state land, oceans and forests have become immediate victims. The need to use the resources is mostly unsustainable with high rates of pollution, release of greenhouse gases and the depletion of the ozone layer, resulting in climate change and ultimately acute food shortages.*

In July, the Zimbabwe Statistics Agency (ZimStats) released the preliminary results of the national census which was held in April 2022. The report shows a population increase.

“Zimbabwean population now stands at 15,178,979 where 7,289,558 (48%) are male and 7,889,421 (52%) are female. The 2012 population census counted 13,061,329, giving an annual population growth rate of 1.5 percent,” notes the ZimStats report.

The 1.5 percent increase of the population per annum is also associated with increased demand for resources, depletion of forests and increased biodiversity loss. In Hwange, the environment has been greatly disturbed and damaged due to human activities.

Environmentalists concerned with the population growth say the population growth will sooner or later run up against the limits of the earth’s finite stock of resources.

“The inherent capacity of population to grow, exceeds the earth’s carrying capacity to yield increases in food, because of limits to the supply of cultivable land. This has resultantly led to depletion of resources and disruption of the natural ecosystems,” says Matthew Chisango, an environmentalist.

In many urban areas there is a lot of construction taking place. Sand poaching and destruction of land where sand is being illegally excavated is evident. In the quest of habitation, humans are also invading wetlands. Chisango added that, if population growth continues and people fail to sustain the environment, they will be the ultimate victims.

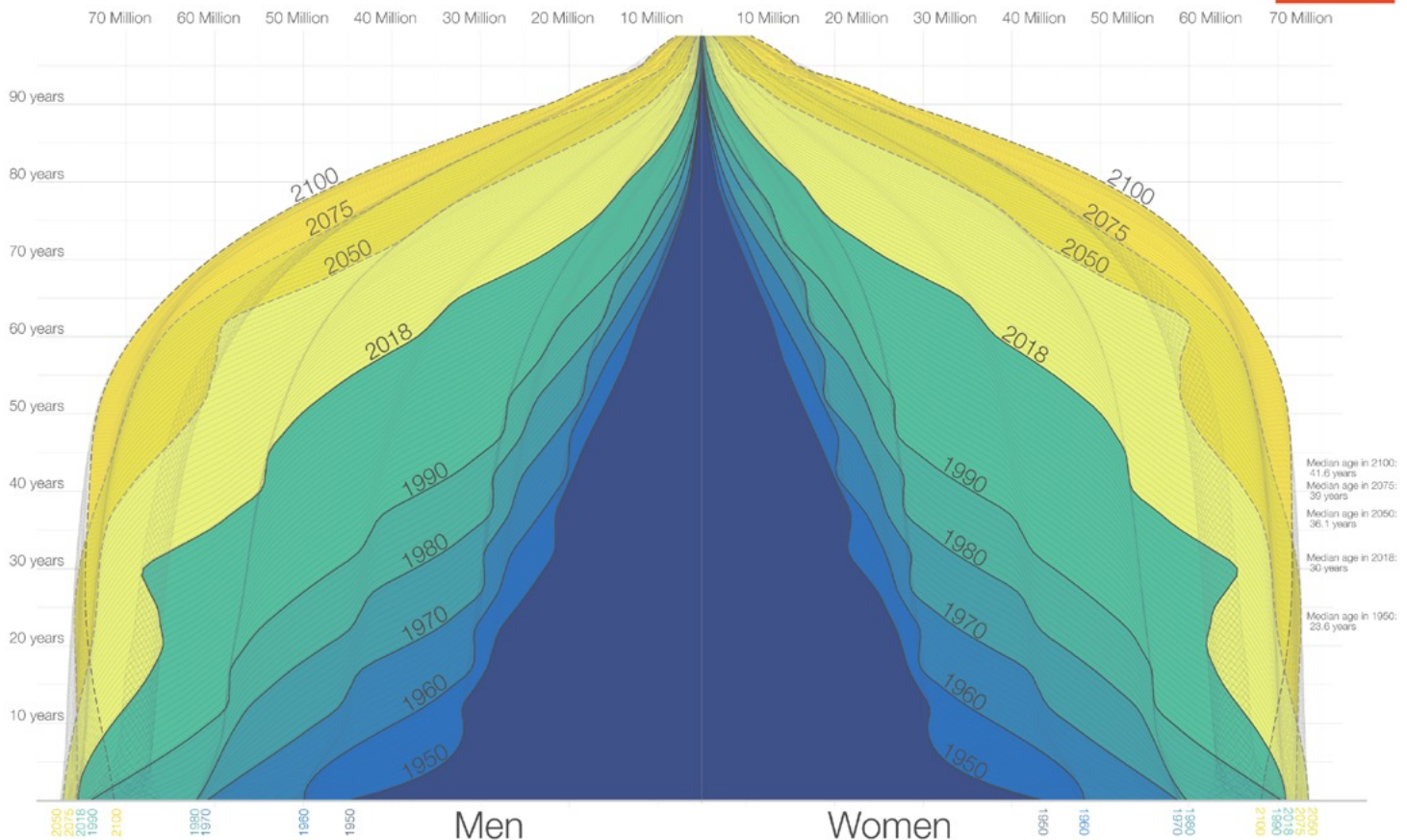
“Standards of living are becoming low amidst high quantities of pollution; this can result in drastic effects to the population in coming years. A related view is that some resources land, forests, fisheries though fixed, are renewable, but their sustainable yields have a maximum limit.





# The Demography of the World Population from 1950 to 2100

Shown is the age distribution of the world population – by sex – from 1950 to 2018 and the *UN Population Division's* projection until 2100.



Data source: United Nations Population Division – World Population Prospects 2017; Medium Variant. The data visualization is available at [OurWorldinData.org](https://ourworldindata.org), where you find more research on how the world is changing and why.

Licensed under CC-BY by the author Max Roser.

Some harvests may exceed this maximum, but they lead to a permanent reduction in the long-run,” said Chisango.

Speaking to the Green Business Gazette, a social development researcher, Mary Kupinga argued that natural resources are not limited; and the increase in human population can be seen as an advantage to save the environment.

“That scarcity is revealed by prices; and that prices of resources are not rising. More people implies more ideas, more creative talent, more skills, and thus better technology; in the long run, population growth is not a problem but an opportunity,” said Kupinga.

Despite the arguments, most of the stakeholders on environment conservation say, population growth, along with increasing consumption, tend to increase emissions. The continued increase in population growth exposes the earth to climate change effects and burdens the natural resources.

“Cities use a large proportion of the world’s energy supply and are responsible for around 70 per cent of global energy-related greenhouse gas emissions which trap heat and result in the warming of the earth. There are many pressures caused by an increase in population, these include pressure on land, soil degradation, forests, habitat destruction, loss of biodiversity, changing consumption pattern, rising demand for energy, air pollution, global warming

