

FORESTS FOR PEOPLE

INSIGHTS INTO RWANDA'S PRIZED FOREST POLICY



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RWANDA: LAND OF A
THOUSAND HILLS. LAND OF
A THOUSAND SOLUTIONS.



LAND OF A
THOUSAND HILLS.
LAND OF A THOUSAND
SOLUTIONS.

THE FUTURE POLICY AWARD

In 2011, the World Future Council awarded Rwanda's National Forest Policy with the Future Policy Award. The East African country has not only succeeded in stopping deforestation, it actually managed to reverse the process: since 1990, the proportion of forested area has increased by 37 per cent. Reasons behind this are massive reforestation projects and plantation in co-operation with the local population. Furthermore the awarded parcel of measures includes the smart combination of agriculture and forestry, sustainable resource management, and education centred around forests.

The theme of the Future Policy Award changes every year. In 2009 it was food security; 2010, biodiversity; 2011, forest protection; and in 2012 it recognises the protection of oceans and coasts. Experts nominate their favourite policies and a research team then evaluates their compatibility with our guidelines for future justice. Finally, a jury of international experts, including some of our council members, selects the award winners.

But our work doesn't end here. The idea behind the Future Policy Award is that the legislation which receives this award act as an example to other countries for policy alignment and the introduction of comparable measures.

CONFERENCE IN KIGALI

For this reason we organised a conference in the Rwandan capital of Kigali in July 2012. We invited members of parliament, government representatives and experts from neighbouring countries, including Cameroon, Burundi, Malawi, Tanzania, Uganda and Zambia as well as Ghana and South Africa. Specialists from Rwanda and other participating states presented their solutions for achieving good forest policy. The principle of "seeing is believing" also holds true in Africa – perhaps even more so than in other regions. Consequently, the conference included excursions into the countryside and dialogues with local people.



above: Participants of the Kigali Conference
left: Buhanga Forest

Rwanda is known as the "Land of a Thousand Hills". Its eleven million inhabitants occupy an area of about one-tenth the size of the United Kingdom. In such an environment, forest policy must be about more than just protecting the original forest area against human influence. The local population needs wood for fuel as well as construction, and also requires space for fields and fodder for their animals. Furthermore, the forests are necessary to protect the landscape against erosion. Politics in Rwanda recognises that forests and trees are crucial for the welfare and development of the country. Accordingly, the National Forest Policy connects a range of diverse measures, including some not directly associated with forests. After travelling across the country, we gained the impression that Rwanda is also the Land of a Thousand Solutions. In this book we would like to present to you some of these amazing solutions.

KIGALI DECLARATION

At the closing ceremony of the conference, all 25 participants signed a declaration, committing to support good policies in their respective countries. Sections of the "Kigali Declaration" serve as the guidelines for this book. In the declaration, the participants also asserted that obtaining donations is of utmost importance to allow the World Future Council to organise yearly meetings in which participants can exchange experiences and report on progress in African countries.

So, it's back to work for us after the Kigali conference. We want to support the local delegates in introducing better laws for both people and forests in their home countries. We hope for your support.

From the Kigali Declaration

(We) ... commit to taking back to our countries policy and programme ideas, successful experiences discussed at this First Inter-Parliamentarian Hearing on 'Forests for People' and to work to get support for these in our own national and local governments and with our citizens, consistent with our national priorities on forest-related policies, our laws and in their implementation...



left: At the Kigali Genocide Memorial Centre
right: Cheerful reception in Rubaya



ABOUT RWANDA

With around eleven million inhabitants, Rwanda is the most densely populated country in Africa. Despite its small size, Rwanda possesses a wide variety of ecosystems, including dry savannah and cloudy forested mountain ranges. Due to its high altitude, between 1000 and 4000 meters above sea level, Rwanda's otherwise tropical climate is more moderate than you might expect. However, extreme rainfall and long dry periods can threaten harvests. Rwanda is also home to the main water divide between the Congo and White Nile rivers. The Akagera River feeds Lake Victoria and is considered the main tributary of the White Nile.

