Religious Leaders for a Sustainable Future

REPORT, DECLARATION AND RESOLUTIONS

FROM THE SUMMIT OF RELIGIOUS LEADERS OF SOUTHERN AFRICAN

meeting at
Midrand, South Africa
February 10 – 12, 2009

Indalo Yethu
SOUTH AFRICA'S ENVIRONMENTAL CAMPAIGN
www.indaloyethu.co.za

SAFCEI
Southern African Faith Communities' Environment Institute

Summit preparations and participants











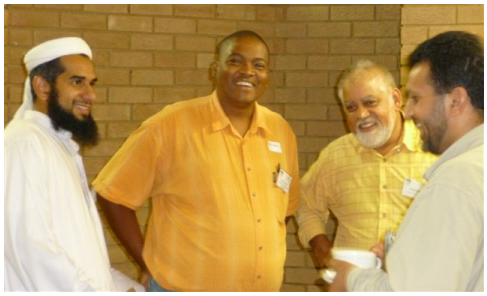


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Bad Dreams

The cats are in the flower bed
A red hawk rides the sky
I guess I should be happy
Just to be alive...
But we have poisoned everything
And oblivious to it all
The cell phone zombies babble
Through the shopping malls
While condors fall from Indian skies
Whales beach and die in sand...
Bad dreams are good
In the great plan

You cannot be trusted
Do you even know you're lying?
It's dangerous to kid yourself
You go deaf and dumb and blind.
You take with such entitlement.
You give bad attitude.
You have no grace
No empathy
No gratitude

You have no sense of consequence
Oh my head is in my hands...
Bad dreams are good
In the great plan.

Before that altering apple
We were one with everything
No sense of self and other
Traditional Healers, No self-consciousness.
But now we have to grapple
With our man-made world backfiring
Keeping one eye on our brother's deadly selfishness.

And everyone's a victim!
Nobody's hands are clean.
There's so very little left of wild Eden Earth
So near the jaws of our machines.
We live in these electric scabs.
These lesions once were lakes.
No one knows how to shoulder the blame
Or learn from past mistakes...
So who will come to save the day?
Mighty Mouse?
Superman?
Bad dreams are good in the great plan.

-Joni Mitchell

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1 Executive summary

Faith Community representatives from southern Africa met from 10th to 12th February, 2009 at Midrand, South Africa, to seek solutions to the growing environmental crisis confronting humanity.

Welcome: In their welcome to the summit, both Ms. Tahirih Matthee, chair of the SAFCEI Board of Management, and Mr. Onkgopotse JJ Tabane, chair of Indalo Yethu, spoke of the potential and critically important role faith communities could play in responding to the environmental crisis. They have the moral authority to hold individuals, governments and industry accountable for environmentally sustainable practices.

Keynote Address: In giving the keynote address Professor Tinyiko Maluleke emphasised that we need to move from a man-centred to an earth-centred approach. The notion of stewardship is no longer acceptable. Instead, as custodians, we recognise a mutuality between humans and other species – each caring for and being dependent on the other. The earth is sacred, just as humans are.

Economics and Ethics: The Executive Director of SAFCEI, Bishop Geoff Davies, introduced five environmental themes by pointing out that our present economic policies are major drivers in environmental destruction and socio-economic injustices. He contended that we have the resources to establish ecological and economic justice, but lack the political will. New values-based economic principles are needed that improve the quality of life, are bounded by ecosystem limits, embrace equity for this and future generations, are grounded in reverence for life and strive for flexibility and innovation.

Environmental Themes

Water: Dr. Anthony Turton, previously with the CSIR, explained that not only was South Africa reaching the limits of its water supply, but that the mining industry was being grossly irresponsible in its use of water, causing major contamination. Our reliance on coal for energy production is a major source of pollution, producing acid mine drainage and acid rain which is causing massive contamination of our water systems. South Africa faces a looming national crisis.

Food Security: In addressing food security, Dr. David Fig believes there is enough food for everyone to enjoy food security. The problem lies with unequal distribution of food and people's access to it. Food subsidies have gradually fallen away as government followed neo-liberal economic ideas. He advocated a more appropriate agricultural model for African farmers, one which honours the soil, is mindful of traditional breeding methods and indigenous seed, and one which does not pollute the soil and water with expensive organophosphates* and toxic chemicals. Dr. Fig proposed that

faith communities link up with other civil society campaigns to support and lobby for agricultural practices that put people and ecological sustainability before profits.

Biodiversity*: Dr. David McDonald pointed out that biodiversity is essential for our survival, yet thousands of species are becoming extinct, in spite of the Convention on Biodiversity which was adopted in 1992 in Rio de Janeiro and ratified by 191 countries. Currently the average annual consumption of one world citizen is 1.3 times more than the earth's regenerative capacity, resulting in an unprecedented loss of biodiversity. Faith communities were challenged to take a lead in preserving biodiversity, a glorious gift of creation which must be cherished for this and future generations.

Climate Change: Climate change is the greatest environmental challenge the human community has ever had to face. The IPCC-4* states categorically that climate change is already having an impact with greenhouse gas* emissions increasing by 70% between 1970 and 2004, due to human activities. Ms Tasneem Essop from WWF-SA believes a "new global contract of co-operation and solidarity" is required that acknowledges the need for low-carbon sustainable development in developing nations, with the international community enhancing funding, technology co-operation and capacity building. The South African government needs to transform the economy from an energy-intensive to a climate friendly path as part of a pro-growth, pro-development and pro-jobs strategy.

The Challenge: Mr. Peter Lukey from DEAT*, explaining that the environmental crisis lies with everyone as it results from our selfish lifestyle choices, called for a groundswell of people from civil society who want change. Only then would government respond. Because South Africa's progressive environmental legislation often took a back seat, faith communities could do much to raise the profile of the environment on government's agenda. Mr Lukey believed it was fundamentally important that faith communities join and participate in the debate around responses to climate change because they have the voice of moral authority which has for too long been absent.

The Declaration and Resolutions: The summit concluded with a participatory process involving all delegates in a day of discussion. The delegates reached consensus and the process culminated in the drafting and signing of a declaration and resolutions on the five focus areas. The resolutions, which will be sent to government departments as well as to faith community leadership, provide a strong foundation for action to help establish a sustainable future. Ecological and economic justice, which cares for the wellbeing of all in society as well as all on the earth, is required if we are to achieve a peaceful and sustainable future.

2 Introduction

Religious leaders from communities throughout southern Africa gathered in Midrand from 10 to 12 February, 2009, to deliberate on the role of faith communities can play in seeking an environmentally sustainable future. Hosted in partnership by the Southern African Faith Communities' Environment Institute (SAFCEI) and Indalo Yethu, South Africa's environmental campaign, a *Religious Leaders for a Sustainable Future* Summit brought together 100 participants from a wide variety of faiths. Represented at the gathering were the Baha'i community, Buddhists, Christians, Hindus, Jews, Muslims and Quakers.

The primary objectives of convening this diverse group of leaders were to:

- Empower delegates to raise awareness about environmental issues in their communities;
- Develop practical strategies to combat environmental degradation;
- Develop for government and faith communities, a comprehensive set of recommendations on responses to the climate crisis and other issues of environmental sustainability.

These objectives were explored through five seminal areas: biodiversity*, climate change, food security, waste and water. The need to establish an ethical and just economic system underpinned all the discussions. What follows is a summary of the conference presentations and discussions as well as the resolutions arising from the deliberations.

3 Opening Session

In keeping with the multi-faith nature of the gathering, the *Religious Leaders for a Sustainable Future* Summit opened with prayer led by six members of the faith communities represented at the summit.

Ms. Tahirih Matthee, the Chairperson of SAFCEI's management committee, then welcomed delegates and outlined the context in which the deliberations would occur. Pointing out that in South Africa, 95% of the country's

population regards itself as religious, Ms. Matthee underscored the potential role faith communities could play in educating the nation about responding to the environmental crisis. She encouraged attendees to seize the unique opportunity afforded by the conference.

Mr. Onkgopotse JJ Tabane, the Chairperson of Indalo Yethu, delivered a welcoming address. He emphasised the historic nature of the gathering and challenged faith communities to play a stronger role in addressing environmental issues. Highlighting the fact that faith communities had an unprecedented presence in every corner of the globe and weekly if not daily interactions with constituents, he drew attention to the fact that few sectors of civil society were better equipped to communicate messages of environmental responsibility.

Mr Tabane also challenged attendees to "think globally and act locally", arguing that while delegates represented communities in developing nations, their responsibility in halting environmental degradation was as important as it is for their counterparts in developed countries. Despite smaller economies, the role of emerging nations such as Argentina, Brazil, China, India and South Africa in contributing to climate change could not be ignored as emissions from these countries were the fastest growing among the international community. In South Africa, tackling climate change is sometimes seen as being at odds with the developmental challenges that the country faces. This is a challenge that must be met through partnerships.

In light of this, Mr Tabane encouraged delegates to develop an ethos in which each person took responsibility for her or his part in caring for the planet, only then would collective action result. He also pointed out that the faith sector, above any other, possessed the moral authority to hold individuals, governments and industry accountable for environmentally sustainable practices and should utilise that clout to act as a catalyst for positive environmental action.

4 Fragments of a Theology of Earth: the Quest for a Sustainable Future

The conference keynote address was delivered by Professor Tinyiko Maluleke, President of the South African Council of Churches (SACC) and Executive Director of Research at the University of South Africa.

Professor Maluleke began by unpacking the meaning of the word 'sustainable' and its dubious status as "one of the most overused words in our time." The promise of sustainability when added to nouns like 'economies', 'development' and 'democracy', has become a veil which continues to allow massive exploitation and injustices to continue. Implicit in many uses of the word "sustainable" is the role of human ingenuity, especially that of men, as the preserver of the environment. This unstated assumption is problematic in that it positions humanity as the defender of the environment rather than those who are protected and sustained by nature. This false assumption contradicts the reality that humans are largely to blame for environmental degradation. It grossly under emphasises the change in thinking that must occur if people are to become part of the solution to the environmental crisis.

Professor Maluleke challenged religious leaders to confront questions of survival of all the inhabitants of the earth against a backdrop of a planet in crisis and a world in danger of extinction. Illustrating this reality, he noted that 50 to 80% of the earth's plant and animal species were found in rainforests. These ecosystems, which produced significant amounts of the oxygen humans and other life forms required, were being depleted daily. In light of this global crisis, the solutions to climate change and environmental disruption could not be left to scientists alone. Will the grandchildren of our children's grandchildren continue to find home on this earth? These are questions that we as faith community leaders need to confront as we seek to commit ourselves to building a more sustainable future.

Remarking on his own childhood as an African, raised in both rural and urban contexts, Professor Maluleke described the tension that often exists between traditional wisdom and notions of reverence for the earth and the rational lessons offered by western education. He recalled, "Whatever lessons I learnt from my grandmother about mutuality, coexistence, awe and respect for nature were thrown into disarray the more educated I became." He suggested that ideas around coexistence were challenged by binaries promoted by the West. He gave examples citing: 'civilized' versus 'primitive', 'human' versus 'nature', 'mind/spirit' versus 'body', 'reason' versus 'emotion' and 'culture' versus 'nature'.

Highlighting these binaries and speaking from his own experience – and not exonerating other religions from culpability in the environmental crisis, Professor Maluleke began to distil the role of Christian theology in the present scenario. He referred to Lynn White Junior's 1967 work, *'The historical roots of our ecological crisis'* in which the author argued that much environmental abuse had occurred because many Christians believed that God had created the earth explicitly for the benefit of 'man'. Professor Maluleke suggested that this belief in 'man's' dominion combined with a propensity to devalue the earth, has led to the treatment of the environment as an object belonging to man. The trend has continued as people engage in the sustainability discourse. As a consequence, the earth is preserved because it is in 'man's' best interest, rather than because the earth has intrinsic value and was created by God.