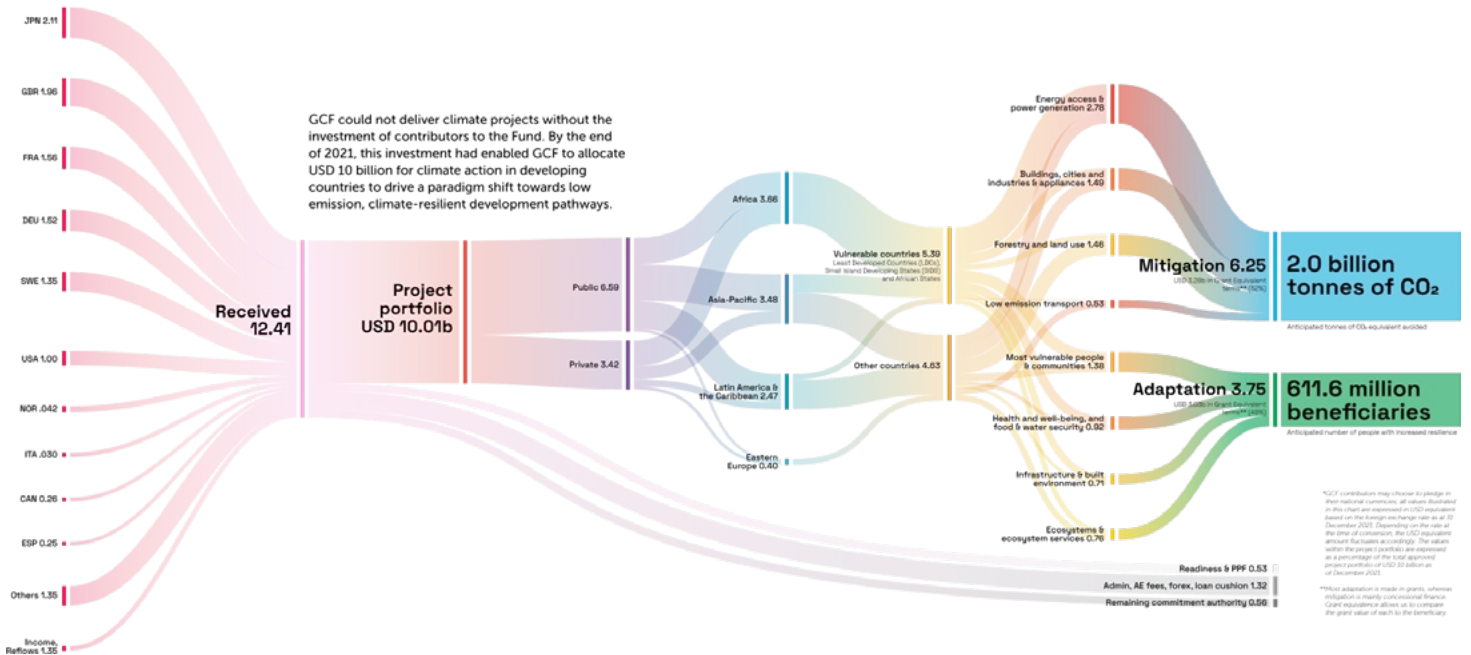
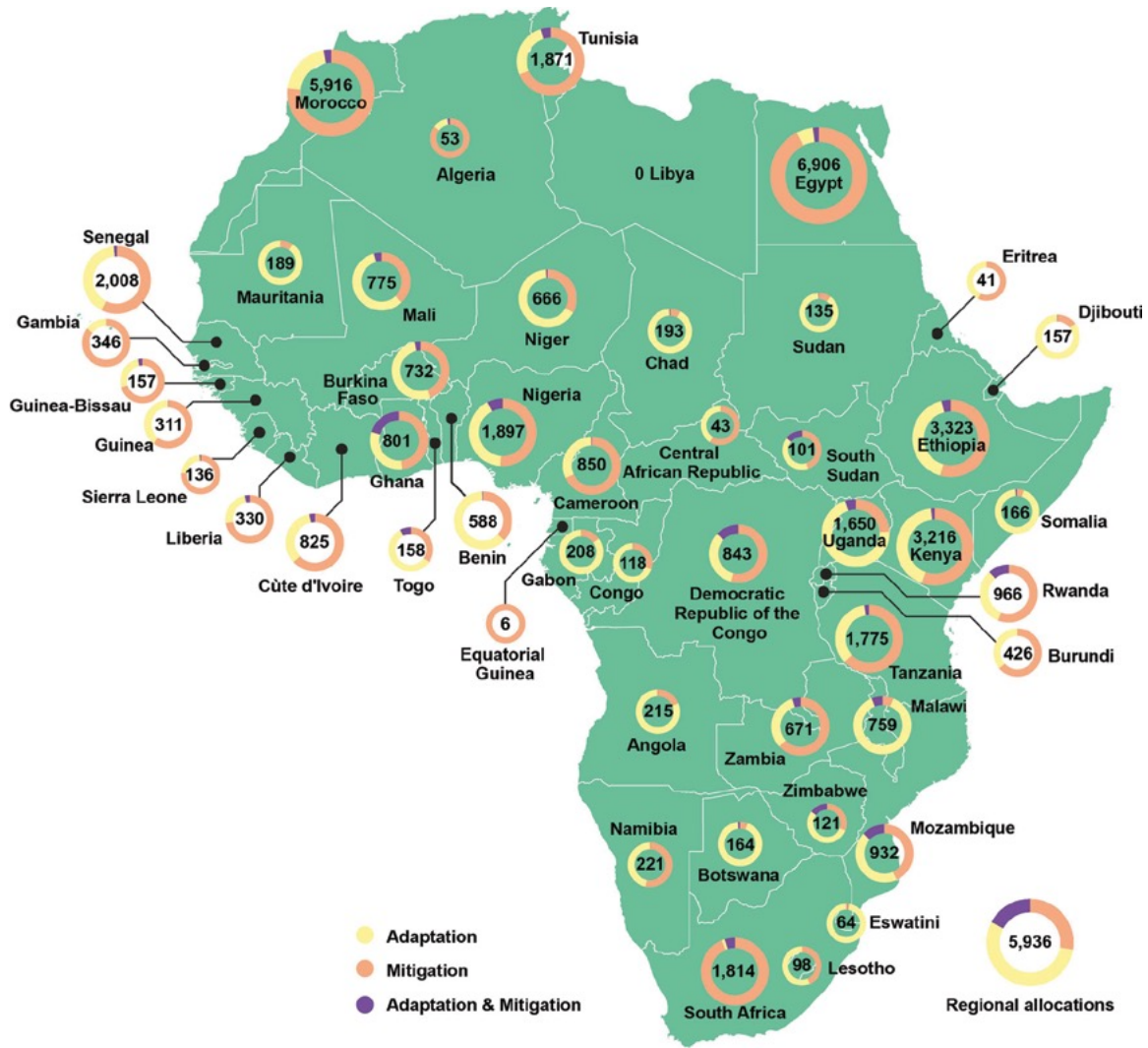
and water scarcity and pollution,” said Collet Hungwe, a Wildlife Conservation Activist.

The Intergovernmental Panel on Climate Change (IPCC) annotates that most of the warming of the past 50 years is attributable to human activities, particularly greenhouse gas emissions from high-income countries, and has acknowledged population growth as one of the major causes of emissions.

The boom in animal population has also caused serious challenges. With overpopulation in the wildlife habitations, animals are now migrating from their usual places invading human spaces in search of food resulting in human/wildlife conflicts. The Zimbabwe Wildlife Management and Parks Authorities announced that elephants in the Hwange National Park now exceeds 100 000, in a park with a holding capacity of 50 000. This has caused a lot of damage to the environment and threatening life for both animals and humans.

An environmentalist Winston Mudimba said rapid population growth causes increased inequities in agriculture, unemployment and underemployment, urbanization and climate change with adverse effects to the environment.

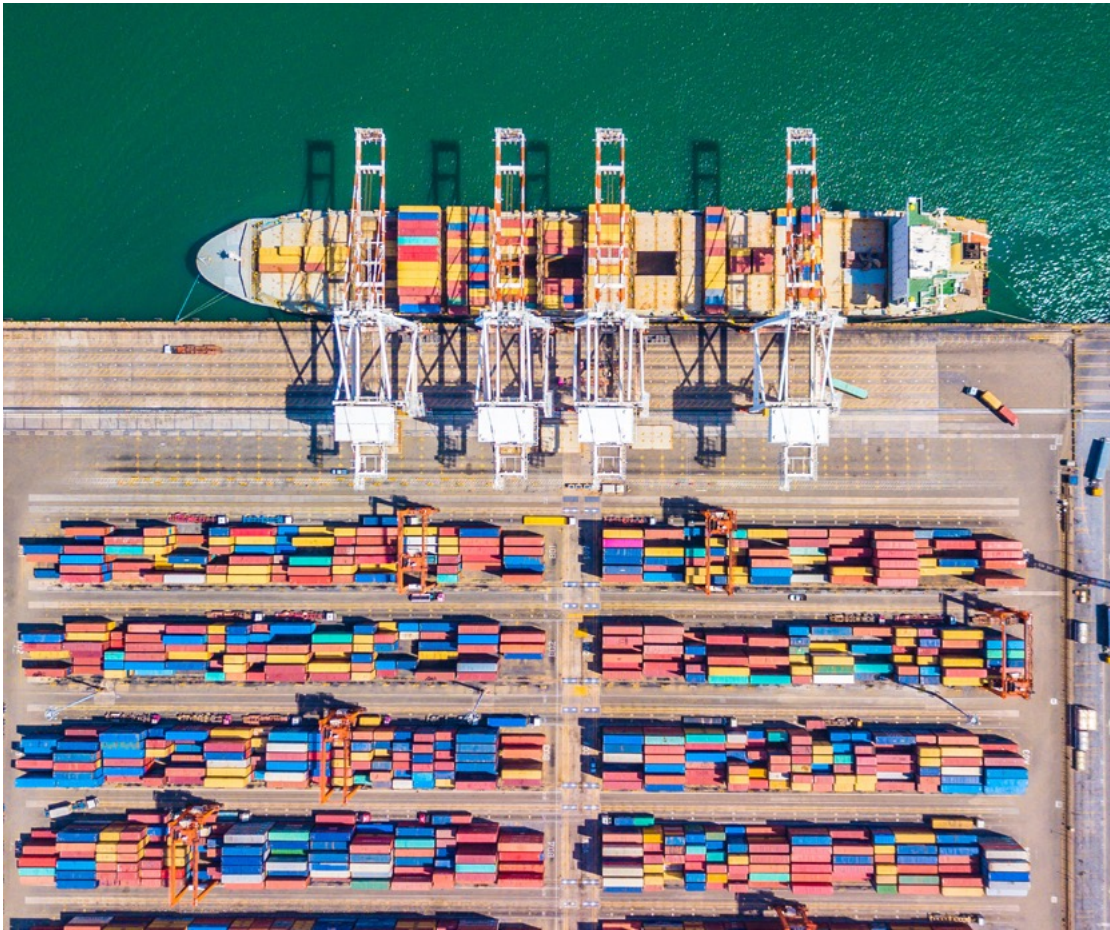
“Population growth is very costly on the environment. High population levels are contributing to the depletion of natural resources and causing widespread pollution,” said Mudimba.