DIVERSITY

Rwanda has an impressive range of ecosystems, with many unique animal and plant species. It is home to over 400 species of mammals, the most famous of which is the endangered mountain gorilla. As a result, tourism is now a major component of the Rwandan economy. Further income is generated by the export of minerals and agricultural products, especially coffee and tea.

AGRICULTURE

Subsistence agriculture is the most common economic activity for the majority of the Rwandan population, whose nutrition depends on growing their own food. This low level of industrialisation, combined with the introduction of renewable energy – hydro-power in particular – means that Rwanda is one of the countries with the lowest per capita greenhouse gas emission levels in the world.

CULTURE OF REMEMBRANCE

As in many African countries, the history of colonialism wreaked havoc on Rwandan social structures. Historians argue that this is one of the primary causes of the 1994 genocide in which 800 000 Tutsi and moderate Hutus were killed by extremist Hutu militia in a space of just three months. Today, coming to terms with this past is one of the central topics of Rwandan society. The country has low levels of both crime and corruption.



FOREST POLICY
FOR PEOPLE

A young woman at work



left: Afforestation between fields
right: Tree plantation

From the Kigali Declaration
(We decide to) ... facilitate effective development and implementation of local and national programs on afforestation, reforestation, restoration of degraded lands as part of a national strategy to effectively halt and reverse deforestation and forest degradation ...

FOREST POLICY FOR PEOPLE

TREES IN RWANDA

Should you expect to see extensive forest areas in Rwanda, you will be disappointed. Original rainforest still exists in the Akagera, Nyungwe and Volcanoes National Parks, while new plantations of native plant species can be found in forest reservations such as Gishwati. However, the landscape is dominated by trees planted around agricultural terraces and small plantations. Here, the eucalyptus tree is a common sight and also the subject of controversy, since the species requires large quantities of water. On the other hand, the deciding argument in favour of the eucalyptus tree is its rapid growth rate and, consequently, the short time until it can be used for fuel and construction. Today, ten per cent of the country's land area is covered with trees. The goal is to increase this area to thirty per cent by 2030.



THE VISION: LAND OF THE THOUSAND GREEN HILLS

Rwanda is on a promising path, but its people face enormous challenges. As the population grows, so does the demand for nutrition and energy, resulting in increased pressure on natural resources such as land and water. During the war, whole landscapes were deforested, and refugees used trees as fuel wood and for building shelters. The subsequent erosion caused floods, while significant lakes in the south and west of the country became silted up.

CLIMATE CHANGE

The dependence of Rwanda's exports and population on agriculture makes the country particularly vulnerable to climate change. Already the local temperature increase is higher than the global average, and climate simulations predict a further increase of 2.5 degrees Celsius by the

year 2050. This creates conditions for the spread of diseases which have been unknown to the region until now. Rwanda receives sufficient rainfall but rainy seasons can be highly irregular. Current calculations predict a twenty per cent increase in precipitation by 2050, leading to flooding and inundation.

GREEN GROWTH

The Rwandan government engages with such challenges strategically. In 2000, it developed "Vision 2020" as a framework for all policy measures. At its foundations is the principle of good governance, while sustainable environmental politics are its building stones. This vision was recently enhanced by the "Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development".

"The ultimate goal is to encourage behavioural change among the Rwandan society towards livelihood activities that promote environmental sustainability and greening the economy for the benefit of present and future generations."

Dr. Rose Mukankomeje

Director General,
Rwanda Environment
Management Authority





GUIDING PRINCIPLES OF THE 2004 NATIONAL FOREST POLICY

The guiding principles of Rwanda's prized National Forest Policy of 2004 are:

- Sustainable Forest Management: All forest and tree resources in Rwanda shall be managed to yield sustainable streams of social, economic and ecological goods and services, ensuring that the forest needs of both current and future generations are satisfied.
- Stakeholder involvement in decision making: Positive efforts will be made by the government to maximise the participation of a wide range of stakeholders, including public institutions, civil society, private operators, youth associations and women in the implementation of the policy.
- Development of agroforestry: Fodder trees, species with fertilising properties and fruit trees will be strongly promoted on farmland. The aim is to improve soil quality and hence crop and livestock productivity, creating income-generating activities in rural areas, improving nutrition and satisfying local timber and non-timber demands.
- Fragile ecological zones nurtured: Tree species that are appropriate to drier climatic regions, resistant to termites or capable of improving local ecological conditions will be researched. Activities such as resettlements likely to cause soil disturbance will take into account the protection and preservation of steep mountain zones and other fragile areas.
- Negative ecological impacts of man-made forests reduced: Monoculture forestry and tree species such as eucalyptus with high water needs should be discouraged in reforestation efforts, due to their potential to exacerbate water scarcity.
- Endangered plant species protected: Necessary measures will be undertaken to identify, propagate and protect all endangered indigenous plants species, particularly those that constitute the raw material for the production of local traditional medicines.
- Education on forestry issues: Courses related to forest management are to be integrated into school curricula and outreach campaigns are to be organised around the year.

From the Kigali Declaration

(We decide to) ... develop policy and a legislative basis that will ensure the implementation of community based forest management at all levels, as well as community rights over resources and the benefits deriving from their management, noting the particular relevance of women and youth ...

*below: Children sitting on a fallen tree
left: Primary Forest*





left: Digging a drainage ditch together
right: Teamwork in terrace construction



THE FUTURE: BORDER TO BORDER LANDSCAPE RESTORATION

In celebration of the United Nations International Year of Forests, the Rwandan government announced the Forest Landscape Restoration Initiative in 2011, a nationwide project based upon its celebrated National Forest Policy from 2004.

The vision: Rwanda not only wants to halt deforestation, the loss of biodiversity and decreasing soil and water quality, it wishes to completely reverse these trends by the year 2035. The strategies put in place to achieve this centre around the creation of opportunities for the rural population, and helping them to secure a subsistence level for survival. Simultaneously, water and energy supplies will be expanded and the country moved forward on its path of low-emission development.

These are ambitious plans, at whose core rests the principle of unifying human needs with a healthy environment. The crucial feature is the restoration not only of individual properties, but also of entire landscapes.

Achieving this requires the implementation of different strategies, including natural regeneration as well as targeted planting. Local actors will be included in decision making and implementation. The government has developed a general plan which individual districts are using as the basis for developing regional action plans. The implementation of an evaluation process should ensure ongoing education and adaptation of measures.

Jan McAlpine

Director,
UN Forum on Forests,
Councillor of the
World Future Council



"Past actions can have a profound effect on lives and the environment, as we can witness all over the world. But what makes Rwanda exceptional is the country's willpower to rebuild people's lives, restore their land and show the world that restoring damaged ecosystems is possible."



INSTITUTIONS ON ALL LEVELS

A good piece of legislation is important, but, the laws must also be well implemented. Effective implementation and compliance with laws remain a problem in many countries. In Rwanda this seems to work. Why is this so?

In the district of Burera in the northern part of Rwanda we meet Wildebrand Sebarezze (33), the District Forest Officer. Willy, as he is known, is responsible for forests, plantings and sustainable forestry in his district. Willy, who studied agroforestry, shows us how the locals make good use of every part of the harvested trees. Leaves and small twigs serve as mulch to protect the soil, branches as bean-poles or firewood, while the trunk supplies building materials. Chain saws are a rare sight, and most trees are felled using an axe and saw.



Wildebrand Sebarezze
District Forest Officer, Burera

Every family is allowed to harvest up to three trees for home use. Even if the trees are from privately owned land, a licence is required for their sale. The regulations are enforced top-down through a hierarchy of diverse institutions. Rwanda is divided into five provinces containing 30 districts and 416 sectors, followed by cells and villages. The district of Burera has 17 sectors, 69 cells and over 200 villages. The implementation of the law is enforced on all levels by citizens, local police, sector and cell facili-

right: Women's teamwork
left: Loggers and sawmill

ties, and last but not least by Willy, the District Forest Officer. According to Willy, after the genocide there were no trees at all left standing. Burera now has a forested area of 5,000 hectares.

Functioning institutions on all levels seem to be the key along with local citizens who are aware of the value of trees to their community. While speaking with us, Willy gets a call: somebody is reporting illegal logging in the Burera district. Willy must go.