Another permutation of this 'man'-centred approach to the earth, is one in which the environmental crisis is denied and the earth subjected to ongoing devaluation. This is evidenced in some of the terminology used for the earth, like the word 'globe'. Professor Maluleke suggested that 'globe' is a descriptor for the earth but is not terminology that spoke of the earth as an interconnected living system with humanity as but one element of it. Earth must no longer be seen as a passive recipient of human action.

Professor Maluleke challenged delegates not only to reflect about the earth, but to reflect with the earth in creating ecological approaches to theology. Citing liberation theologians who sided with the oppressed before developing theology, he encouraged delegates to stand with the earth when examining scriptures. This was necessary for there to be a paradigm shift from a man-centred to an earth-centred approach.

Six Principles of Eco-Justice

In giving voice to the earth, as a living system, Professor Maluleke proposed six eco-justice principles.

Principle 1: The Intrinsic Worth of the Earth

Because of its existence and not because of its utilitarian value, the earth and all of its components, has inherent worth. We must do away with the logic of dualisms and use whatever cosmology we find most engaging in order to appreciate and enhance earth's intrinsic value.

Principle 2: Interconnectedness

Earth is not a machine; it consists of a complex set of interconnected relationships that comprise the earth community. People must do away with hierarchical relationships between humanity and other earth inhabitants.

Principle 3: Voice

Earth is a subject in and of itself, not an object of humanity. Citing Christian scriptures, such as Romans 8, in which the earth 'groans in faith', Professor Maluleke questioned whether we allow the earth to speak or if we suppress its voice.

Principle 4: Purpose

Earth is a complex system of mutually dependent ecosystems, which function according to an inbuilt design and purpose. While humans do not understand earth's complex systems and while there might be disagreement regarding the origin of the earth and its creation, faith communities must recognise and appreciate that this magnificent green planet was designed to sustain life in all its diversity and beauty.

Principle 5: Mutual Custodianship

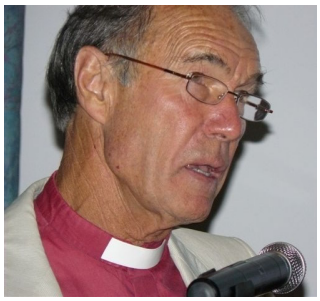
People are called to view relationships between humans and other members of the earth community differently. The notion of rulership, of stewardship, in which humans are entrusted to take charge on behalf of God, is not acceptable. The key word is custodianship. This speaks of a mutuality between humans and other species – each being custodians of one another. The earth is sacred, just as human beings are sacred.

Principle 6: Resistance

Earth has the capacity to resist, just as all who suffer oppression do. Earth is not merely a victim of oppression anymore than women are victims of patriarchy. Resistance should not be glorified or romanticised. There is a price to be paid – this time all life forms on earth may have to pay it. Eco-sensitive humans must join earth in its struggle against the injustices that threaten to extinguish all life on earth.

People of faith need to do more than join a bandwagon of resistance. The challenge is to dig deep and build on our faith traditions and our contemporary culture. Our struggle against the degradation of the earth should not be trivialised because God's mission has never been only about human beings. The earth is crying out in pain and anguish and we must hear and respond to the call.

5 The Issues



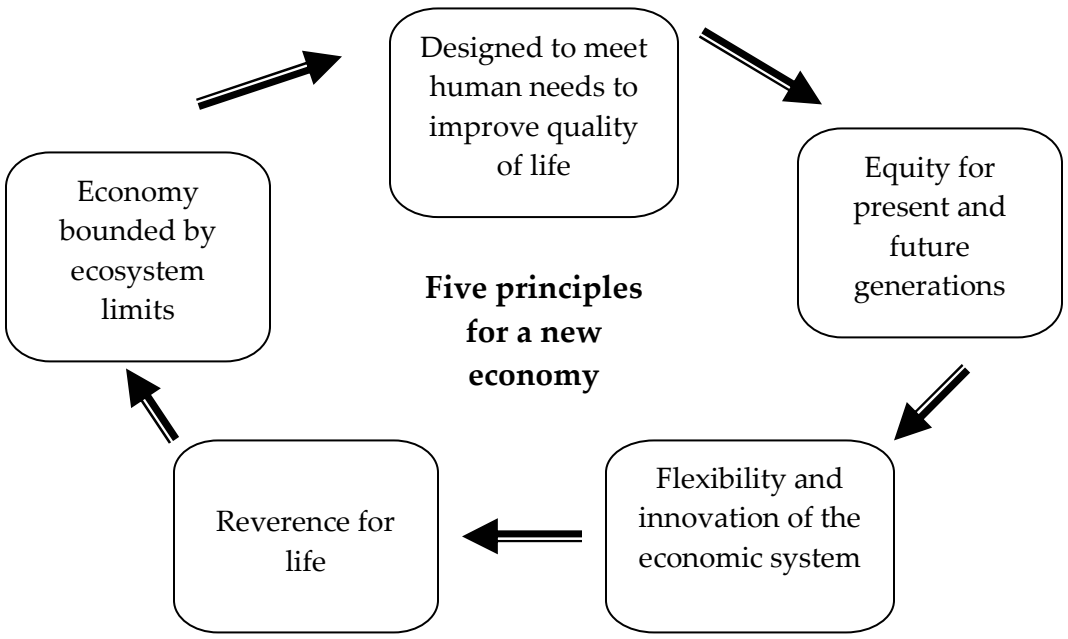
The second day of deliberations focused on specific areas of environmental sustainability. Framing the issues that were to be considered, Bishop Geoff Davies, Executive Director of SAFCEI, emphasised that seeking solutions to the earth crisis is a matter of survival. Decisions we make over the next few years will affect the future of all life on the planet.

He asserted that global economic policies have been a major driver of environmental destruction and socio-economic injustice. The huge resources of wealth in the world today are a result of the energy derived from fossil fuel*, the benefits of which have been kept in the hands of a minority of people, who control and manipulate both political and economic power. The vested interests of the fossil fuel industry have shown little responsibility for the environment or the poor of the world. Present economic disparities

where the poorest 50% of the world owned barely one percent of the world's wealth are an affront to God. Bishop Davies suggested that by reverting to our greatest under-utilised asset, our people, and by harnessing energy from the sun and other renewable sources, we could put power into the hands of people and communities. He emphasised that we are not only dealing with environmental concerns but issues of democracy and justice. There will only be peace in the world when we seek justice for the environment and people.

The Bishop contended that the resources to halt environmental degradation existed, as evidenced by the massive amounts of capital that had been mobilised in the midst of the current international financial crisis but the political will to deploy resources for ecological justice and poverty alleviation did not yet exist. He called for the adoption of new, values-based economic principles which had been developed at the Tällberg Forum in Sweden in 2008. These principles describe an economy that is designed to meet human needs, is bounded by ecosystem limits, embraces equity for this and future generations, is grounded in a reverence for all life and strives for flexibility and innovation.

Delegates were challenged to interact with the presentations they were about to hear in the context of the critical decisions that must be made to preserve the earth for future generations and to make solid commitments that would make this vision a reality.



Panellists, from the left: Dr Anthony Turton (water), Dr David Fig (food security), Ms Tasneem Essop (climate change), Mr Peter Lukey (DEAT) and Dr David McDonald (biodiversity)

5.1 Water

Drawing on his tenure at CSIR[1], Dr. Anthony Turton, of Touchstone Resources, provided delegates with insight into the critical state of water resources in South Africa. In illustrating the crisis, he told the story the life of Gonste Kelebetso, a South African child born with congenital deformities. Gonste lived alongside a stream contaminated by the mining industry. At the age of three, she died, having lived with kidney dysfunction and having suffered a heart attack. Gontse's community believed that her deformities and untimely death were the consequence of uranium and heavy metal exposure from mining. It was suggested that geophagia, the practice of eating soil which is undertaken by some pregnant women to ensure the intake of sufficient trace elements, might explain how such a young child could have been exposed to so many toxins. Because this is a single data point, it is not possible to determine the cause of her deformities and death with any degree of certainty. There is no funding available and further research to test this assertion has thus been blocked.

Gontse's story is a case study of the toll the mining industry takes on the environment and the damage it does to the most vulnerable members of society. Dr. Turton described how the hidden costs of mining are passed on to civil society because the external costs to the environment can last for hundreds of years after mine closure. Sustainability cannot be achieved when mining companies make short term profits while future generations bear the brunt of consequent pollution and have to pay for delayed remediation costs.

Dr. Turton highlighted the contemporary impact of mining on water quality. Acid mine drainage (AMD), particularly from metal and sulphur rich coal mines is a growing problem which is impacting on human health and livelihoods and the environment. Water is pumped from mines when they are operational in order to lower the water table. Once operations cease, the water-table rises again and contaminated mine water

[1] Dr. Turton lost his position with the CSIR after drawing attention to the critical state of water pollution in South Africa

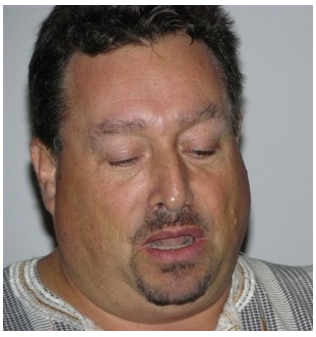
eventually makes its way into streams and rivers. Runoff from mine spoil* exacerbates the situation. This is a growing problem which is worsening as more coal mines are licensed.

South Africa's energy production is based on coal. When it is burnt, the sulphur contained in coal is released as sulphur dioxide. In the atmosphere, it dissolves in water to form acid rain. Once it has reached the earth, the resultant acidic groundwater frees up trace elements in the soil, like aluminium. There is growing evidence that aluminium inhibits tassel development in maize plants and thus preventing pollination. Scientists are only just beginning to understand some of the implications acid rain will have on food security and biodiversity*.

Using photographs, Dr Turton shared graphic evidence of the impact of high levels of the toxic blue-green alga, microcystin which is present in some contaminated dam and river water. While Finland had legislated a maximum microcystin tolerance level of 10 µg/l (microgrammes per litre) and the USA approved a level of sixty µg/l, (1 µg is 1 millionth of a gramme) contamination in some water bodies in South Africa has been found to be as high as 10 000 µg/l.

South Africa already uses 38 billion cubic metres of water annually. This is currently the total surface water available. Dr Turton pointed out that if South Africa wants to grow its national economy at even a moderate rate, it will need to find an additional 28 billion cubic metres of water by 2025. Because of the state of contamination, South African river systems have lost their capacity to dilute effluent currently emptying into drainage basins. Dr Turton believes that acid mine drainage, eutrophication*, endocrine disruptors* and other contaminants in our water systems are a looming national crisis which we haven't begun to take seriously enough.

5.2 Food Security



Food security is "when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."(FAO* of the UN). Dr. David Fig, an independent environmental policy researcher, believes that there is enough food for everyone to enjoy food security. The problem rests with the unequal distribution of food and people's access to it. Many people cannot afford to buy sufficient food because of the way the market operates. The high level of stunted growth in children in South Africa illustrates this.

Over the past 18 to 24 months, the international community had experienced major food price inflation with 80 nations experiencing food riots. The inability of people to afford food was partly due to the commodities boom but also because food growing arable land is being used for other purposes. Food subsidies in South Africa have gradually fallen away as government has followed neo-liberal economic ideas, leaving food prices to react to market forces. Marketing boards which used to guarantee affordability and which set fair prices for farmers have been done away with. Dr Fig emphasised that with the deepening global recession, the government needed to put in place a social safety net for the growing numbers of poor and destitute people. He suggested that National Treasury might have to take the idea of a basic income grant more seriously.