# CLIMATE CHANGE: THE GAME CHANGER IN THE WORLD OF BUSINESS AND FINANCIAL MANAGEMENT

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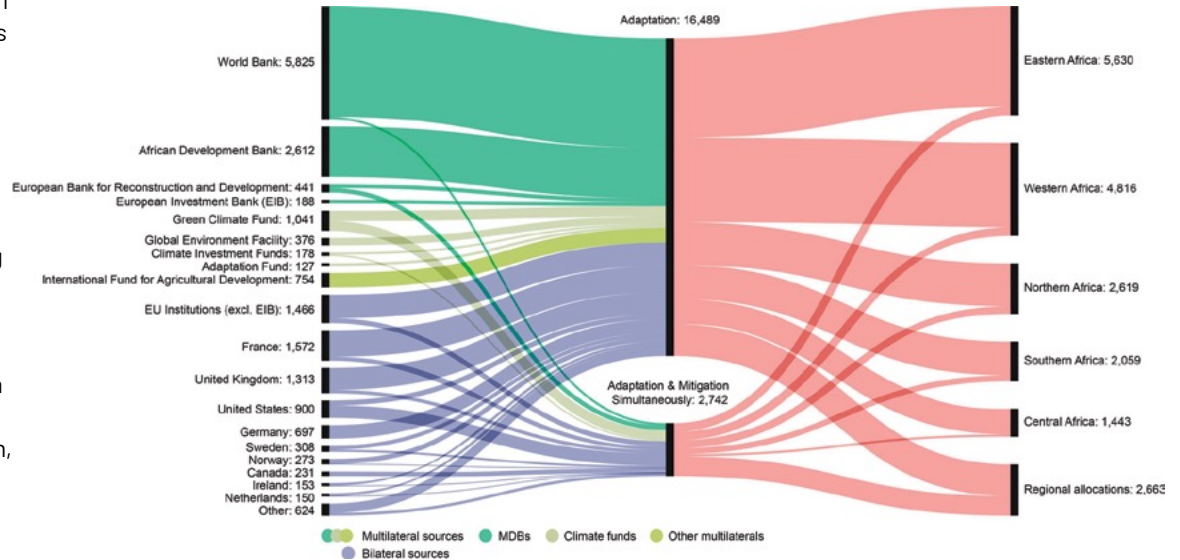
■ Wadzanai Manyame

*A phenomenon that was once termed an illusion by many is now being fully embraced after realizing the dire effects the world will face if it continues unabated. An increasing realization also appreciates the benefits that come with trying to mitigate and adapt to this catastrophe.*

As with any catastrophe, opportunities arise and it is to those who come up with ways to address the problem to harness the opportunities and benefit from them. An example is that of the Covid-19 pandemic. In 2020 and 2021 most people successfully supported their families from selling Covid-19 protective clothing and equipment. Similarly, with climate change, following the different mechanisms that have been put in place internationally to address this phenomenon, developing countries have been presented with an opportunity to benefit from availability of funds to address climate change and other related matters.

Most of these mechanisms were developed following the Kyoto Protocol, which came into force in 2005. An example is that of the Clean Development Mechanism (CDM) which also funds the UNFCCC's Adaptation Fund from the 2% levy on its Certified Emission Reductions. The mechanism allows industrialised and developed countries to fund GHG emission reduction projects in developing countries, whilst they benefit by claiming saved emissions under their own efforts.

The Adaptation fund was formed to finance programmes and projects in developing countries ratified to the Kyoto Protocol and are vulnerable to severe effects of climate change (Mori, et al., 2019) such as Mozambique, South Africa and Zimbabwe. The 2015 Paris Agreement also seeks to ensure mobilisation for funding for the implementation of mitigation



and adaption projects in all parts of the world including the developing countries.

Climate finance has become one of the most topical issues in the field of finance and business sustainability. To date there are a number of climate financing platforms that have been created including private facilities and these include the Green Climate Fund, the Adaptation Fund, the Global Environmental Facility and the Global Climate Change Alliance. This has given rise to a number of opportunities and has stirred a remarkable amount of interest in the field of finance and business management. The once not understood field of environmental management is now one of the most sought after fields to incorporate in business to ensure all cards are put on the table in terms of business sustainability.

Opportunities have arisen in the financial sector to handle and manage climate funds which is good business for these institutions, thus inciting their interest in climate chance. Most banks and

financial institutions are slowly creating a climate finance and sustainability department and are incorporating climate action in their main agenda so as to create room for climate change related issues, build their knowledge on the matter, concientise the organization and see how best they can navigate the climate action arena through the climate finance route. This has created a lot of job opportunities and has also bridged the gap between financiers and environmental scientists. Environmental experts are now taking up positions in financial

institutions to manage the climate finance and sustainability departments. The formation of multidisciplinary teams working under one roof to achieve the same goal, working on concept notes and project development and management has been noted. Financiers can now be heard talking about climate change whilst environmental scientists now have a full understanding of the different possible financing opportunities that can be applicable to different projects and their returns, pros and cons.