TRUE TEAMWORK: UMUGANDA

Imagine that one day a month businesses stay closed for the morning and all of us have to clean the streets. This phenomenon probably only exists in Rwanda and is known as "Umuganda", which translates roughly to "collective effort". Umuganda takes place on the last Saturday of each month. On this day, all residents between 18 and 65 are legally required to participate in communal activities. People all over the country set themselves to work repairing public buildings, building homes for the poor, cleaning the streets, cutting shrubs – and planting trees. Specialists offer their services to the public. Physicians, for example, offer free examinations. All efforts are coordinated by local Umuganda managers.

The day is intended to strengthen societal unity and advance the country in general, but it is also an opportunity for groups and individuals to address the community and share their opinions and needs. Furthermore, Umuganda is used to educate the people on their forests. Information campaigns and training courses are offered with the aims of communicating a new appreciation for forests and teaching sustainable methods for their cultivation.





Banana trees as shade trees for coffee growing

AGROFORESTRY



left: Bean field overlooking the valley
right: Coffee harvest

From the Kigali Declaration

(We decide to) ... implement agroforestry by integrating trees with annual and perennial crops in our effort to address food security, while also focusing on the millions of hectare of completely degraded land which can be populated preferably with indigenous or appropriate exotic species ...



Dr. Athanase Mukuralinda
ICRAF Rwanda

THE RIGHT TREE FOR THE RIGHT PLACE

Agroforestry combines techniques of both agriculture and forestry to enable the productive, diverse and sustainable usage of land. Simply put, this means “more trees on the farm”. The idea is not new: Africa has a long tradition of planting and maintaining trees on agricultural land. However, until recently, the dominant paradigm was that forests and trees have to be protected against human activities whilst designated areas for logging are retained. Agroforestry shifts this emphasis and thus represents a divergence from past perceptions, policies and methods.

TRADITION AND MODERN WORLD

Today, there is a strong focus on combining traditional techniques with modern scientific knowledge, and there are many organisations involved in de-

veloping this interface. An international leader in this field is the International Council of Research in Agroforestry (ICRAF), a centre for agroforestry research. During the conference in Kigali, Dr. Athanase Mukuralinda of ICRAF Rwanda outlined the basic principles of agroforestry. It involves using a variety of tree species, including fruit trees, animal fodder trees, and other species, which fertilise the soil and improve soil quality. One example of this agricultural technique involves growing coffee plants in the shade of trees, increasing both the quality of the coffee and the household income of the family growing it.

The logic behind agroforestry is appealing to both the local and the layman, leading to increased agricultural output and enhanced food security. It drives qualitative improvements in nutrition through techniques such as animal husbandry and the addition of nuts and vegetables to the diet. In the medium term,

the wood can serve as fuel or timber for construction. Additionally, trees decrease erosion and help to prevent valuable soil from washing away in floods. They also stabilise soil moisture and nutrient levels, as well as binding carbon dioxide in their wood as carbon.

TREES FOR FOOD SECURITY

For Rwanda, agroforestry is an excellent approach as it addresses several problems at once. Rwanda’s development agenda is governed by the responsibility to balance the need for food security against the sustainable use of natural resources. The awarded forest policy of 2004 underlines the country’s support for agroforestry. Stated goals include increasing soil quality and the productivity of agriculture and livestock farming; generating income opportunities in rural areas; increasing the food supply; and satis-

fying demand for wood sustainably. In the long run, it is intended that 85 per cent of agricultural areas operate using the methods of agroforestry.

In August 2012, Stanislas Kamazi, the Rwandan Minister for Lands and Environment, together with the ICRAF and other partners, presented a new project titled “Trees for Food Security”. It is aimed at small communities of farmers in the eastern lowlands of Bugesera and the western highlands of Gishwati. Corn, beans, millet, potatoes, bananas, rice, soy, peas and cassava are grown there, as well as tea and coffee for export. The main goal of the project is to identify and develop the best agroforestry techniques and work on their transferability to other regions. The project focuses on harvesting methods for saplings, supply chains, market equality, and achieving qualifications. Last but not least, it tries to solve the fundamental question of agroforestry: Which is the right tree for this place?