The reduced availability of arable land for growing food and our increasing industrialisation of commercial agriculture also threaten food security. Individual families have lost the resilience to manage commercial farms. Commercial mono-crop (monoculture*) agricultural practices consume over 50% of South Africa's scarce water resources and threaten biodiversity*. Industrial agriculture leaches nutrients and poisons soils with pesticides and herbicides, encroaches on marginal lands and pollutes fresh water sources with organophosphates* and nitrates from chemical fertilizers.

Dr. Fig highlighted other threats to food security and to the agricultural industry at large. South Africa is the world's eighth largest producer of GMO* products (genetically modified organisms) including maize, soya and cotton. Although laws are supposed to be changing there is no compulsion on industry to separate or label GMO containing products in spite of a growing concern about the potential health hazards they might pose.
The Massive Food Production programme which was rolled out to small scale farmers in the Eastern Cape has to a large degree collapsed because of the high costs of patented seed and fossil fuel driven chemical and mechanical inputs. This costly mono-crop agricultural system which is toxic and contaminating sits more comfortably with large-scale multinational companies.

The lack of support for small scale farmers is another area of concern. Extension services to small scale farmers, previously provided by the government, have been reduced. This information is now coming from representatives of the seed and chemical companies who have vested commercial interests. The current pace of land reform is slow, leaving many in rural communities without access to arable land. Emerging farmers also suffer from lack of access to financing and ongoing training. Given South Africa's apartheid history, in which people were deliberately divorced from knowledge of farming for the market, this support is critical if small farmers and new entrants into the profession are to function productively.

In some regions, provincial governments have placed added pressure on food security by providing arable lands for non-food products like timber and the growing agro-fuel*

industry. While maize, as a staple food crop, has been excluded from the potential biofuel* mix, ethanol, an alcohol fuel derived from sugar has a high water demand.

The new 'green revolution', modelled on the industrialisation of Asian agriculture in the 1950s and 1960s, was designed to assist the small farmer in Africa to "catch up". Dr Fig believes that although designed as a route for greater agricultural production and food security on the continent it is likely lead to more hunger and frustration.

Current commercial agricultural models need to be questioned. Dr Fig advocated a more appropriate agricultural model for African farmers. This is one which honours the soil, is mindful of traditional breeding methods and indigenous seed, and does not pollute the soil and water with expensive organophosphates* and toxic chemicals. There needs to be support from extension officers, provision of land, credit and marketing support mechanisms for smaller producers. All this must be viewed in the context of providing household and community food security, at a time when there are escalating food and transport costs and mass unemployment

As consumers and citizens we need to be vigilant about what is happening to food production in our region. Dr Fig proposed that faith communities should link up with other civil society campaigns to support and lobby for agricultural practices which put people and ecological sustainability before profits.

5.3 Biodiversity

'Biodiversity (Biological diversity) is the totality of the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. It is the 'natural wealth' of the Earth, which supplies all our food and much of our shelter and raw materials.'(WWF-SA)

In arguing that biodiversity is essential and a blessing rather than a burden, Dr. David McDonald of Bergwind Botanical Surveys and Tours, started with a quote from scripture:

> *"Then God said, "Let the Earth sprout vegetation, plants yielding seed, and fruit trees bearing fruit after their kind, with seed in them, on the Earth"* Genesis 1:11

A remarkable record of the rise and decline of plant and animal species over aeons of time has been traced by many notable palaeontologists*, resulting in the suite of species as we know them today. Despite this knowledge, however, humans have not even begun to count or identify the inhabitants of the earth with any accuracy. According to Edward O. Wilson, "The number could be close to 10 million or as high as 100 million."

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Conservationists use the number of different plant species per unit area to define biological richness. Endemic* plant species are a particular component of this measurement. The biological richness and degree to which the plants in a region are under threat defines a 'biodiversity hotspot*'. These are extremely threatened areas of diversity which have lost 75% of their original vegetation.

Conservation International recognises 34 global biodiversity hotspots (Figure 1.). These are regions where nearly 50% of the 270 000 known plant species of the planet occur. Nine of these hotspots are located in Africa, more than on any other continent. South Africa is home to three of the nine hotspots, a reflection of our rich and remarkable plant heritage of over 20,500 plant species.

Figure 1. Global biodiversity hotspots Source: www.biodiversityhotspots.org

In a short illustrated introduction to the highlights of South Africa's rich biodiversity heritage, Dr McDonald noted that the country is home to 18 centres of recognised plant endemism*. The country also hosts the Cape Floral Kingdom, the smallest of the world's six floral kingdoms. In this tiny 90 000 square kilometer region there are 9 000 plant species. Approximately 6 000 are endemic. More than 1,850 or 20% of the species in the Cape Floral Kingdom are threatened with extinction.

Dr McDonald gave a brief overview of the status of some of South Africa's fauna. There are 247 known species of mammals, twenty seven are endemic and in 2000, 16% of the species occurring in the region were threatened. Of the approximately 850 species of birds that had been recorded in South Africa, 725 were resident or annual visitors and 50

are endemic. There are 110 frog species in South Africa, some critically endangered because of human activities.

Dr McDonald outlined some of the conventions and legislation designed to govern biodiversity conservation. The international community adopted the Convention on Biodiversity in 1992 in Rio de Janeiro. This treaty articulated that the genetic resources of a country were to be acknowledged as the sovereign property of a nation and its people. This convention hosts regular meetings in which issues of global biodiversity are assessed and goals for biodiversity conservation established.

South Africa has passed its own legislation relating to biodiversity. The *National Environmental Management: Biodiversity Act* (NEMBA) was promulgated in 2004, with various regulations coming into effect on 1 April 2008. The Act aims to regulate the use of indigenous plants, animals and other genetic resources and to ensure equitable sharing of the benefits from them.

One of the tools used for assessing the impact of individuals and human communities on the planet is the ecological footprint*. This is an index of human pressure on the earth resulting from consumption of natural resources. Currently, the average annual consumption of one world citizen is 1.3 times more than is available. This measure indicates that humans have exceeded the earth's regenerative capacity which is unsustainable and resulting in an unprecedented loss of biodiversity. Dr. McDonald noted that sustainable lifestyles require our ecological footprint to remain below the earth's regenerative capacity. For this to occur, we must examine how we use resources and look for ways of reducing negative and wasteful practices.

Dr McDonald concluded with a challenge to faith communities to take a lead in preserving biodiversity. It is a wonderful and glorious gift of creation which must be cherished for this and future generations.

5.4 Climate Change

Climate change is the greatest environmental challenge the human community has ever had to face. In examining the crisis, Ms Tasneem Essop of the World Wide Fund for Nature South Africa (WWF-SA), focused on what science is saying about climate change. The fourth report from the Intergovernmental Panel on Climate Change (IPCC-4*) states categorically that climate change effects are already been felt, primarily in the form of melting snow and ice and rising sea levels. Greenhouse gas (GHG) emissions

due to human activities have increased by 70% between 1970 and 2004. It is predicted that the greatest impact will be on fresh water supplies, biodiversity and ecosystems, food security, submerging coastlines and health. In order to avoid catastrophic impacts the increase in the earth's temperature must not exceed 2º C. The poor of the world will bear the brunt of climate change. Biodiversity hotspots frequently occur in the same locations as poverty hotspots.

In Ms Essop's opinion, a "new global contract of co-operation and solidarity based on a commitment to equity and the principle of common but differentiated responsibilities and capabilities" is required to tackle the looming crisis. It is important that the developed world acknowledges the role it had played in contributing to the crisis. Accordingly, it should bear a particular responsibility and create capacity to implement mitigation* and adaptation* measures. While striving for equitability, the new contract must acknowledge the need for low-carbon sustainable development in developing nations given that emissions rise as economies grow. The international community must enhance funding, technology co-operation and capacity building in the developing nations.

Speaking specifically about the objectives of this new deal, Ms Essop emphasised that global emissions must peak before 2020 in order to keep temperature rise below 2ºC. To achieve this, high GHG emitting industrialised countries must reduce their emissions by as much as 40% of 1990 levels by 2020 and developing countries should substantially reduce their emissions below levels of 'business as usual'. In the longer term, global emissions must decline by 80% before 2050. Technology co-operation and action plans for adaptation and mitigation would require scaled-up financing estimated to be in the region of $130 billion.

South Africa has an inexcusably large carbon footprint, a result of a coal-based electricity system. In spite of its high emissions, the country has played an important role in the international climate change negotiations and has had a strong voice in the G77 + China as well as in the Africa negotiating group. The country needs to develop far more ambitious carbon cutting measures. The DEAT* National Climate Change Conference (NCCS) and the Review of Renewable Energy Policy meetings in March would provide an opportunity to promote more ambitious action plans and targets.

South Africa has developed a Long-Term Mitigation Scenario* (LTMS), Fig. 2.
In it, government had stipulated that GHG emissions must peak by 2020-2025 at the latest. GHGs could remain stable for up to a decade, but must then decline.
Government would need to redefine the nation's competitive advantage and structurally transform the economy by shifting from an energy-intensive to a climate-friendly path as part of a pro-growth, pro-development and pro-jobs strategy. Alongside this strategy, a system to measure, verify and report on domestic emission reduction would have to be established.

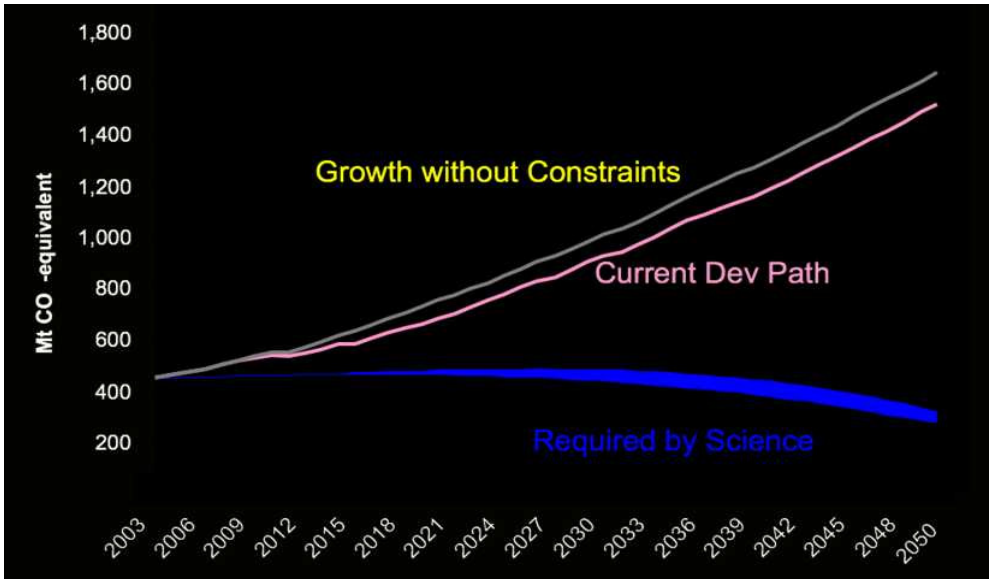


Figure 2. Long Term Mitigation Scenario* – South Africa's mitigation challenge.

Ms Essop challenged faith–based communities to work alongside other civil society organisations to:

- Acknowledge that everyone is contributing to the problem, collectively and individually.
- Unite around a vision to promote the transition to a climate resilient and low-carbon economy* and society in preparation for the National Climate Change Summit.
- Advocate for a more ambitious policy from Government, locally and internationally. One example would be setting a national target for 15% renewable energy by 2020.
- Grow local industries in renewable energy technologies.
- Put a price on carbon and phase in a carbon tax*.
- Support legally binding measures nationally and internationally, including national standards.
- Lobby for urgent implementation.
- Encourage lifestyle change in various constituencies and discourage unsustainable consumption.
- Ensure that policies are based on the principle of equity and protect the most vulnerable in our society.
- Support Earth Hour, March 28th, by switching off all lights between 20:30 and 21:30.