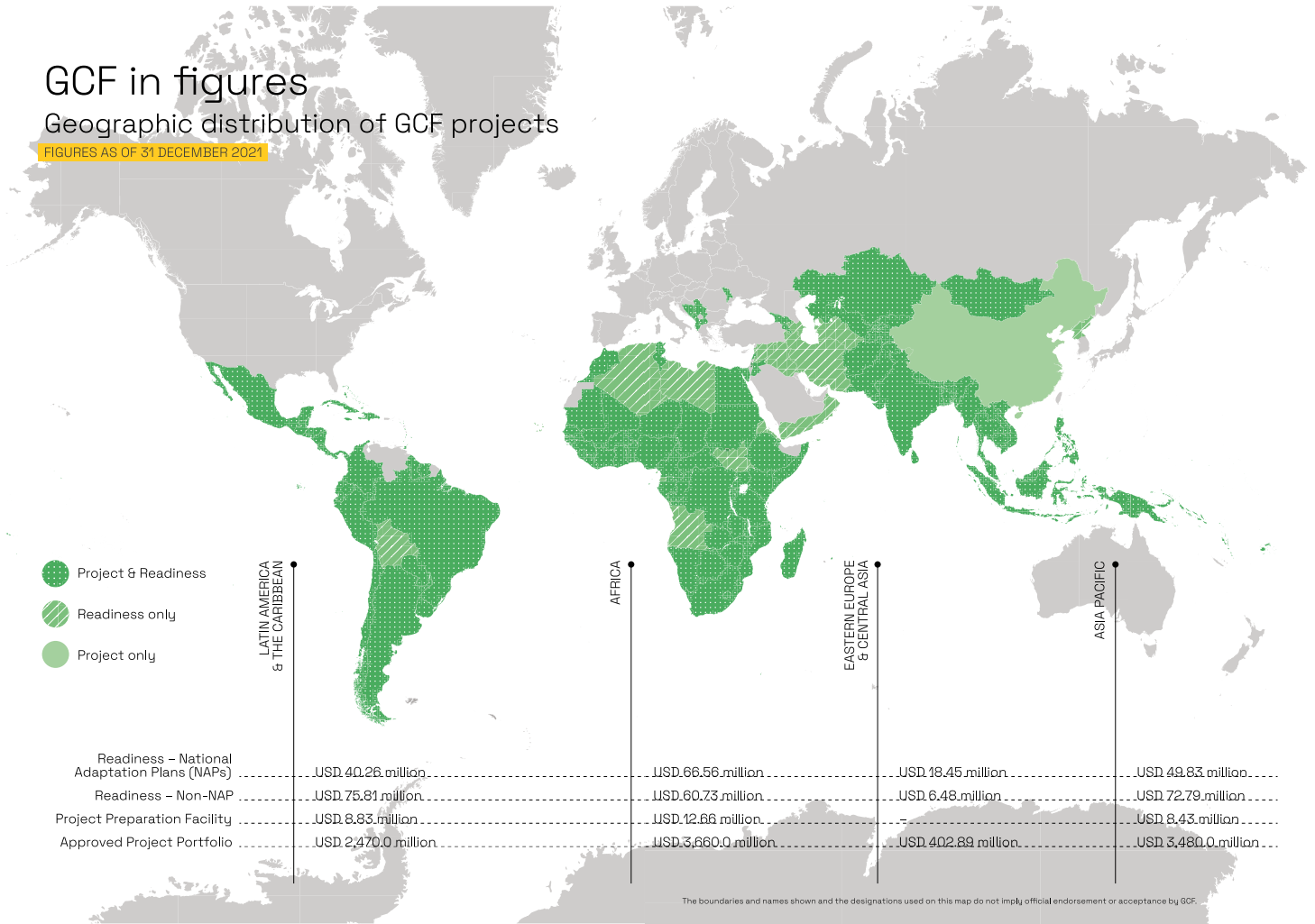




# GCF in figures

## Geographic distribution of GCF projects

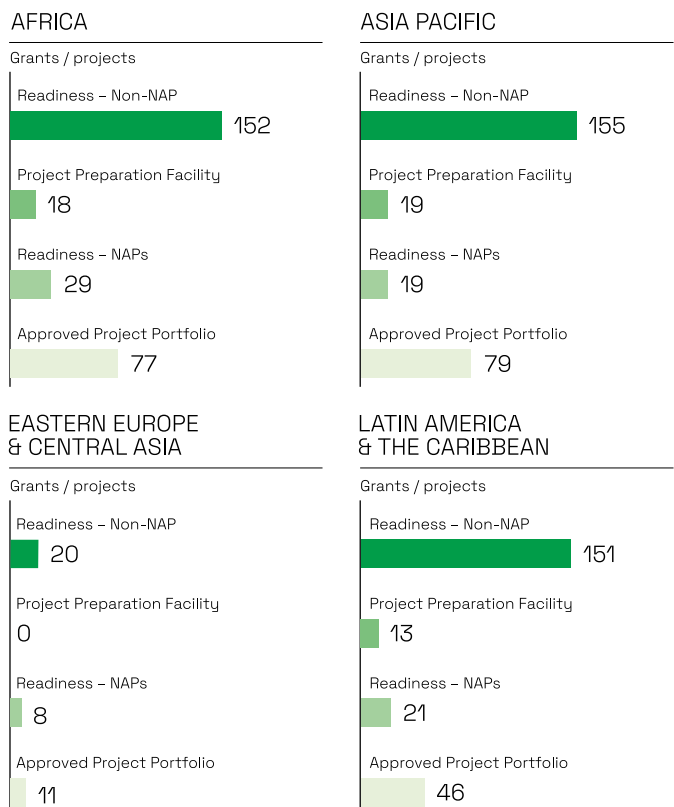
FIGURES AS OF 31 DECEMBER 2021



## GCF-funded activities by region\*

This is true for Zimbabwe where the Infrastructural Development Bank of Zimbabwe (IDBZ) was one of the first banks to embrace this concept by developing a climate finance department that has contributed immensely in the development and support of a number of climate mitigation and adaptation projects in the country. The bank also worked to attain its GCF accreditation which is paving way for the development of its Climate Finance Facility. Other financial institutions such as FBC Bank and Steward Bank have developed their climate finance departments and are working towards accreditation for climate financing platforms as well as on climate finance related projects.

Whilst embracing SDG 13 on climate action. This is also paving way for SDGs 9, 11 and 17 on industry, innovation and infrastructure; sustainable cities and communities; and partnership for the goals



# THE COMING OF A CIRCULAR ECONOMY – IS AFRICA READY?

■ Tawanda Muzamwese

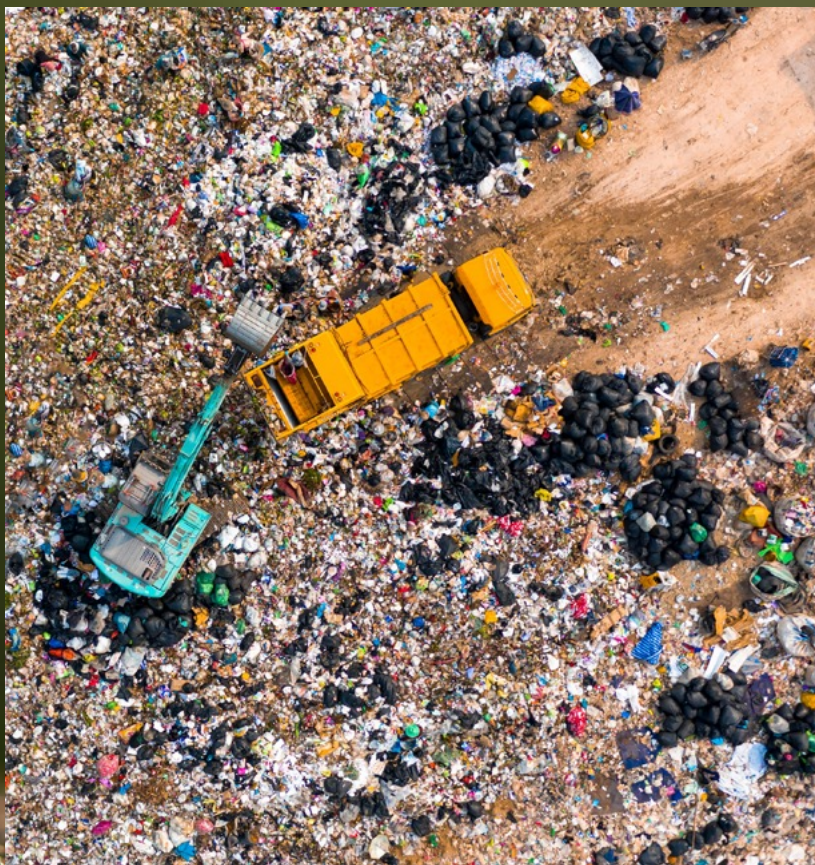
*Circular Economy buzzword has become synonymous with many African countries as nations find ways to deal with burgeoning environmental crises. Traditional models of development favoured take-make-dispose models. These models resulted in overexploitation of environmental resources.*

*Wearing clothes once, single-use plastics and other key one-hit wonders are largely blamed for the global environmental crises which exist in different parts of the world. In Africa the transition towards a Circular Economy (CE) is facing both opportunities and challenges.*





Opportunities exist in wastewater recycling, plastic recycling and waste beneficiation. Attaining a high level of sustainability requires sustainable economic development models anchored on the circular economy. Some countries which are moving towards circularity include South Africa, which is implementing industrial symbiosis. Industrial symbiosis is where waste from an organisation becomes a raw material to another organisation. This is a paradigm shift from the conventional way of doing things. Through industrial symbiosis, companies can save costs and achieve sustainable development.



In the area related to fertiliser production, waste materials can be used as raw materials in the manufacturing of wall finishing plasters. In a Circular Economy there is nothing which is considered as waste and this allows for a wide collaboration between stakeholders.

In Africa the main challenge is how to finance circular economy activities as well as how to strike a balance between environmental protection and economic development. Some communities view a circular economy as a foreign concept which needs to be domesticated. There is no agreement as to when the circular economy will commence, therefore countries are adopting it at their own pace.

The million-dollar question has also been around how to finance a circular economy. Financing a circular economy is necessary and can occur through loans, guarantees, grants and equity. The question is whether ordinary people and small to medium sized enterprises can access the financing.

Circular Economy will require Africa to abandon its ways of doing things including unsustainable practices. Some sectors of the economy believe that a circular economy could be a hindrance to the growth of Africa whilst other scholars believe that Africa should not repeat the mistakes of developed countries.

In order to ensure that the future generations enjoy the same environmental resources as we are doing today, a Circular Economy is an imperative. Let's all strive to build one through our daily activities.