NO GRAZING!

Agriculture is hugely important to Rwanda. Over 80 per cent of its population are employed in this sector and over 70 per cent of the country's land area is used for agricultural purposes. The greatest challenge is Rwanda's high population density and the significant pressure that this places on agricultural production. The average farm size is constantly decreasing, and even ecologically unstable zones are now being cultivated. Intensive farming and the use of artificial fertilisers have poisoned the water and exhausted the soil. Particularly in the southern provinces of Gikongoro and Butare, this is the greatest contributing factor to poverty.

COWS FOR EVERY POOR FAMILY

In 2006, the Rwandan government began a new programme targeting poor rural families, titled "One Cow Per Poor Family". This programme, also known as "Grinka", allows each poor family to apply for a cow. The "One Cow Per Poor Family" policy benefits rural families with the lowest incomes, particularly single mothers and 'child-headed households' where both parents have died. Again, the programme is aimed at addressing multiple problems: malnutrition, low income, and low soil quality.

MILK, FERTILISER AND COLLATERAL

The programme fosters increased food security as families can either consume the milk that the cows produce or decide to sell it to supplement their low incomes. In order to receive a cow, the family has to prove that they are planting fodder crops and have built a stable. Under no circumstances are cattle allowed to roam free, and, like goats, they must either be tied to a stake or live in a stable. Rwandan law is clear: "No grazing!" Livestock are not permitted to graze on crops or saplings, and their manure must be collected for use as fertiliser on the fields.

MONITORING BY THE OMBUDSMAN

The "One Cow Per Poor Family" programme was not included in our evaluation when deciding the Future Policy Award, meaning that we are unable to provide a verified assessment of its outcomes. However, Rwanda possesses its own institution responsible for examining laws and their implementation and publishing the results. The institution of the "Ombudsman" serves as a connection between citizens and public organisations by relaying complaints and combating injustices, particularly corruption.

The Ombudsman reports that while there has been a lack of transparency and some irregularities in the distribution of the cows, the programme did result in a significant increase in both soil quality and milk production. Some farmers were able to use their cows as collateral in order to receive microcredit loans. Furthermore, many proud cow owners use the manure not just on their own fields, but also give it away to their neighbours and friends, thus helping the programme benefit whole communities.

*below: Cows are not left to graze freely
left: Boy with bunch of bananas*





WHAT IS A MODERN
ENERGY SOURCE?



left: Women collecting firewood
right: Cecile Nyirabahutu makes briquettes
from used paper

ENERGY MAKES THE DIFFERENCE

Over 800 million people in Africa have no access to a modern energy supply. Put another way, 80 per cent of Africa's population still use wood or charcoal for cooking. The hard labour involved in gathering firewood and other biomass like manure or crop falls mainly on the women. In some regions, women must complete journeys of many hours, resulting in a loss of productivity for Africa. On their travels, the women can be subjected to abuse or harassment. Furthermore, smoke from cooking fires can cause serious respiratory diseases. The World Health Organization estimates that every year 400,000 people die of these diseases, and that these victims are mainly women and children.

If wood is not sourced sustainably, it results in deforestation and the many problems associated with it, including soil erosion, desertification, increased risk of flooding, loss of biodiversity, and climate change. It is estimated that the unsustainable use of biomass results in Africa losing more than four million hectares of forest each year – twice the global average.

From the Kigali Declaration

(We decide to) ... address the specific challenges faced by women and children among others health hazards related to providing and using wood fuels, by promoting sustainable wood fuels, energy efficient cook stoves and by promoting alternatives including environmentally friendly renewable energy sources such as biogas and solar cookers and thereby helping to prevent abuse and violence against women and girls ...

WOOD AS A SUSTAINABLE ENERGY SOURCE

Despite this, fuel wood does have its undeniable advantages: it is a renewable resource and sustainable – when sourced sustainably. It can be produced in a decentralised manner. Additionally, wood is emission neutral, as burning releases into the atmosphere only as much carbon dioxide as the tree had bound in it. From this perspective, fuel wood can be very modern.