5.5 The Challenge

Reading from Joni Mitchell's poem *Bad Dreams*, Mr Peter Lukey from the Department of Environmental Affairs and Tourism (DEAT) told how science is now backing up the gloomy scenario articulated in Mitchell's lyrics and in the Summit presentations. The blame for the environmental crisis lies with everyone. It is a result of our selfish lifestyle choices.

Mr Lukey called for a groundswell of people from civil society who want change. Government, as a civil servant, has a mandate dictated by the tax payer. Civil servants are better at policy making than addressing intangible moral priorities. Continuing to emit GHGs is a moral issue but if the public instructed Government to maintain low electricity tariffs, and this could only be achieved through coal - despite its negative impact on the environment - inexpensive, coal based electricity is what Government would deliver.

Mr Lukey acknowledged that Government had played a leading role in the international climate change negotiations and had demonstrated a commitment to responsible global citizenship. However, despite this global leadership role, Mr Lukey and others in DEAT often had to do battle with public servants in departments with other priorities. South Africa's progressive environmental legislation often took a back seat. Faith communities could do much to raise the profile of the environment on Government's agenda.

The DEAT National Climate Change Summit (NCCS), to be held from the 3rd to the 6th of March, would provide a valuable opportunity for various sectors of society to engage with Government and to have input into South Africa's climate change policy response. By making their voice heard, faith communities could ensure that this gathering did not result in privileges for the few at the expense of the poor and the environment. Environmentalists would be in attendance and would deliver messages of sustainability that had consistently been overlooked. Mr Lukey said that it is fundamentally important that faith communities join and participate in the debate around responses to climate change because they have a voice of moral authority which has for too long been absent.

Religious Leaders for a Sustainable Future

February 10 – 12, 2009
Midrand, South Africa

Declaration

In response to the three days of deliberation, representatives from the various faith communities adopted the following declaration:

We, the members of faith communities from across southern Africa, in partnership with Indalo Yethu, gathered at a summit of religious leaders for sustainability held from the 10th to 12th February 2009, in Midrand, South Africa. We acknowledge that while we are of diverse faith traditions with varying beliefs and practices, we are united through our common commitment to a just care of the earth and all of God's creation. In all our diverse religions we have a common calling by our creator to care for, protect and sustain creation for this and future generations.

Over three days of dialogue, debate and discussion, we have deliberated on the critical environmental issues of water, food security, biodiversity*, climate change and waste.

It was noted with deep concern that an underlying cause of much environmental degradation is our current economic system which places the interest of capital above the well-being of the poor and the natural environment. Our current economic system is grossly unjust. The poorest fifty percent of the world's population owns only one percent of the world's wealth; the richest one percent own forty percent of global assets. This is an affront to God who provides sufficient for our needs, not our greed. God commands us to seek justice if we want peace.

We believe that we have confused money with wealth. *"Money is only a measure of wealth and a means of exchange. Real wealth is good land, pristine forests, clean rivers, healthy animals, vibrant communities, nourishing food and human creativity."*[2] The degradation of the environment has direct negative consequences for the poor, who form the majority of our communities in southern Africa. The poisoning and polluting of our air, water and soils affects us all. We believe we need to bring ethics into the dealings of business and we encourage business and industry to recognise their responsibilities towards the poor of the world as well as to the natural environment.
Similarly the conference noted the enormous responsibility of governments, as curators of the environment entrusted with taxpayers' resources, to carry out this mandate. As

[2] Satish Kumar: Nature Crunch. Resurgence, January 2009

faith communities we have a responsibility to engage governments continuously on the development and implementation of legislation that safeguards God's creation, in order to improve the lives of the poor and ensure the sustainability of the earth and all the life it supports.

We believe that faith-based communities have a significant role to play in the nurturing and protection of God's creation. We call on religious leaders to place environmental justice at the forefront of their agenda, to promote an ethically based economic system and to take steps to safeguard the future of our children and planet earth. This requires religious leaders from all faiths to take practical steps to integrate 'earthkeeping' into liturgy, worship and celebration as well as to implement environmental programmes and interventions at the congregational and community level.

This summit agrees to endorse the following five values-based principles for a new economic system. This would involve an economy:

1 designed to meet human needs to improve the quality of life
2 bounded by ecosystem limits
3 embracing equity for present and future generations
4 grounded in reverence for life
5 striving for flexibility and innovation [3]

We also declare our concern and commitment to respond to the broad issues of water, food security, biodiversity* loss, climate change and waste through the attached resolutions developed and agreed upon by consensus as well as through the following statements of commitment:

- **On Water**: Since we recognise that clean water has spiritual value and is a precious commodity essential for the wellbeing and survival of all life, we are alarmed that many of our rivers and water supply systems are in a critical state. Amongst other remedial actions we call on our members and the southern African governments to encourage all citizens to recognise the value of water and therefore to use it sparingly, ensuring it is not polluted or wasted through irresponsible usage or leakage. At the same time we call on governments to ensure that nobody is deprived of water because of its cost.

- **On Food Security**: We know that all people are dependent on adequate and nutritious food, and yet too many people go to bed hungry. We note with concern how oil-based agri-business, monopolistic multi-national companies and the growing biofuel* industry is concentrating high-tech agricultural production in fewer hands and is impacting negatively on biodiversity, food security, rising food

[3] Developed by the Tällberg Forum in Sweden, 2008 See attachment www.tallbergfoundation.org

costs, soil fertility and health. The solution to this crisis lies in more labour intensive organic farming. We believe localised actions to mitigate the crisis are needed and that it is the duty of governments of the world to strive to seek justice, fairness and ecological sustainability in the production and trading of food. We express our particular concern that the subsidy of food production in developed countries and trade regulations are causing massive suffering and food shortages around the world.

- **On Biodiversity**: We recognise that biodiversity is the earth's rich living heritage and that life on this planet flourishes through diversity. We acknowledge that in southern Africa, a region that has the third highest level of biodiversity in the world, life is being threatened and destroyed by human activities due to habitat loss, pollution, climate change, invasion of alien species and the over-exploitation of natural resources. We recognise that we humans have a responsibility to maintain the health of the planet and to care for, protect and preserve the diversity of all life on the earth.

- **On Climate Change and Energy**: We recognise that communities of Africa are particularly vulnerable to climate change. In addressing this we urge South Africa to continue to play a leadership role both regionally and internationally in climate change negotiations. We understand the need for urgency to reduce greenhouse gases. As people of faith we recognise that we have a responsibility to care for the planet and all life on it as well as caring for our fellow human beings. This responsibility includes leaving a healthy planet for future generations so that they are not robbed of their inheritance. We need to move from an energy intensive economy to one that places people and the environment at the centre.

- **On Waste**: More than 25 million tons of waste is generated and disposed of in South Africa every year. Littering and pollution continue to be a growing threat to the health and wellbeing of all life on the planet. This is a product of our consumer culture. Waste is 'something that nobody wants at a particular moment in time', but one person's waste can be raw material to another. We believe it to be both practical and visionary to strive to become a zero waste* society, emulating nature where neither material nor energy is ever wasted. We are deeply conscious of the role a clean and aesthetically pleasing environment can play in affirming human dignity and promoting physical, psychological and spiritual wellbeing. We also recognise the positive role we, as members of faith communities can play, in partnership with government, industry, business and civil society, in restoring the earth and in helping to reduce our carbon footprint and the mountains of waste we produce.

Commitment

Through the support and facilitation of SAFCEI we agree to work with renewed vigour to implement the resolutions we have agreed upon. It is our firm belief that all of these efforts need to be done in partnership which we will continue to forge with all faith communities, as well as environmental, civil society and appropriate government bodies. SAFCEI acknowledges with gratitude, the partnership with Indalo Yethu, that has made this summit possible. We hope to continue developing this partnership as we seek to achieve mutually beneficial outcomes in the years ahead. Environmental challenges are not going to diminish and we need a coordinated effort, built on strong partnerships, to meet them.

Ms. Tahirih Matthee, Chairperson of SAFCEI and June Josephs-Langa, CEO of Indalo Yethu, signing the Declaration.

Resolutions

In response to the challenges presented by the various speakers during the course of the *Religious Leaders for a Sustainable Future* Summit, and from their own experiences and deliberations, leaders of the various communities committed to the following resolutions:

1 WATER

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February, 2009, know that water is essential for the wellbeing and flourishing of all life on the planet. We also believe that water has inherent spiritual value that is recognised by all faiths. We acknowledge that we are one of the 20 driest countries of the world. Our fresh water systems are in crisis and water security is threatened, largely because of our human activities. We recognise that responsible water management is an economic, political, social, environmental and spiritual challenge.

Part of our role as faith communities is to engage with leadership, including government leadership. We acknowledge that the South African Constitution provides the foundation for the ordering of society. While many needs have still to be met, we commend the South African government for the significant strides it has made in the rollout of water supply and improved sanitation. As representatives of the faith communities of southern Africa, we call on all the governments of southern Africa to listen to and work with civil society. In turn we commit ourselves to working with our respective governments and other leaders in seeking to ensure that the following resolutions are attended to and acted upon. We therefore:

1.1 Call upon governments to implement their mandate to provide access to safe and sufficient water to all in southern Africa. The lack of secure, safe water impacts negatively on our right to health and dignity as enshrined in the South African Bill of Rights and the National Water Act.

1.2 Support the resolution passed by the South African National Council of Provinces in November 2008 for the establishment of a national water quality science, technology and policy programme, and call on the government to implement it as a matter of urgency.

1.3 Call on governments to launch education programmes on water stewardship to encourage all citizens to recognise the value of water for all life, and therefore use it sparingly, ensuring there is no wastage through leakage or irresponsible usage.

1.4 Call on local governments to recognize their responsibility to ensure adequate maintenance of bulk water infrastructure.

1.5 Call on the government to ensure that nobody is deprived of water because of its cost.

1.6 Call on the South African government to introduce legislation requiring all industry, notably mining, to ensure that any water source affected by their operations is kept free from radionuclides*, heavy metals and any other contamination. Mining and industry must be held accountable for groundwater that is polluted as a result of their activities. This redress must be applicable retroactively.

1.7 Call on municipalities and local authorities, in terms of the South African National Water Act, to monitor and regulate the use of borehole water to ensure the long term integrity of underground aquifers.

1.8 Call on all municipalities to ensure that there is adequate sanitation for all, because without sanitation, water can be poison. This is particularly urgent in informal settlements in order to prevent the spread of disease.

1.9 Call on governments and faith communities to promote, and enable householders to install rain water tanks and to encourage the use of grey water and safely recycled water. It is imperative that water harvesting, the use of grey water and the installation of water efficient devices become law within building regulations.

1.10 We call on the South African government for consistent and credible monitoring and transparent reporting of the quality of our water, especially in terms of endocrine disrupting chemicals*(EDCs) and microcystins*. We call on the Department of Water Affairs and Forestry (DWAF) to educate and appoint monitors to assist with testing, reporting and enforcement of water quality standards.

1.11 Call on governments to recognise that water, if properly managed, can safely be used repeatedly before it is returned to the hydrological cycle*. Using alternative technologies water can be recycled for numerous purposes. In the domestic sector this could include rain water harvesting, grey water treatment, waterless sanitation and water for bio-digesters*. In the industrial sector this could include effluent treatment processes, desalination, reverse osmosis and process efficiencies.

1.12 Call on governments to implement legislation that will hold public and private entities accountable for the quality of the effluent from waste water treatment plants. Many waste water treatment works around the country are malfunctioning.