# THE INVOLVEMENT OF CHILDREN IN GREENING AFRICA AND THE FIGHT AGAINST CLIMATE CHANGE

■ Calvin Manika

*In the borderlines of Hurungwe and Nyaminyami districts, in Chitete village, Netsai \* walks a combined distance of 20 kilometres every day going to school. When she returns around sunset, she has to fetch water. The nearest water hole which is the source of life in the village is four kilometres away, making it a tedious trip. For the past 3 years since she enrolled for secondary education, Netsai has been exposed to the seemingly permanent experience as there is no water nearby.*

Anthony Hudini, an elder in the community says water used to be available in abundance, but, since climate change is intensifying, water sources and other wildlife are dwindling, causing a panic and threat to humanity.

“In such cases, children and women have become vulnerable to various life-threatening scenarios including abuse. Children like all other humans survive on water and food from the field, but, climate change is affecting the production of food and the general way of life,” said Hudini.

On the side-lines of the Africa Green Waste & Energy Expo and Conference which was hosted in Zimbabwe at the end of July, the Zimbabwe Sunshine Group 2021 with the support of UNICEF Zimbabwe and the Government of Zimbabwe through the Zimbabwe Youth Council (ZYC) hosted a children’s conference under the theme – The Young and Green.

Children have been at the receiving end of climate change due to the gradual rise in global warming and pollution, and seldom get the platforms to demand climate justice and advocate for their rights as individuals.

Children at the conference said that, high temperatures and low rainfall for the past years have dramatically affected the food production as many farmers in Zimbabwe rely on rain-fed farming. Zimbabwe’s Child President, His Excellency Unathi Nyoni explained the importance of involving children in issues affecting their daily lives.

“Children are the most affected by climate change, but can also contribute in the fight for climate justice and environment sustainability. The earth needs to be saved now and by us. We can achieve a green Africa together,” said Nyoni.

Despite the scarcity of water, children have been affected by climate on the quality and quantity of food they receive. As people unsustainably cut firewood, fetching firewood in distant locations due to deforestation and the rise of human/wildlife conflict is affecting children and women.

Onita Sibanda, a children’s rights activist based in Hwange said, the children’s conference and the involvement of their voices is the beginning of a change in behaviour and support Africa needs in fighting climate change.

“Children’s role in greening our communities is the first line of defence in saving the earth. The ‘catch them young’



approach works for all and they are part of the society which is threatened by climate change. Therefore, their action is equally important," says Sibanda.

Three years ago, during COP25 in Spain, world leaders joined young activists in the signing of an Intergovernmental Declaration on Children, Youth and Climate Action. The declaration was the inaugural obligation to fast-track child centred climate policies at country and international levels.

"Children experience various risks caused by climate change, and that children from poor families and peripheral communities bear the heaviest burden; calling leaders for children and young people for immediate climate action, and their important role as agents of change; the committee advocates for global recognition and fulfilment of children's inalienable right to a healthy environment," notes the declaration.

The Paris Agreement at its inception made a commitment in Article 2 to limit the increase in the global average temperature to well below 2°C above pre-industrial levels. The involvement of children reaffirms the UN Convention on the Rights of the Child, and all human rights instruments relevant to the protection, promotion, respect and fulfilment of the human rights of all children and young people.

In 2020, an international humanitarian organisation, Save the Children said, the climate crisis directly affects children

around the world and is the greatest threat to their survival, learning and protection.

"We are currently heading towards a global temperature rise of 3 degrees by the end of the century. We have less than 10 years to act!" said Save the Children.

According to another global humanitarian player, World Vision, commenting on the Overseas Development Institute (ODI), report on 'Ending violence against children while addressing the global climate crisis', there is a connection between climate change and violence against children.

In the past years, children have been seen only as victims of climate change and violence yet their agency can be one of the most powerful tools in overcoming these growing challenges. Stakeholders at the expo and conference said engaging children as 'agents of change' in the fight for a better world is one of the most powerful but underused strategies adults have at their disposal

Children attending the conference said they are seriously concerned about climate change and the impact it is having on their communities.

"This perspective contrasts with traditional views of childhood, which portray children as passive recipients of aid or helpless victims. It's a shift to a portrayal of children that respects them as people with something to bring to efforts to improve our world," said one of the child participant.



# PSYCHOLOGICAL BLOCK TO ACTING ON CLIMATE CHANGE

## ■ Innocent Nhire

*People are always motivated when it comes to avoiding danger. You run away if you step into the street and a bus is coming at you from behind. You stay inside if a sizable strange dog is growling outside your front door. Why is it so difficult to convince people to take action on climate change if people are motivated to prevent dangers to their existence? Unfortunately, a number of concerns related to climate change make it challenging for people to get engaged.*

First, combating climate change requires people to make the most difficult trade-off possible between immediate and long-term gains. Years of research on temporal discounting have shown that we overvalue short-term rewards in comparison to long-term benefits. People do not save enough money for retirement because they would rather spend it now than have it later in life.

In the time being, it is advantageous for both people and organizations to ignore climate change. If people choose to disregard the impact their carbon footprint has on the world, they are not required to make changes to the vehicles they drive, the goods they purchase, or the residences they live in. If companies do not need to create new methods to reduce carbon emissions, they can continue to produce goods at lower costs. Governments can save money by relying on combustion-based power generation techniques rather than creating and advancing green energy sources, even ones that are more cost-efficient in the long run.

Secondly, the issue of climate change is nonlinear. People are quite skilled at evaluating linear trends. Without a spreadsheet, it is simple to consider the impact that \$5 spent each day on coffee has on your weekly budget.





Similar to this, it took a while before people could clearly see any symptoms of climate change. Dangers that escalate swiftly and nonlinearly do not work well with people; they work much better with threats that are clear, like the ugly dog at the door.

Thirdly, many effects of climate change are far from most people. Research on construal level theory indicate that people understand objects that are psychologically distant from them more abstractly than those that are psychologically close. Wildfires and extreme storms are two examples of weather catastrophes that frequently occur far from where most people live. These catastrophes are likely a result of climate change, because of this, most people are free to regard climate change as an abstract idea rather than having to deal with its specifics. Specific conceptions simply compel people to act more strongly than abstract ones do.

Another point to note is that future events are always more unpredictable than current ones. People cherish the present so much more because of this, in part. After all, there is no assurance that you will live long enough to enjoy your retirement, even if you save a lot of money for it. There are others who doubt the likelihood that human activity's impact on the environment will result in the disastrous outcomes some scientists have predicted in the case of climate change.

There is hope even though all of these things are working against us. There are a few things you can do, whether you're trying to convince others (or organizations) to take action or trying to

convince yourself to engage in more activities that lessen your impact on the climate.

Reducing the psychological distance will help you feel the specifics of a daily life disrupted by a change in the climate by mentally bringing the future closer. You and others won't be motivated to take measures that require more work today, like cycling to work, until you and others feel this future threat in the here and now .

It is also beneficial to face the future's uncertainties head-on. Think about the likelihood that global climate change is genuine if you doubt that human activity is changing the climate. Most doubters agree there is at least some potential that human activity is altering the climate.

You can also start a thoughtful conversation on values among your co-workers and inside your company. An evaluation might state that options for the present are more valuable than those for the future. Additionally, the word evaluation contains the word value, which denotes that a set of values is assumed.

In the end, we must be prepared to be transparent about the ideals we are acting on. It is a choice of values that we rarely like to make directly if we choose to improve our lives in the present at the expense of the quality of life for future generations. To live our lives selfishly and without consideration for the lives of our children and grandchildren. We must alter our behaviour right now if we are not prepared to accept that selfish value.





# AFRICA GREEN WASTE AND ENERGY EXPO AND CONFERENCE. A GENDER PERSPECTIVE

## ■ Tendai Guvamombe

*The Africa Green Waste and Energy Expo and Conference 11th Edition held from the 26th to the 29th of July 2022 provided a platform for women and youth to participate in all engagements of the conference. The move shows that there is a significant improvement in terms of youth and women's progressions in the climate change arena. The Africa Green Waste and Energy Expo and Conference is held on annual basis and is attended by delegates from different parts of Africa. The 2022 Edition was attended by youths and women from as far as Zambia, Malawi, South Africa, Mozambique among other countries.*

This year's edition of the Expo was running under the theme, "Staging an Intervention for a Climate Resilient Future".

In the previous editions, the participation of women and youths was limited and this could have been caused by lack of enabling factors for meaningful inclusion such as

inadequate capacity and awareness among young people and women. A change was noted this year. The networking platforms provided for youths enhanced their ability to amplify their voice and to also participate in climate change programmes on a maximized perspective.

Women and youths are regarded as vulnerable groups. This has been a trend in policy documents and at international forums. Research reveals that women are the most vulnerable to the impacts of climate change and are prone to be affected by issues around water, poverty, food insecurity and energy factors. To add onto that, young people's future will be in jeopardy if nothing is done to address climate change issues hence meaningful engagement becomes a necessity by both women and youths.

Observations made by this publication shows that women and youth were active during the proceedings of the main engagement and the three side events. Meaningful involvement is when women and youths become the drivers of their own in speaking on issues that affects them. Apart from advocacy issues they are also now part of the action. The element of institutional organization is another reality that categorically positions women and youths in terms of organizational representation and having the ability to add their voices in the climate change discourse.



The Stockholm 50+ feedback which was held on the sidelines of the main event reflected on the special needs for the youths and women in climate change programming. This also included persons with disabilities. Women and youths are moving from being classified as marginalized or vulnerable as they are making efforts to stand for themselves and fight for their rights.

Youths are departing from just being climate change activists to being implementers of climate change programmes. Tinashe Mangosho, Tinashe Dhlakama, Claris Mandoreba, Tapiwa Kamuroko and Melisa Murwira are some of the youths who are now technical experts in different areas of climate change.

During the proceedings of the main event, most youths were seen factoring in their contributions on technical grounds thereby signaling a meaningful inclusion.

On the side events, Delight Bumhira a young climate advocate personnel stirred the proceedings of the Children's Conference, Melissa Murwira, Executive,

the Director of Young Volunteers for the Environment (YVE Zimbabwe) was leading the session on Green Youth Academy. The Green Youth Academy provided a platform for young people in identifying opportunities in the current Revised Nationally Determined Contributions on climate change (NDCs) in the sectors of energy, agriculture and waste.

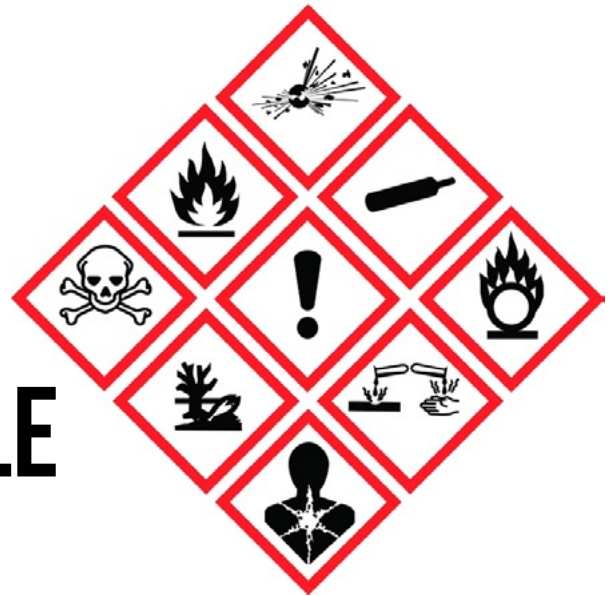
The engagement also marked as a follow up on the youths' position paper on Zimbabwe's NDCs championed by African Youths Initiatives on Climate Change (AYICC), a process that was coordinated by Elizabeth Gulugulu and other Zimbabwean youths.

These platforms became a centre of discussion around women and youths' participation in national programmes and international forums.

The main challenge left is for women and youths to develop capacities in areas around formalization and compliance. Without proper registry documents, it becomes difficult for women and youths to tap into NDC Sectors as these requires adherence to national laws.



# SAFE CHEMICALS MANAGEMENT KEY FOR SUSTAINABLE INDUSTRIAL GROWTH



## ■ Tawanda Muzamwese

*Chemical usage continues to rise globally. The utility of chemicals is well documented, but mitigation measures are lagging behind. Many chemical accidents have occurred. As a result, stakeholders are implored to manage their chemical usage, storage and disposal. Chemical accident prevention is a priority in the 21st century.*

Chemicals have different properties such as flammable, corrosive, irritant, explosive, toxic to human health and the environment as well as carcinogenic. At farms, industries and nuclear plants there is a big risk of hazardous substances exposure.

It is necessary to eliminate the chemical hazards where possible and ensure that awareness is raised on the dangers of chemicals, their acute and chronic effects. In addition, Material Safety Data Sheets (MSDS) should be made available to chemical users for continual reference.

Chemicals can have long lasting effects on human health and the environment and as well cause birth defects.

The majority of workers are not fully aware of the dangers of the chemicals they use.

An emerging threat is the use of mercury by small scale miners involved in gold processing. There is need for increased awareness on how to manage mercury in that sector. Construction companies use a lot of chemicals including those that are volatile (Volatile Organic Chemicals - VOCs). Respiratory problems as well as accumulation of chemicals around the fatty tissue of vital organs of the body remains a key

challenge affecting the world.

The other headache related to chemicals is the issue of dealing with obsolete and expired chemicals. Instead of building stockpiles, organisations should develop strategies of handling expired chemicals which will still exhibit some residual toxicity. Training, awareness and sensitisation are required in order to eliminate fatalities related to chemical usage. In order for countries to develop sustainably, chemicals management should be a priority.







**environment**



**governance**



**social**

# ESIA AS A TOOL FOR BUSINESS SUSTAINABILITY

■ Wadzanai Manyame

*Every developmental project entails the exploitation of the environment, be it the natural or artificial built environment. Construction encompasses the extraction and use of resources and this could have significant or non-significant impacts on all aspects of the environment either during project implementation or after decommissioning.*

It is therefore imperative that an assessment of the project be done prior to development to measure the severity of the possible impacts of the project on the environment. This allows for proper planning, making informed decisions as well as coming up with mitigation measures to prevent the occurrence of possible devastating effects related to

the project. As they say, forewarned is forearmed. This is mostly done through conducting Environmental and Social Impact Assessments. This concept follows a precautionary approach under the principles of environmental management.

An Environmental and Social Impact Assessments (ESIA) is a tool used to comprehensively analyse the project and its possible effects, be they positive and negative on the environment. It gives a description of the mitigation actions that can be carried out in order to avoid or minimize the possible identified effects.

There are a number of factors to consider when conceptualizing a project. The nature of the project, its size or scale, geographical location, geographical features in the area are some of the first factors to consider to assess whether the project is well-sited.

The environmental and social impact assessment therefore allows for an in-depth analysis of the project before it has begun. It involves a deeper assessment of the project owner or developer, project nature and details of implementation and operation; a critical assessment of the environment in which the project is to be established; identifying and analyzing all applicable regulations, standards, policies and conventions that apply to the project; stakeholder identification, engagement and analysis; possible project impacts identification and analysis and the drafting of environmental management plans.

Through this process a decision can be made whether the project is well positioned, whether it will not pose severe impacts on the environment, whether it will be beneficial to both the proponent, community and investors. Environmental and Social Impacts Assessments play a key role in aiding the sustainability of the project.

The main output of Environmental and Social Impacts Assessments are environmental management plans and these are recommended for implementation by the proponent during project development and running of the entire project. Environmental Management Plans provide ways to manage possible identified impacts and thus prevent any possible occurrence of environmental incidents.

Key management plans mostly address the specific identified impacts, occupational risks and possible emergencies. Furthermore, what is also key to an ESIA is a decommissioning plan especially for high severity projects such as mining projects.

There are a number of environmentally sensitive issues that arise during the conducting of an ESIA that prove the necessity of conducting such as process. Development within wetlands is prohibited, especially in countries being affected by desertification and facing a lot of dry spell related challenges.

When conducting an ESIA it is therefore important to note where the project is located considering the hydrology of that area. Park lands should be protected as wildlife should be conserved and should still have enough room for survival. Other key issues include the co-



existence of farming and mining, displacement of settlements and pollution of water sources of possible communities that could be located downstream of a project. To do away with bias, ESIA are done by independent consultants and these are reviewed by the environmental regulatory authority in a particular country. In Zimbabwe that will be the Environmental Management Agency (EMA).

ESIA present a foresight and contribute to project development by minimizing the negative impacts that could affect the progression of the project. It also acts as a cost saving measure through ensuring reduction of fines from non-compliance, reduction of costs from environmental incidents management and compensation, reduction of costs from occupational safety and health incident management, compensation and pollution recovery measures.