1.13 Call on the South African government to be vigilant in the implementation of public private/partnerships in the field of water supply, ensuring that there is no risk of alienating the water rights of South Africans, as upheld in the National Water Act and the Bill of Rights.

1.14 Urge governments to ensure the protection and conservation of all wetlands. They are essential to a healthy water supply and in the prevention of flooding, as recognised by the South African government which is a signatory to the Ramsar Convention*.

1.15 Call on the South African government to intensify and expand the excellent work of the Working for Water programme in eradicating invasive alien plants from water catchments and in creating jobs.

1.16 Call on governments to address the growing problem of plastic waste from bottled water. The rapid expansion of the industry is a response to public perceptions about the quality and reliability of local municipal water, commercial advertising and fashion. This trend is wasteful and where safe, it must be discouraged and reversed.

1.17 Call on governments and local authorities to ensure that there is sufficient water available for residential, commercial and industrial developments before passing plans, and to ensure that effluent from such developments will not impact negatively on the environment or local communities.

1.18 Call on faith community leaders and faith-based organisations to reaffirm the importance and value of water. We need to educate and lead by example to help our communities understand the importance of looking after our water resources, which includes reducing wastage.

1.19 Call on faith community leaders and faith-based organisations to join civil society in advocating and lobbying for the provision of safe drinking and washing water to all South Africans by 2012.

1.20 Call on faith community leaders and faith-based organisations to implement water conservation measures in our places of worship and encourage and assist our members and communities to do the same in their homes. The installation of

rain water tanks and use of grey water wherever appropriate and possible are good examples.

1.21 Call on faith community leaders and faith-based organisations to mobilise their members who live and work in water catchment areas to clean up their rivers by helping to collect litter, eradicate invasive alien plants and monitor effluent.

1.22 Call on faith community leaders and faith-based organisations to support local and national initiatives to hold polluters accountable.

2 FOOD SECURITY

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February, 2009, note with growing disquiet that while it is God's intention that we should be able to live like "in all its fullness," too many people lack adequate and nutritious food and too many people go to bed hungry. This is unethical and reflects a grave lack of compassion.

We note with concern how oil-based agri-business, monopolistic multi-national seed companies, factory farms and the growing biofuel* industry is concentrating high-tech agricultural production in fewer hands and is impacting negatively on biodiversity*, food security, rising food costs, soil fertility, health and growing poverty and unemployment.

We express our particular concern that subsidies on food production in developed countries and trade regulations are causing massive suffering and food shortages around the world.

We also note that the use of genetic engineering (particularly when applied to staple foods, such as maize, soya, rice or potatoes) could have serious health implications and threaten the genetic integrity and variety of indigenous food crops.

We note further that the new biofuel industry which is responding to the demand for so-called sustainable alternatives to fossil fuels is partly to blame for the rising food prices.

We believe that the solution to the problem we have created lies in more labour intensive organic farming which embraces the principles of permaculture*, shows greater respect for animals and supports communities. Localised actions to mitigate the crisis are needed. It is the duty of governments of the world to strive to seek justice, fairness and ecological sustainability in the production and trading of food and of civil society to make their voice heard with regard to food insecurity. We therefore:

2.1 Call on national and local governments and civil society to encourage and support small scale, organic and local community farming initiatives. We believe that through this, Africa can make a contribution to the world, particularly as oil becomes scarcer. In a world in which there is large scale unemployment, labour intensive agriculture can only be to the benefit of humanity as we restore the dignity of working with the soil and the dignity of labour.

2.2 Call on governments to enforce legislation that requires full and comprehensive testing prior to licensing of crops.

2.3 Call on the South African Department of Agriculture to promote conservation agriculture by encouraging farmers to reduce the use of chemical herbicides, pesticides and fertilizers and replace them with benign organic alternatives.

2.4 Call on regional governments to subsidise staple foods for the poor and ensure the regulation of food prices.

2.5 Call on governments to ensure that food production takes priority over bio-fuels even when the latter may be more profitable.

2.6 Call on the South African government to initiate independent and impartial research on matters related to GMOs*. Research findings must be made public.

2.7 Call on southern African governments to ban the use of GMOs, as we believe that they are not the solution to food security in Africa and that they do not promote sustainable, multi-crop farming.

2.8 Call on the South African Government, if GMO products are not banned, to institute mandatory labelling of food, and in particular products containing GMOs, so that the public can make choices about the food they are buying.

2.9 Call on the South African government to invest the funds from companies found guilty of price fixing to support community-based food security initiatives.

2.10 Call on the South African government to cease support of the arms industry, turn swords into ploughshares and develop and manufacture green technology, such as small scale appropriate technology farm equipment, like human, animal, sun or wind powered water pumps in order to reduce farmers' dependence on fossil fuels like diesel

2.11 Call on governments to ensure that permits are not issued to timber companies to plant water thirsty alien trees in regions that are currently used for food production.

2.12 Encourage faith communities to uphold the wholeness, divinity and sacredness of food and life, remembering that the physical intake of food has a spiritual dimension. In this regard, issues of food security and eco-justice should be a concern on the agenda of all faith communities.

2.13 Encourage faith communities to promote rainwater harvesting.

2.14 Call on faith communities to promote healthy living and raise awareness about the importance of food security and the social and spiritual values that underpin it. In this regard, we encourage advocacy on behalf of the poor and marginalised.

2.15 Encourage faith leadership and membership to support local producers and buy locally produced food in order to reduce transport costs and carbon emissions.

2.16 Call on faith communities to lobby for fairly traded food products.

2.17 Encourage faith communities to lead by example. We need to move from a dehumanising and disempowering development paradigm to one which brings hope and builds the capacity of people with the resources they have in their own communities. Local faith communities are well placed to mobilise capacity building and awareness-raising.

2.18 Urge faith communities, where possible, to encourage the production of indigenous food and the use of traditional methods of production.

3. BIODIVERSITY

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February, 2009, recognise that biodiversity is Earth's rich living heritage and that life on our planet flourishes through diversity. The destruction or loss of any species is an affront to all life and to the creator.

> *For humans to cause species to become extinct and to destroy the biological diversity of God's creation, for humans to degrade the integrity of the Earth by stripping the Earth of its natural forests, or destroying its wetlands…for humans to contaminate the Earth's waters, its land, its air, and its life with poisonous substances… these are sins.*
>
> His All Holiness Bartholomew I, Orthodox Church

The destruction of any parts of the magnificent variety of life degrades nature's wellspring and impoverishes the entire Earth community, because everything is interconnected and interdependent. We believe that we humans have a responsibility to restore the health of the planet and to care for, protect and preserve the diversity of life for the sake of future generations.

Southern Africa is a region that is home to the third richest levels of biodiversity in the world. This is being threatened and destroyed by human activities through habitat loss, pollution, climate change, invasion of alien species and over exploitation of natural resources. We therefore:

3.1 Call on all the governments of southern Africa to take the commitment to protect our natural heritage much more seriously, acknowledging with appreciation that all Southern African Development Community (SADC) member governments are signatories to the UN International Convention on Biological Diversity (ICBD). At the Conference of Parties 10 to be held in Nagoya, Japan, in October 2010, our governments, along with all other signatories, will be reporting to the world community on the steps they have taken to halt the loss of biodiversity in their respective countries since 2002. To strengthen this commitment and enforce the legislation, an institution of state might be required in the future.

3.2 Call for the implementation and enforcement of biodiversity conservation legislation with regard to illegal mining, logging, trade in endangered species and theft of plant material. We call on all governments to recognise their responsibility with regard to biodiversity conservation and to ensure that economic incentives do not override environmental and social considerations in the granting of permits and licensees for mining and other development initiatives.

3.3 Call on governments to adhere to the ICBD principles and ensure that the integrity of biodiversity hotspots* and critically threatened ecosystems are respected. At this time, we express particular concern about the threat to the biodiversity of the Pondoland Centre of Endemism*, the Enkangala grasslands and wetlands in Mpumalanga and the mist-belt of the eastern highlands of South Africa.

3.4 Note that local communities and indigenous people are often marginalised from participating in formal environmental impact assessment and review processes because they are unable to engage with the discourse. They have the democratic right to make decisions regarding their land and we ask that their views be taken into account with honesty and integrity. The capacity of local communities must be strengthened so that all people are able to engage with the legal processes to ensure full democratic participation. It is essential that funding is made available to enable impoverished communities to oppose any developments that might involve the destruction of their environment.

3.5 Ask that our concern about the threats posed to biodiversity by the growing biofuel* industry be taken seriously.

3.6 Demand funding for and honest reporting on independent research into the threat to biodiversity posed by genetically modified organisms (GMOs*) through the crossing of genetically modified material into both second generation plants and other species.

3.7 Call on the relevant government departments to enforce commercial mono-culture farmers to comply with legislation with regard to corridors along riparian (riverbank) boundaries. Farmers must be encouraged to increase the fringes of biodiversity along rivers and around wetlands in order to create biodiversity corridors across the length and breadth of southern Africa.

3.8 Call on the governments of Mozambique and the Democratic Republic of Congo to halt the destruction of forests of 'Outstanding Universal Value' (as defined by the UNESCO World Heritage Convention) that grow in their countries.

3.9 Commend the Department of Water Affairs and Forestry (DWAF) for their Working for Water Programme because we are deeply concerned about the threats posed to biodiversity by invasive alien plants. We call on the South African government to provide more support for this and other programmes like Working on Fire and Working for Wetlands.

3.10 Call on the leadership of faith-based organisations in the SADC region and in the whole of Africa to draw the attention of their members to the sacred nature of all biodiversity, including the human species.

3.11 Call on faith communities to raise awareness for the reverence of all forms of life. We must recognise the value of biodiversity if the planet is to flourish. We encourage leadership and membership to do all they can to prevent the destruction of plant and animal species. Both advantaged and disadvantaged faith-based organisations can and should assess the impact that they have on their local ecosystems. Such communities should seek ways of restoring biodiversity in their local and wider context so as to enhance the quality of life for this and future generations.

3.12 Call on local faith communities to strive to become centres of biodiversity good practice. This could involve the planting of indigenous gardens and auditing and phasing out the use of pesticides and harmful chemicals, replacing these where possible with organic alternatives. Faith communities can also set an example by adopting public spaces with biodiversity value as community conservation projects.

4 CLIMATE CHANGE AND ENERGY

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February, 2009, recognise that the burning of fossil fuels* is causing a greenhouse effect leading to dramatic climate change which could have catastrophic consequences for the future of life on this planet.

We also recognise that communities of Africa are particularly vulnerable to climate change. We need to address this and we urge the South African Government to continue to play a leadership role both regionally and internationally, notably at Copenhagen* at the United Nations Framework Convention on Climate Change* (UNFCC) in December 2009. We faith communities strongly express our concern and our position to the government delegation of the need for meaningful action in order to ensure that the meeting in Copenhagen results in positive and significant progress.

We also recognise the need for urgency to reduce greenhouse gases* (GHGs). We, people of faith, recognise that we have a responsibility to care for the planet and all life on it as well as caring for our fellow human beings.

We furthermore recognise that this responsibility includes leaving a healthy planet for future generations so that they are not robbed of their inheritance.

Part of our role as faith communities is to engage with leadership, including government leadership. Acknowledging positive steps that the South African Government has taken to address energy and climate change issues, we call on the governments of southern Africa to work earnestly with civil society to meet these challenges. In turn we commit ourselves to working with our respective governments and other leaders in seeking to ensure that the following resolutions are attended to and acted upon. We therefore:

4.1 Call on the governments of southern Africa to take on concrete, measurable steps to reduce carbon emissions. This means stopping the expansion of further coal and nuclear generation, and progressively moving away from fossil fuels and nuclear generation towards the increasing development of renewable energy, concentrating on solar and wind, as a matter of urgency. This could be greatly encouraged through the urgent implementation of the feed in tariff*.