ESIA contribute immensely to climate change management, waste management, corporate social responsibility, stakeholder management, environmental and social governance. They play a very big role in business sustainability. When adhered to in all aspects, a project or a business is guaranteed of high standard maintenance at international level.

ESIA over the years have proven to be viable tools in project development and sustainability and they continue to be relevant as they are gaining ground internationally.





**SAY NO TO  
POLLUTION**

**REUSE  
RECYCLE  
RETHINK**





**A GREEN  
ECONOMY  
BUILDS  
A GREEN  
FUTURE**





# HYDROPONICS AND THE ENVIRONMENT

**Tawanda Muzamwese**

*Hydroponics is the growth of plants in other media which are not soil. This could be fluids that have minerals and essential plant nutrients. Agricultural benefits of hydroponics include the fact that it allows crop growth in small space, thereby achieving intensification of agriculture and better produce.*

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Hydroponics eliminates pests which normally exist in the soil as it uses alternative growth media. This situation reduces the need for pesticides and other agrochemicals which may be needed in pest control.

Land for agriculture remains a challenge in many countries due to increased population growth. As a result of this, hydroponics is becoming the most favoured option where applicable, as there is less pressure on land.

Soil erosion and land degradation are greatly prevented by the use of hydroponics. Although it is widely proven, the use of hydroponics is still gaining ground as many people are socialised to traditional agricultural practices which are labour intensive such as planting, weeding and harvesting. Deviating from the usual practices can be seen as taboo in some areas. This brings to the fore the issue related to technology transfer and the barriers of adoption.



# CAN AFRICA WIN FROM EXPLOITING ITS OIL AND GAS?

Innocent Nhire

*One can not dispute the arguments made against fossil fuels from an environmental standpoint. Numerous calculations demonstrate that the production from oil and gas fields that have already received licenses, much alone any upcoming exploration, will release carbon emissions substantially above what is consistent with the 1.5-degree ceiling stipulated in the Paris Agreement. From the standpoint of energy systems, it is gaining strength quickly.*

What is the development justification for a fossil fuel 'free-for-all' if the environmental pressure to quit fossil fuels is so great and they are less and less technically necessary? From a development standpoint, the case is supported by two important channels.

Does fossil fuel investment tackle inequality? The first is that investments in fossil fuels lead to widespread wealth creation on the continent, with profits from new projects going directly into African communities where they can improve quality of life.

This connection is flimsy. Just 33% of expected oil and gas output in Africa is held by African companies, according to data from Oil Change International. Companies in the global North, mainly in Europe, with 36% of the market share, but also in Asia and North America, hold the majority. As the only owners of the fuels produced by African fossil fuel projects, it is highly improbable that a sizable portion of the sales proceeds will stay in Africa to support local development. Therefore, Africa must ensure that it benefits from its resources.

Even if a sizable amount of the gains from the extraction of fossil fuels go to Africa instead of the foreign investors who hold the resources, these are likely to be distributed very unequally. A very small group of African countries account for the lion's share of new oil and gas output. 36% of the total expected production is accounted for by Nigeria and Mozambique alone, when including Algeria and Angola, coverage is about 60%.



This shows that increased fossil fuel output is more of a short-term boost for a select few, rather than a solution to the pan-African challenges of poverty and vulnerability. It might not even be that, given that the majority—including established fossil fuel producers like Nigeria, Algeria, Angola, Libya, and Egypt—have not yet been able to use their resource richness to achieve real development results.

Do Fossil fuels increase access to energy for Africa? According to supporters, if Africa extracted more gas and oil, it could be utilized to increase energy availability while displacing dirtier options for cooking and heating. This merits careful consideration. Sub-Saharan Africa was home to 660 million and 910 million of the 759 million people who did not have access to electricity or clean cooking in 2019, respectively, according to the World Bank.

However, it is unclear that increased domestic fossil fuel output will be able to address these issues. We would anticipate that Africa would consume at least as much energy as it actually produced if supply alone were the problem—if demand for energy constantly outpaced the amount available from existing sources, leading to access gaps. Contrary to popular belief, Africa routinely produces more energy than it consumes.

The fact that Africa cannot even use all the energy it produces raises the possibility of other factors contributing to the extreme lack of access to energy. For instance, cost is probably a key consideration. The price and trading of fossil fuels drives a significant gap between what the average African can afford to pay for energy and the price that energy can fetch abroad, even if it was initially extracted in Africa.

Nine of the top ten most expensive nations for gasoline are located in Africa, according to [www.globalpetrolprices.com](http://www.globalpetrolprices.com), which offers a real-time database of fuel affordability. The least expensive country, Malawi, charges 1.48 times the average monthly salary to fill a 40-liter tank. Therefore, it should come as no surprise that Africans use a lot less fossil fuels than they have to. It is simply too expensive at inelastic global prices and is likely to stay that way.

Along with being simply unaffordable, the high cost of fossil fuels on global markets increases the likelihood that Africa's oil and gas will be sold rather than kept for domestic use. Given recent moves by European nations to wean themselves from Russian gas, this is extremely pertinent.

In order to support Germany's claim on Senegal and Niger's future gas supply, Chancellor Olaf Scholtz travelled there in May. In contrast, Italy signed significant new supply agreements with Angola, the DRC, Algeria, and Egypt in March. More will come, and as more fossil fuels are sold to wealthy Western customers, access for power-poor Africans will be reduced with each drop.

Another important issue is the infrastructure. Just 43% of African households are connected to a national electrical grid, according to a new Afrobarometer poll. Increased fossil fuel output doesn't do much to address this issue; the issue isn't a lack of availability, but rather the inability to provide energy to those who need it most.

And the most likely winners are...

In reality, the expansion's development dividend is meagre. It is far from certain that it will bring about widespread riches on the African continent or resolve chronic access to energy deficits.

The foreign corporations and rich countries whose carbon-intensive development is to blame for the change in climate, which has been devastating on the continent are the most likely winners from African fossil fuels, not Africans themselves. Africa would be wise to avoid footing the price for them. It is time Africa becomes the centre of its own energy revolution.





# CLIMATE PROOFING IN ZIMBABWE

■ Tendai Guvamombe

*The Government of Zimbabwe is making remarkable strides in making sure that the whole nation is well equipped with the knowledge of climate change. Everyone has seen the realities presented by climate change vagaries, ranging from drought spells, shift of climatic weather pattern, flash floods, cyclones and among other unprecedented scenarios, such a process is referred to as climate proofing. The term refers to the ability by the government through entities, departments or agents to carry out an engagement process with regards to the need to incorporate institutions, departments and individuals in climate change programming.*

It can be noted that while climate change is causing more harm than good to communities, there are a number of opportunities that can be unlocked by government to the very communities. Climate change mitigation

and adaptation options present a lot of cross cutting opportunities for communities. It is in this manner that some mitigation options can actually translate into adaptation through economic benefits and gains.

In August 2022, the Ministry of Environment, Climate, Tourism and Hospitality Industry (MECTHI) embarked on a climate change mainstreaming agenda in the eastern districts of the country. This was being spearheaded by the Climate Change Management Department under the Ministry of Environment, Climate, Tourism and Hospitality Industry. The Climate Change Mainstreaming Engagement Programme targeted Chimanimani, Chipinge, Mutare and Mutasa Districts. This is also the same area that bears the evidence and realities of climate shocks in Zimbabwe. The Cyclone Idai that ravaged some parts in Chimanimani and Chipinge still bears fresh memories in the whole region of Southern Africa.

The current efforts are part of a country wide awareness and capacity building exercise to assist subnational governments to begin to integrate climate change in development planning. The engagement programme is also informed by the rising cost of response measures due



to climate change augmented by weak preparedness. The programme also builds on the foundation laid by the Climate Change Mainstreaming Provincial Research Programme conducted in collaboration with provincial structures and the MECTHI.

The programme has so far covered, districts in Mashonaland Central, Masvingo, Midlands, Matebeleland South, Matebeleland North, Mashonaland East and West provinces. Concerted efforts to bolster climate change mainstreaming are made during the engagement, as outlined in the National Budget for 2022 towards ensuring the effective integration of climate change issues in planning and budgetary processes. It is expected that at the end of the engagement programme subnational governments will be able to identify climate change mainstreaming entry points as they implement their subnational economic development plans.

The government is working with District Development Committees, non-governmental organizations, civil society organizations, women, youths and vulnerable groups. The engagements with District Development Committees in Manicaland Province revealed that the leaders at district levels are instrumental in the quest to mainstream climate change in development planning and the devolution process. This cascades down to inform non-governmental organizations (NGOs) and civil society organizations (CSOs) with latest knowledge on current and future climate scenarios, climate change priorities, and investment opportunities to increase resilience to climate change.

The most significant aspect revolves around the trainings conducted with vulnerable groups on climate change adaptation initiatives and stakeholder involvement processes for climate change adaptation to actively participate in the National Adaptation Process (NAP). This has led to the active participation of vulnerable groups in the climate change mainstreaming agenda. Increased awareness of climate change and adaptation at local level enhances appreciation of climate change mainstreaming entry points. Improved understanding of climate change priorities and investment opportunities at district and local level as they relate to planning and devolution; and increased participation of vulnerable groups in the climate change mainstreaming agenda.

Vulnerable groups were represented by women, the disabled, youth, and people living with HIV and AIDS among other members. The efforts made show that the country is working towards action-based implementation. The key results are now pointing towards policy documents that include; the National Adaptation Plan (NAP), the Climate Change Communication Strategy and the National Development Strategy (NDS 1). The Nationally Determined Contributions on Climate Change (NDCs) recently updated, also speak to an inclusive climate change programming.





# CATCH THEM YOUNG! — TEACH CHILDREN SUSTAINABLE LIVING







# RECYCLING BUSINESSES GAIN GROUND

Recycling waste was once detested as an unsavoury economic activity, but tables are turning. Recycling companies are beginning to make financial profits and breaking even. With the increase in consumption patterns globally, waste generation is increasing.

In most countries, municipalities are overwhelmed by the amount of waste that comes their way. Jobs are being created for women, young people and other societal groups. With proper support on policy, financing and capacity – it is clear that waste management enterprises will soar high.

WASTE MANAGEMENT ENTERPRISES HAVE EMERGED AS A POSSIBLE SOLUTION TO DEAL WITH THE WASTE SCOURGE



# CAR BREAKERS

## – ENVIRONMENTAL IMPACT



*Many cars are damaged during accidents and also some depreciate over time to a stage where they cease to run. Mechanical faults and other reasons also lead to cars becoming redundant and therefore needing breaking.*

Car breakers are on the rise in many countries with some being registered and others being unregistered. Car breaking can save costs as it may facilitate more affordable parts of vehicles. However, if it is not done in a proper manner, there are effects on the environment and human health.



Car breaking can result in spillage of hazardous waste through used oil, scrap metal, rubber, oil filters and glass. The lack of proper waste management plans and environmental management plans is a cause of concern. It is high time that car breakers invest in technologies such as oil separators, proper chemical labelling and develop protection measures against land and water pollution.



# ENVIRONMENTAL IMPACTS OF AVIATION POST-COVID-19

Tawanda Collins Muzamwese

*Bon Voyage! Many people are celebrating that they are able to get into the skies again after the COVID-19 pandemic has eased in the last few months. There are serious concerns however related to the emissions caused by the aviation sector due to the flight of aircraft from one destination to the other. Building more efficient aircraft which is fuel efficient is also being actioned as a way of minimising environmental impact of this sector.*

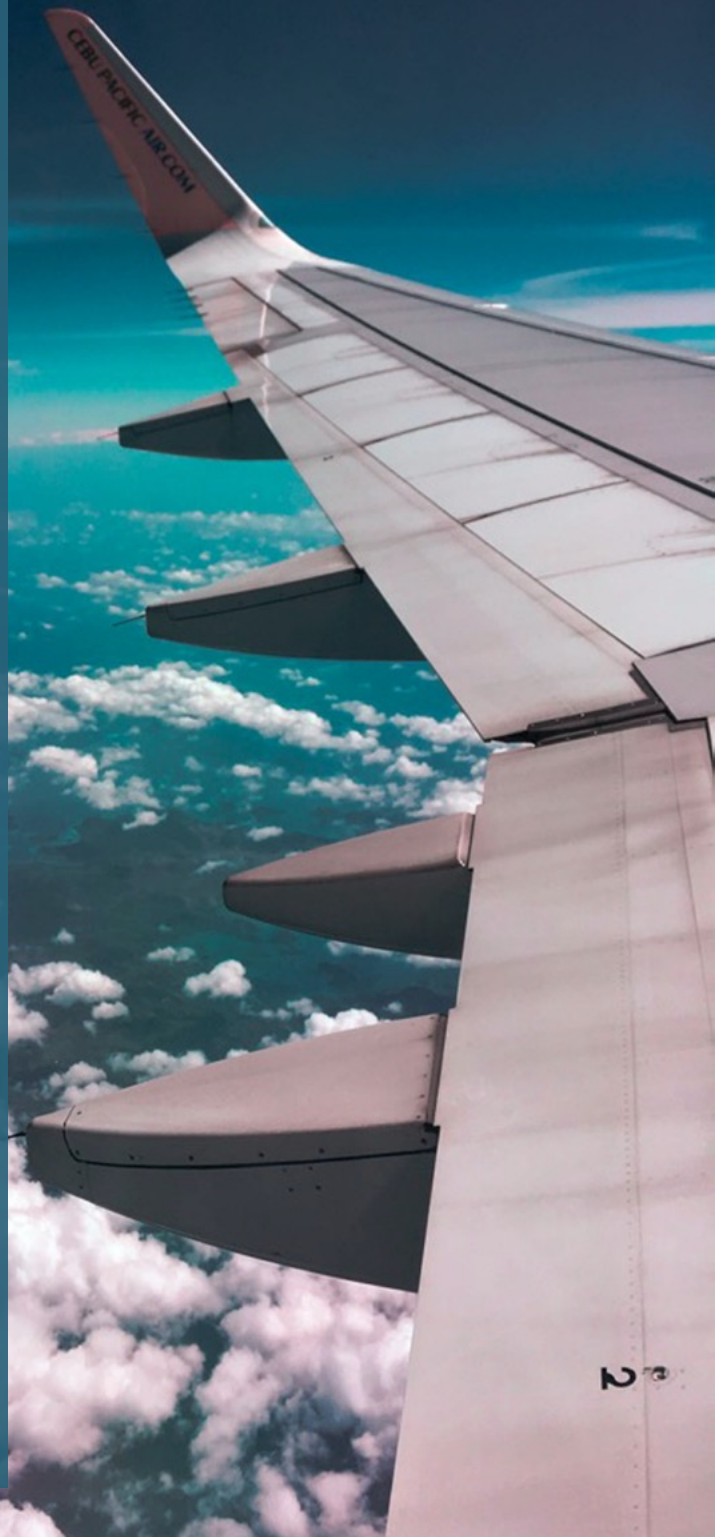
In addition, the generation of waste by airline passengers is also an issue of concern. Paper, plastic and food waste are endemic in the aviation sector. Novel approaches are being developed to cater for recyclable packaging, but more still needs to be done in order to avert an environmental crisis.

As we build back better in the post-Covid-19 era, there is need to devise new ways of ensuring that aircraft journeys are more sustainable. Servicing and maintaining aircraft offers low hanging fruits which may facilitate success.

On the grounds and airports, waste management is also essential as airports handle millions of customers on an annual basis. Segregation, recycling and signage provide clear building blocks of a sustainable aviation sector.

A value chain approach is essential to also include travel agents, tour operators, as well as other key players in the aviation sector. Covid-19 was a crisis, and yet it also reduced emissions from flights. Therefore, we must use the recovery phase as a chance to reduce emissions permanently. Individuals must also offset their emissions from flying through afforestation and carbon neutrality.


Business Executives must also be involved through cutting on unnecessary business travel and optimising business trips. Globetrotting everyday will not save the planet.











**SOLAR ENERGY  
— POWERING  
THE WORLD**



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# CLIMATE SMART AGRICULTURE

## — KEY TO SUSTAINABLE DEVELOPMENT

With the ever increasing droughts and climate change affecting Sub-Saharan Africa, there is need for a change in the farming practices. Reduced rainfall calls for drastic measures at farm level.

Climate smart agriculture is agriculture which shifts away from the usual way of doing things and saves resources. Some of the key strategies include minimal soil disturbance, permanent soil cover and planting crops at dates which are in sync with modern climate.

Water saving techniques and techniques that reduce evaporation is the mainstay of the modern day farmer. Rainwater harvesting, also plays a key role in promoting sustainable farming practices.

Mulching with plant residues and grass has also proven to be a generation old technique which has strengthened some crops to survive. In the day and age of climate change, we cannot afford to be wasteful of resources especially the much needed water.



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