4.2 Call on the Government of South Africa to set before the world community a carbon dioxide (CO_2) emissions reduction target so that the levels of atmospheric greenhouse gases are reduced to below 350ppm (parts per million) which is a more practical and measurable target than keeping temperatures below a 2^oC increase.

4.3 Call on both governments and civil society to assist vulnerable communities to develop indigenous and local models of adaptation* in order to meet the impacts of climate change.

4.4 Call on governments to ensure resources are provided for creative and innovative communication and capacity building, as part of a broader commitment to democracy and participatory learning around issues of climate change. This must focus on positive messages of hope that will motivate and inspire all stakeholders.

4.5 Call on Government, ESKOM and NERSA (National Energy Regulator of South Africa) to ensure that electricity tariffs include 'cradle to grave' external environmental and social costs. A stepped tariff* must be implemented so that the poor are not further burdened by increasing electricity tariffs. Renewable, locally generated electricity provides the opportunity for access to affordable electricity for all.

4.6 Call for the improvement and shifting of freight from road to railway, setting a target of 40% road freight to be transported by rail by 2020. Call for the improvement and subsidisation of safe, efficient public transport, in particular railways, and encourage and incentivise the public to use it. Implement measurable targets, for example, 20% of private road commuters to shift to using public transport by 2012.

4.7 Call on all local governments to develop cycle tracks in order to promote the use of bicycles. This would also involve providing security for cyclists.

4.8 Call for governments to establish and support local innovative technologies to drive new economic sectors such as renewable energy. Such sectors must focus on local job creation, for example, electric vehicles and the generation of electricity by renewable means. The arms industry must be transformed into a renewable energy industry.

4.9 Call on the South African Government to end the policy of enticing polluting industries, such as smelters, to our country with the promise of heavily subsidised "cheap" electricity. Equity must be pursued in that industrial users must not pay less for energy than households.

4.10 Acknowledge how critical the supply of energy has become and call on the government to ensure that all departments work cooperatively on climate change, through an interdepartmental presidential task team. We also call on the South African Government to create a separate ministry of energy.

4.11 Broadly endorse *Hope for the future,* the Uppsala Interfaith Climate Manifesto issued by the Archbishop of Sweden in November 2008 in which faith traditions address global warming (attached). We commit ourselves to sharing the contents with our faith communities and working towards strengthening the voice of faith communities at Copenhagen*.

4.12 Call on faith communities to take a lead, mitigate against climate change and set an example by implementing energy efficient measures as models of good practice, encouraging members and the public to do the same. Energy efficiency targets (25% by 2020) must be implemented as a matter of extreme urgency.

5 WASTE

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February 2009, note that more than 25 million tons of waste is generated and disposed of in South Africa every year. Littering and pollution continue to be a growing threat to the health and wellbeing of all life on the planet. This is a consequence of our consumer culture.

Waste is 'something that nobody wants at a particular moment in time', but one person's waste can be raw material to another. We are mindful of the potential that good waste management practice has on reducing the national carbon footprint and on providing employment and generating incomes. We are also aware of and congratulate the South African government on the progress it has made in this regard by introducing a National Waste Management Act.

As members of faith communities in southern Africa, we are deeply conscious of how important a clean and aesthetically pleasing environment can be in affirming human dignity and promoting psychological and spiritual wellbeing. We, as faith leaders and communities, deeply value Earth. We place ourselves alongside all living things, and respect the earth, endeavouring to live in harmony with it. We believe it to be both practical and visionary to strive to become a zero waste* society, emulating nature where neither material nor energy is ever wasted. As representatives of the faith communities and mindful of the positive contribution our communities can make in restoring Earth and in helping to reduce our carbon footprint, we therefore:

5.1 Request that the South African and other southern African governments set a target to become 'zero waste* societies' as a matter of urgency.

5.2 Request that a directive and budget is provided to local governments which will enable them to deliver services to citizens which are consistent with the South African constitutional right to a clean, healthy and safe environment, and which considers waste management as an essential service.

5.3 Support government and business in the creation of an enabling environment for investment in and development of cleaner technology and waste repurposing projects such as tapping gas from waste at landfill sites*.

5.4 Call on the South African government urgently to reclassify "mine spoil*" which forms 80% of the waste stream to "waste" so that it can be treated appropriately.

5.5 Call on government to enforce the Extended producer responsibility* (EPR) terms in the new legislation which broadens the responsibility of producers to

accept their products back for recycling and which ensures that producer pricing factors in the total life cycle of the product, including its recycling costs.

5.6 Advocate that deposit legislation be imposed on all forms of non-biodegradable packaging and potentially hazardous items of waste like batteries and fluorescent light bulbs.

5.7 Call for legislation to replace all petro-chemical based plastic packaging in all its forms with organically biodegradable packaging.

5.8 Ask governments to incentivise good waste management practice and innovation in reducing packaging in particular, and recycling and using and reusing sustainable non-harmful materials.

5.9 Ask governments to promote and reward with (economic) incentives, the use of recycled content materials in the manufacturing of new products, while placing a surcharge on the use of virgin non-renewable resources from the natural environment.

5.10 Call on the South African government to provide adequate local government budgets for multi-bin waste recycling management systems in urban areas in order to encourage the separation of glass, metal, paper, plastic and biodegradables at source. In areas where there are no bins available, we call for the provision of adequate public recycling facilities so that citizens can act out of their own concern for the environment.

5.11 Request governments to regulate and formalise the waste management industry in order to recognise and restore the dignity of informal waste collectors and pickers. We ask this because we recognise the potential the waste industry has in creating jobs and generating income.

5.12 Call on governments to introduce and enforce more stringent penalties for the illegal dumping of waste in urban and peri-urban environments.

5.13 Call on the South African and other governments to launch country-wide education programmes informing the public about the danger of electronic (e-waste*) and hazardous waste and to enforce legislation regarding its disposal. Facilities for the collection, recycling, treatment and responsible disposal of such waste must be made easily accessible as a matter of urgency. In order to prevent this waste from entering the general waste stream, it may be necessary to impose deposit legislation.

5.14 Call on governments to support rigorously the Basel Convention* on the control of trans-boundary movements of hazardous wastes, to which South Africa is a signatory. There is an urgent need to strengthen legislation. We must take a lead in the condemnation of illegal dumping of hazardous waste, particularly in less resourced countries.

5.15 Call on the South African government to be open and transparent with regard to the safe, long-term disposal of nuclear waste. Because we believe it unacceptable to leave a legacy of potentially hazardous nuclear waste to future generations, we call on the government to work actively to reduce South Africa's dependency on nuclear energy by replacing it with clean renewable energy technology.

5.16 Call on faith communities to use their platforms and networks to raise awareness regarding the philosophical, spiritual and practical implications of wastefulness.

5.17 Call on faith communities to promote a culture of reducing, re-using and recycling of waste, and of rethinking our consumption habits so that we buy things for their usefulness, not their status.

5.18 Encourage local faith communities to use places of worship as models of good practice and where possible become centres for the collection, redistribution or recycling of unwanted goods and waste.

5.19 Urge faith communities to support local recycling initiatives and encourage cooperatives for greater shared benefit.

5.20 Call on members of faith communities to lobby governments for stricter legislation on packaging and waste disposal.

5.21 Call on faith communities to encourage and support retail business to take action regarding the reduction and recycling of waste.

5.22 Suggest that faith communities initiate and support community clean up projects, encouraging the participation of young people, tomorrow's generation, and promoting a culture that disapproves of littering and wastefulness.

6 POVERTY AND THE ENVIRONMENT:

We, members of faith communities of southern Africa, meeting for the *Religious Leaders for a Sustainable Future* Summit at Midrand, South Africa, from 10 to 12 February 2009, recognise that the impacts of environmental degradation are unfairly distributed between resource rich and resource poor communities in our countries. The link between poverty and a degradation of our environment cannot be overstated. The lack of safe drinking water and proper sanitation impacts negatively on health and is the major contributor to infant mortality. Desertification, the proliferation of invasive alien plants and the propagation of mono-cultures* reduce the land available for agricultural use and therefore promote food insecurity. The draining and destruction of wetlands destroys habitats and increases the risk of flooding, thereby posing a risk to livelihoods and security.

We further acknowledge that one of the main factors contributing to poverty is unemployment. This poses a threat to growth and development but is also an opportunity for natural resource management. People are our greatest natural resource but unemployment and poverty are hampering their ability to contribute positively to our countries.

We wish to commend the South African government on the strides made to address issues of natural resource management and poverty reduction in an integrated manner. We acknowledge the good work done by the Expanded Public Works Programmes, particularly in the Environment and Culture Sector, in exceeding their job creation targets during its first five years. The Working for Water, Working on Fire, Working for Wetlands, Food for Waste and Coast Care programmes are all models for integrated, government-initiated programmes that have consistently set international best practice standards. These programmes have had a positive impact on the environment and have empowered resource poor communities by providing skills and short-term jobs. They have also promoted environmental awareness within these communities.

In acknowledging this, we therefore call on the South African government to:

6.1 integrate the efforts of the Expanded Public Works Programmes with those of other programmes that have similar objectives, like The War on Poverty. These could all be consolidated into one well managed, coordinated effort.

6.2 explore and implement appropriate institutional arrangements that will increase the ability of these programmes to deliver their services in the most efficient and effective manner.

6.3 allocate continued and increased funding to the programmes currently housed within the Environment and Culture Sector of the Expanded Public Works Programmes.

6.4 ensure that all activities of these programmes are executed with the highest level of technical skill, to guarantee that these are not simply "make work" programmes.

6.5 provide accredited training and skills programmes that offer the beneficiaries of the Expanded Public Works Programmes the best opportunity for continued employment within the mainstream economy.

6.6 strengthen the economic empowerment activities of these programmes, in order to promote sustainable livelihoods and to spread benefits as widely as possible.

6.7 provide incentives for responsible land users who offer job opportunities for workers and teams who have been capacitated through these programmes.

6.8 establish the Working for Energy programme to generate clean energy through the utilisation of invasive plant biomass.

Hope for the Future!

The Uppsala Interfaith Climate Manifesto 2008

Faith traditions addressing Global Warming

As religious leaders and teachers from the whole world, gathered in Uppsala 2008, we call for effective leadership and action in view of the global threat to the climate. From religious traditions, with different approaches to religious life, we come together at this time in human history to assure the world of what we have in common. We all share the responsibility of being conscious caretakers of our home, planet Earth. We have reflected on the concerns of scientists and political leaders regarding the alarming climate crisis. We share their concerns.

The world religions are a source of empowerment for change in lifestyles and patterns of consumption. Religious faith remains a powerful force for good among a considerable number of the human family. We undertake this mission in a spirit of responsibility and faith.

From wonder to change

With a sense of wonder we look at life on planet Earth. It is a miracle − and a gift!
Clear nights with the sky full of stars fill us with awe. It reminds us of our role in the universe. We have many reasons to be humble. Meditating on the sea shore, in the desert or in the forest allows us to feel one with the universe, yet we are so small. Faith traditions with diverse cultures and backgrounds converge to express wonder and awe at the gift of life.

In the history of the Earth, the climate has always varied. However, we are very concerned about the huge human impact on the Earth's very complex and sensitive climate system. Today humanity constitutes a major force which changes the preconditions of life and welfare for most creatures on the planet. We know enough to realize that we need to act now in the interest of future generations. The situation is critical. Glaciers and the permafrost are melting. Devastating drought and flooding strike people and ecosystems, especially in the South.

Can planet Earth be healed? We are convinced that the answer is *yes.* Major transformations in understanding human life, lifestyles and work modes, economy, trade and technology are needed. Ethics and values are intrinsic to the development of new institutional structures and architectures of politics and finance. In the religious realm long-sightedness has always been important. More than ever before the world now needs extraordinary, long-sighted political leadership.

Our appeals to the Copenhagen process

For the Earth, salvation is about more than new technology and green economy. Salvation is about the inner life of human beings. Life without hope is detrimental to human existence. The peoples of this beautiful precious planet need to dialogue about what it means to live together, with global empathy in a global village. Religions can contribute to this in a decisive way.

As people from world religions, we urge governments and international organisations to prepare and agree upon a comprehensive climate strategy for the Copenhagen Agreement. This strategy must be ambitious enough to keep climate change below 2° Celsius, and to distribute the burden in an equitable way in accordance with the principles of common but differentiated responsibility and respective capabilities. *Greenhouse Development Rights** offers one concrete model of such burden sharing. We urge all actors concerned to find politically acceptable tools to realize this. The Copenhagen Agreement must counteract misuse of land, of forests, and of farmland, using creative incentives for landowners, users and indigenous communities to manage growing forests as carbon sinks.

We ask the global political leadership for:

- **Rapid and large emission cuts in the rich world**. Developed countries, especially those in Europe and North America, must lead the way. In the developed countries emissions should be reduced by at least 40% by 2020 and 90% by 2050 against 1990 levels.

- **Binding cuts for the rich world on top of their domestic obligations.** According to the principles of responsibility and capability countries should pay for *international* cuts in addition to their own *domestic* initiatives. These payments should be obligatory, rather than voluntary.

- **Measurable, verifiable and reportable mitigation* actions by developing countries**, especially countries with fast growing economies.

- **Massive transfers and sharing of important technology.** All countries must encourage and facilitate the sharing of technology that is intrinsically important to reducing emissions. Developing countries must have viable and technologically responsible opportunities to provide for their populations.

- **Economic incentives for developing countries** to foster cleaner development on a national scale.

- **Adaptation* to climate change.** According to the same principles of responsibility and capability, countries must ensure that poor and vulnerable communities are empowered and supported. Adaptation to climate change must not fail for want of money or other resources.

Humility, responsibility – and hope!
We urge political and religious leaders to bear responsibility for the future of our planet and the living conditions and habitat preservation of new generations, assured in this of support and cooperation from the faith traditions of the world. The climate crisis is a fundamental spiritual question for the survival of humanity on planet Earth. At the same time, we know that the world has never before been more capable of creating sustainable development. Humanity possesses the knowledge and technology. Popular commitment to doing what can and must be done is growing.
We are challenged to review the values, philosophies, beliefs and moral concepts which have shaped and driven our behaviours and informed our dysfunctional relationship with our natural environment.

We commit ourselves to taking and sharing responsibility for providing moral leadership within our various faith traditions and for others who so desire. We call upon all who have influence over the shaping of both intellect and spirit, to commit themselves to a profound reorientation of humanity's self-understanding and of the world, whereby we acknowledge our estrangement and henceforth strive to live in harmony with Nature and one another.

We offer the gift of our various faiths as a source of empowerment for developing sustainable lifestyles and patterns of consumption. We undertake this mission in a spirit of humility, responsibility, faith and urgency.

Now is the time to mobilise people and nations.
As people of different faiths, we make these commitments:

- To inform and inspire people in our own religious and cultural contexts to take responsibility for and to implement effective measures

- To challenge political and business leaders where we live and work to develop comprehensive strategies and action

- To focus on the struggle against global warming and draw upon our innermost religious convictions about the meaning of life. This commitment is a deeply spiritual question concerning justice, peace and hopes for a future in love and solidarity with all human beings and the whole of creation.

As religious leaders and teachers, we want to counteract a culture of fear with a culture of hope. We want to face the climate challenge with defiant optimism to highlight the core principles of all major sacred traditions of the world: justice, solidarity and compassion. We want to encourage the best science and political leadership. We commit our communities to fostering a spirit of joy and hope in relation to the greatest gift given to us all – **the gift of life!**

Tällberg Forum, Sweden, 2008

A set of five economic principles for the New Economy by 2020

Principle 1

Designed to meet human needs to improve quality of life

- Meeting fundamental human needs
- Keeping the door open to go beyond fundamental needs
- Full spectrum of contribution is valued
- Rights and responsibilities upheld

Implications:

- Differentiate between satisfiers and needs
- New measurement systems
- Thinking globally
- Rewards for responsibility

Mechanisms:

- Alternative currencies
- Gross Domestic Happiness Indicators*
- New tax systems
- Charter of human responsibilities

Principle 2

Economy is bounded by ecosystem limits

Implications:

- We do not erode natural capital
- Non-renewable stocks will either be recycled or be replaced by renewables

Mechanisms:

- We have in place the means to restore eroded natural capital stock
- Fully price negative activities
- We fully account in price the negative impact of human behaviour
- Reward system with incentives to invite good behaviour

Principle 3

Equity for present and future generations

- Requires an economic system that is just, participatory, transparent and peaceful

Implications:

- Live within planetary boundaries – leave a better world for the future
- Directly tackle power distribution within markets and companies
- Income should be distributed in a way that does not hinder individuals' abilities to:
    - Achieve a secure, meaningful and ecologically sustainable livelihood
    - Participate in the economy with their full potential

Mechanisms:

- Domestic:
    - Free primary/secondary education
    - College loan payback system
    - Progressive energy tax
    - Unified universal health care and portable social insurance
    - New forms of company structure
- Globally:
    - Social insurance for globally poor
    - Migration rights
    - Trans-national deliberation on local/national/global policies

Principle 4

Reverence for life

- Moving from an anthropocentric to bio-centric perspective
- All life as subjects, not objects
- Factoring into mystical/spiritual/existential/symbolic/aesthetic value

Implications:

- All forms of life part of the economic system - taking into account full cost and value of all forms of life
- Ownership needs to be redefined (stewardship)
- Recognition of nature as 'natural investment' – the value of the ecosystem (stocks, not just flows) and the intangible services these offer
- Paying for all the externalities that arise from our activities
- Technology only has limited answers e.g.:
    - Looking after watershed versus building purification plants
    - Appreciation of the whole, rather than fragmentation of the whole

Mechanisms:

- Financial analysis tools need to include life support systems (e.g. loss of biodiversity for commodity gain)
- Revise the indicators that we use to determine value
- Revise the concept of the time value of money e.g.
    - rain forest an appreciating asset
    - a dollar today has depreciation tomorrow
- Non relevance of national boundaries (e.g. transfrontier parks)
- Communities and mineral/biodiversity rights

Principle 5

Flexibility and innovation

- for sustainability, self realisation (for development, not growth)

Implications:

- Challenge existing optimisation process
- Safeguards needed to keep on right track

Mechanisms:

- Continuous learning and improvement
- Develop new incentives
- Education for open collaboration

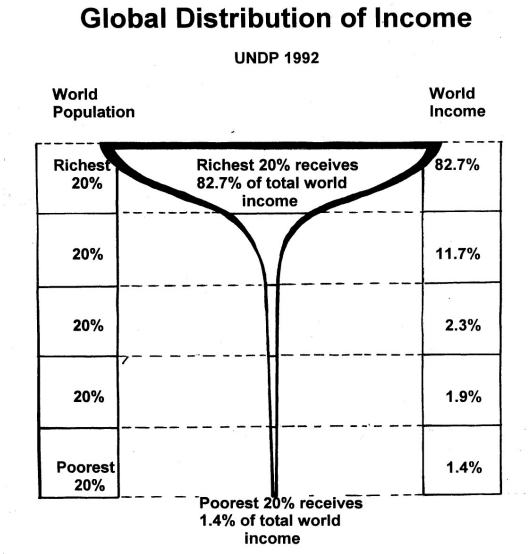
PRESENT POSITION[4]

Richest 2% of adults own more than half global household wealth

Richest 1% of adults own 40% of global assets

Richest 10% of adults own 85% of global assets

Bottom 50% own barely 1% of world's wealth



[4] From UN University World Institute for Development Economic Research, Dec.2006

GLOSSARY of TERMS

adaptation: This is a term used to describe a way of responding to climate change. Adaptation calls for us alter some aspect of our lifestyle so that we can live within the constraints of a changed climate. This might, for example, force us to grow different drought resistant food crops or move coastal villages inland where they would be less affected by rising sea levels and the ravages of severe storms.

agro-fuel: Biofuels derived specifically from agricultural crops, including maize and sugar cane to produce ethanol and oil palm, soya and canola to produce biodiesel. There are valid concerns that growth in the biofuel industry is pushing up the price of food and undermining food security and biodiversity as it competes with food crops for land and water.

anthropogenic: Something that is caused or made as a result of human activities.

Basel Convention: A global environmental agreement initiated in 1992 and signed by 172 parties, which aims to protect human health and the environment from the adverse effects resulting from the generation, management, transboundary movement and disposal of hazardous and other waste.

biofuel: Solid, liquid or gaseous fuel derived from relatively recently dead biological material.

bio-digester: A system that converts organic waste into a nutrient rich liquid fertilizer and biogas, a renewable source of electrical and heat energy. Bio-digesters are widely used in some developing countries, particularly India, Nepal, China and Vietnam. Bio-digesters help families by providing a cheap source of fuel, preventing environmental pollution from runoff from animal pens, and reducing diseases caused by the use of untreated sewerage and manure as fertilizer.

biodiversity (biological diversity): This is the totality of the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. It is the 'natural wealth' of the Earth, which supplies all our food and much of our shelter and raw materials.'(WWF-SA)

biodiversity hotspot: This is a bio-geographic region with a significant reservoir of biodiversity that is threatened with destruction.

carbon tax: This is a pollution tax on emissions of carbon dioxide (CO_2) and other greenhouse gases, measured in CO_2 equivalents. The aim of carbon tax is to protect the environment and slow climate change by reducing emissions of CO_2. It can be implemented by taxing the burning of fossil fuels in proportion to their carbon content. It can be easily understood and popular with the public if the revenue from the tax is

returned by reducing other taxes. Carbon taxes may also be used to fund environmental projects.

Copenhagen COP 15: COP 15 is an acronym referring to the fifteenth meeting of the 'Conference of the Parties', the first of which was held in Berlin, Germany, in 1995. The overall goal for the COP 15 United Nations Climate Change Conference to be hosted by Denmark from 7 to 18 December 2009, is to establish an ambitious global climate agreement for the period beyond 2012 when the first commitment period under the Kyoto Protocol expires. It is expected that ministers and officials from 192 countries will take part. In addition, there will be participants from a large number of organisations.

DEAT: Department of Environmental Affairs and Tourism of the South African Government.

endemic plants found in **centres of endemism:** Plant species found in one region of the world and nowhere else.

endocrine disruptors: Any chemical or other substance that prevents the proper functioning of hormones in living organisms.

eutrophication: A phenomenon that takes place in a body of water when there is a super-abundance of nutrients (e.g. pollution from sewerage or fertilizer runoff). The nutrients stimulate prolific growth of algae. When this plant material becomes very dense, it dies because there is insufficient light for photosynthesis. The decomposing plant matter uses up all the oxygen in the water which then kills all the fish and other animal life.

ecological footprint: A measure of the human demand on the earth's ecosystems, comparing it with the earth's capacity to regenerate. It is a measure of how many planet earths it would take to support the human population if everybody lived a similar lifestyle. For 2005, our ecological footprint was estimated to be 1.3 planet earths. This means we are using up the earth's ecological services at a rate 1.3 times faster than earth can renew them.

e-waste or electronic waste: This is a broad category of waste which includes computers, electronic entertainment devices, batteries, cell-phones and other electronic equipment. Growing global stockpiles of e-waste are a consequence of rapid technology change, low initial cost, planned obsolescence and lack of environmental, health and safety accountability in the electronics industry. E-waste is dangerous because some of the substances contained in the gadgetry are highly toxic (e.g. lead, mercury and cadmium) or carcinogenic (cancer inducing) (e.g. polychlorinated biphenyls PCBs). In the USA, an estimated 70% of heavy metals in landfills come from discarded electronics. Because of the high cost of e-waste disposal, it is often shipped from the 'North' to countries in the South and East which have become 'dumping grounds' because there

are lower environmental standards. Here, safety protocols are less stringent, labour is cheap and there is a high value for recoverable raw materials. People are employed in highly polluting, primitive recycling technologies, extracting metals, toners, and plastics. Trade in e-waste is controlled by the Basel Convention, but the USA, one of the world's highest per capita e-waste contributors is not a signatory.

Extended producer responsibility (EPR): This is a strategy designed to make manufacturers, importers, transporters and retailers of products and packaging physically and financially accountable for the complete lifecycle of their products. EPR shifts the responsibility for waste from government to private industry, forcing industry to internalise waste management costs into product prices and to be accountable for all related environmental costs.

FAO of the UN: United Nations Food and Agricultural Organisation.

feed in tariff (FiT): This is a remuneration structure set up as an incentive to encourage private power producers to supplement the supply of power by feeding electricity back into the national grid. It obligates the regional or national electricity utility to purchase electricity from off-grid sources and by its nature encourages energy production from renewable sources. In South Africa, NERSA, the National Energy Regulator of South Africa, is responsible for setting feed in tariffs, implemented in April 2009.

fossil fuels: Solid, liquid or gaseous fuels which are derived from long dead biological material (coal, oil products and natural gas).

gas from landfill site waste:
Decomposing biological material buried in landfill sites produces methane as a by-product when there is no oxygen present. It is a flammable gas which can be captured and used as a source of energy, either as fuel for machinery, to drive a power station or as domestic gas for households. This is done in many countries to mitigate against climate change because methane is a greenhouse gas that is 20 times more potent than CO_2. It is good climate and economic sense to make use of this potential source of energy.

GMO - genetically modified organism: This is an organism, plant or animal that has had its genes altered by human technology in order to enhance particular characteristics. After modification the organism displays enhanced characteristics like resistance to disease or commercial chemical pesticides or the ability of a plant to produce its own pesticidal proteins. The major commercial uses of GMOs are in the pharmaceutical and agricultural industries. International controversy about GMOs focuses mainly on 'patent-protected' seed for food crops which are largely owned by multi-national companies like Monsanto. Issues of concern are related to the ethics of tampering with biological processes that have taken millions of years to evolve and possible health risks

incurred like promoting anti-biotic resistance and the introduction of allergens into the food chain. There is also the moral question about the rights of global corporations to 'own' and make profits from seed patents at the expense of the poor.

Greenhouse Development Rights (GDR): This is a new equity-based global policy framework for avoiding climate catastrophe, developed by the Stockholm Environment Institute and its partners. It combines responsibility and capacity to respond to the climate crisis into a single explicit calculation of 'obligation'. Obligations are calculated on an index of historical responsibility for climate change as well as level of economic development and capability to pay. The GDR does not frame 'the North' as the sole culprit, but identifies the affluent and consumer classes in all nations as those who must invest the greatest effort into climate transition. Twenty US dollars per person per day has been defined as the 'development threshold' above which people will have to take increasing responsibility to protect the climate through actions to underpin global mitigation. Countries below the development threshold will discharge their obligations by increasing their investment in human development. The framework acknowledges inequality within nations by requiring rich people in poor countries to invest explicitly in human development rather than mitigation. It will also ensure that the 'South's' right to develop is not compromised by mitigation costs.

Paul Baer, Stanford University Center for Environmental Science and Policy
Grasping the climate crisis, 2008 Bo Ekman, Johan Rockstrom & Anders Wijkman

greenhouse gas (GHG): These are gases in the atmosphere which occur in very small amounts but which determine the temperature of the earth because they absorb and emit radiation within the thermal infrared range. Water vapour, carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons are the common GHGs. Human activities have added greenhouse gases to the atmosphere, mainly through the burning of fossil fuels and the clearing of forests.

Gross Domestic Happiness Index or Gross National Happiness Index (GDH): This is an attempt to redefine wellbeing and quality of life using indicators that are not defined by economic growth and prosperity (Gross Domestic Product - GDP). The index is based on the premise that true development of human society takes place when material and spiritual development occur side by side, complementing each other. The four pillars of GDH are the promotion of equitable and sustainable socio-economic development, preservation and promotion of cultural values, conservation of the natural environment, and establishment of good governance.

hydrological cycle or water cycle: The circulation of water between atmosphere, land and oceans on the earth. It involves evaporation of water from land and sea and transpiration of water vapour from plants, the condensation of water vapour into clouds, the precipitation of water as rain, hail, snow and sleet, the flow of water into the sea or its infiltration into underground aquifers.

IPCC-4: The Fourth Assessment Report from the United Nations Intergovernmental Panel on Climate Change (IPCC) is the fourth in a series of reports intended to assess scientific, technical and socio-economic information concerning climate change, its potential effects, and options for adaptation and mitigation. The report is the largest and most detailed summary of the climate change situation ever undertaken, involving thousands of authors from all over the world. In its summary, it states that "Warming of the climate system is unequivocal" and "Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

Long-Term Mitigation scenario (LTMS): In 2006, the South African Cabinet commissioned a team of strategic thinkers to help draw up a long-term climate change policy by examining possible future energy options for South Africa that would be informed by the best available research and scientific information. While seeking to protect the climate through GHG emission reductions, the scenarios could not lose sight of the development challenges of poverty alleviation and job creation. The LTMS document presented to Cabinet in early 2008 by a task force headed by the Energy Research Unit at UCT and made up of stakeholders from government, business, civil society, and a team of research scientists, outlined two possible future energy pathways or scenarios that had been modelled from 2003 till 2050. The first one was a 'business as usual,' growth without constraints pathway. The second, and only robust option, was one which encouraged committed and active interventions to reduce GHG emissions as a way of addressing the challenges of climate change. The sound scientific analysis of the LTMS underpins the policy the South African team has been mandated to negotiate with at the United Nations Framework Convention for Climate Change (UNFCCC) in Copenhagen at the end of 2009.

low carbon economy (LCE): This concept refers to a global economy which has a minimal output of greenhouse gases (GHGs). It has been proposed as a means of avoiding catastrophic climate change and as a precursor to an ideal, zero carbon society. It aims to integrate all economic activity around technologies that produce energy and materials with as little GHG emissions as possible. This economy would thus reward populations, buildings, machines and devices which use energy and materials efficiently, and encourage the disposal and recycling of wastes so as to have a minimal GHG output.

mine spoil: Waste rock**,** overburden**,** tailings, ash and slime are all part of the mix of waste products from mineral extraction processes of the mining industry. While not officially classified as waste, 'mine spoil' makes up 80% of South Africa's waste stream. It not only causes habitat destruction and environmental degradation in the immediate vicinity of a mine but drainage also contributes to the toxic contamination of streams and rivers in drainage basins and in underground water systems.

mitigation: This is a term used to describe a way of responding to climate change. Mitigation involves active interventions aimed at reducing the production of greenhouse gases which would in time slow and ultimately stop human induced climate change. Mitigation responses would, for example, include replacing CO_2 emitting coal fired power stations with renewable energy technology and planting indigenous forests. Growing trees would sequestrate CO_2 (absorb CO_2 and lock it into the wood as carbon compounds).

monoculture (mono-crop): This is an agricultural practice of producing or growing a single crop over a large area. The term can be applied to food crops like maize and wheat, tree plantations, lawns or the rearing of a single species of farm animal on a grand scale. By planting crops with the same patterns of growth with no pressure from other species, they can make better use of available light and space and maximize productivity, resulting in greater yields. This practice has produced a world wide surplus of foodstuffs in some areas. Mon-crop agriculture depends on the fossil fuel industry for its chemically synthesized fertilizers, pesticides and intensive mechanization. It also drains nutrients from the soil and threatens biodiversity. The dependence on a monoculture can lead to large scale failures when a single crop succumbs to a pathogen (microscopic organism causing disease) or when there is a change in weather patterns.

palaeontologists: People who study fossils as a guide to the history of life on earth.

permaculture: A system for creating sustainable urban and rural human settlements by integrating the way nature works into the design. Using nature as a model, permaculture systems provide the social and economic infrastructure to sustain basic human needs, promoting the use of both science and traditional knowledge. It encourages people to become a conscious part of the solution for local and global problems.

organophosphates: These are a group of commonly used chemical insecticides and pesticides which are acutely toxic. However, when exposed to sunlight, air or water, they degrade faster than persistent organochloride pesticides like DDT and dieldrin.

radionuclide: An atom with an unstable nucleus that releases radioactivity, also known as a radioactive isotope.

Ramsar Convention: An international treaty for the conservation and sustainable utilisation of wetlands which was ratified in 1975 and now has 158 signatories. The convention recognises the fundamental ecological functioning and economic, cultural, scientific, and recreational value of wetlands.

reverse osmosis: This is a filtration process which can be used to purify water. The solvent, which in this case is water, is forced through a membrane under pressure while the polluting impurities, which are the solute, are retained behind.

stepped tariff: A pricing structure for essential services like water and electricity which aims to ensures that a minimum basic requirement is affordable to everyone. Instead of charging a flat rate, the price of the utility increases as the level of its consumption increases. Stepped tariffs are designed to encourage more efficient use of essential services and rewards consumers who do so.

UNFCCC: The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. The treaty was aimed at stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The treaty as originally framed set no mandatory limits on greenhouse gas emissions for individual nations and contained no enforcement provisions. The principal update is the Kyoto Protocol, which must be replaced with another agreement when the UNFCCC meets in Copenhagen for COP 15 in December 2009.

zero waste: This is a goal which guides people to emulate sustainable natural cycles, where all discarded materials are resources for others to use. Products and processes must be designed and managed so that all resources are conserved and recovered and none are buried or burnt. It will drastically reduce the volumes and toxicity of waste materials and eliminate all discharges to land, water or air that may be a threat to planetary, human, animal or plant health.

group participation for the resolutions







Closing ceremony







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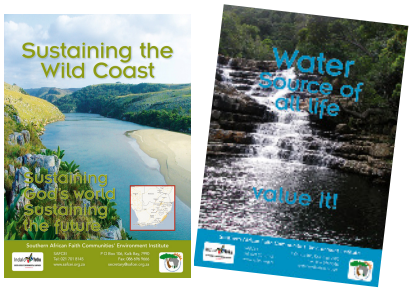
RESOURCES

Posters

English, Afrikaans and Xhosa:



Waste *is our responsibility – live simply that others may simply live*

Climate change *affects us all – live your values change your lifestyle*

Biodiversity *is life in all its fullness – respect and care for it*

Sustaining the Wild Coast *– Sustaining God's world, sustaining the future*

Water *source of all life – value it!*

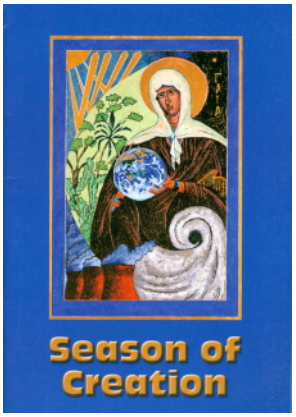
People of faith cherishing living earth

Don't waste the earth

Leaflets

Why should I as a person of faith be concerned?

Books



Practical guide for Eco-congregations

Worship, liturgy and activities for celebrating six creation themes

These resources are obtainable from the SAFCEI Office
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021-701-8145