SITTING IN THE DARK AFTER 6 PM?

Energy is clearly the key to development. Few other factors influence human life chances as significantly as having access to energy sources, in particular electricity. Food security, health, education and income are all based on the question of energy: do I have fuel with which to cook food and how many hours do I have to travel to get it? Does the hospital have electricity for its fridges to cool the children's vaccines? Do I have light so that the children can study and we can work after nightfall? Or will we have to sit in the dark after six pm?





above: The cows of Rubaya village
right: The biogas plant produces biogas for cooking

WHAT IS A MODERN ENERGY SOURCE?

Even businesses require vast amounts of energy, including in the form of traditional biomass. Food companies and collectives need large quantities of wood for the preservation and refinement of food – for example for drying tea, fish, and fruit or roasting nuts and coffee. For the construction of streets, bitumen must be heated and building bricks have to be baked. Many other vital economic activities are reliant on electricity, often produced by diesel generators.

Finding alternatives is not easy. Electricity is expensive and requires access to the energy grid. Other energy sources have their own problems. Solar cookers and LPG demand new cooking habits and a distri-

bution network. Although biogas offers many advantages, it also necessitates great changes in consumer behaviour.

So what to do? Multiple roads must be travelled. Access to regenerative energy supplies for cooking and production has to be improved, financed and enabled. Access to electricity must be fostered. However, this development will take time, and in the meantime it is paramount to be able to produce fuel wood both locally and sustainably. To help ensure the healthier and more efficient use of fuel wood, suitable technologies must be made available, such as cook stoves and ventilation systems.

BIOGAS – AN ALTERNATIVE

Ninety-five per cent of all households in Rwanda use wood or charcoal for cooking. This huge proportion alone demonstrates the fundamental importance of sustainable forest policies for the survival of the people.

Projects are being launched to promote the use of biogas as an alternative to wood. Rubaya is a trial village for one such biogas project. Originally, the people of Rubaya lived on a steep hillside, but were able to resettle with organisation from the Rwandan Environment Management Authority (REMA) which provided the villagers with support and advice. Umuganda projects involved the construction of new houses for 43 families – around 200 people. In addition to a house, every family received a parcel of land, one cow and a toilet, thus creating a self-contained energy cycle. Waste from the cattle and from the toilets flows to a biogas plant, and fermentation is used to create biogas which is then piped back to the dwellings for use in cooking. After three months of composting, the leftovers from the biogas plant can be used as fertiliser to support agriculture.

While researching biogas, we encountered the history of Rwanda's "poo-powered prisons", which are supplied by biogas plants. In Rwanda's fourteen prisons, biogas plants are being introduced and already cover 75 per cent of their energy needs. In doing so, Nsinda prison reported an 85 per cent reduction of its energy costs. It is Rwanda's stated goal to stop the use of fuel wood in prisons by 2013.





*From the Kigali Declaration
(We decide to) ... take action, in recognition of the close relationship between forests, forest products and energy to develop a national plan which recognizes the sustainable use of fuel wood, renewable energy resources at affordable prices. Support research and development institutions in Africa, foster capacity building, enhance technology transfer and to do so in a short-, medium- and long-term approach which recognizes that deforestation is still occurring at unsustainable rates ...*

POWER TO THE PEOPLE

The World Future Council's Working Group for Climate and Energy advises policy makers on how to create favourable conditions for the production of and access to renewable energy. From South Africa our Director Africa Liaison Office, Ansgar Kiene, coordinates the African Renewable Energy Alliance, a network of 1000 experts who support renewable energy on the continent.

RENEWABLE ENERGIES

The World Future Council believes that the best strategy is to aim for decentralised electricity generation in small to medium sized plants. Ideally this would be achieved using small hybrid networks combining at least two sources of renewable energy, for example solar and wind energy. This may be the only way of supplying the most remote areas of Africa with electricity, as no government or private entrepreneur will build an energy grid across the African deserts, jungles or savannahs. For this reason, we have adopted "Power to the People" as our slogan: people must be able to produce energy where they need it – in a sustainable way.

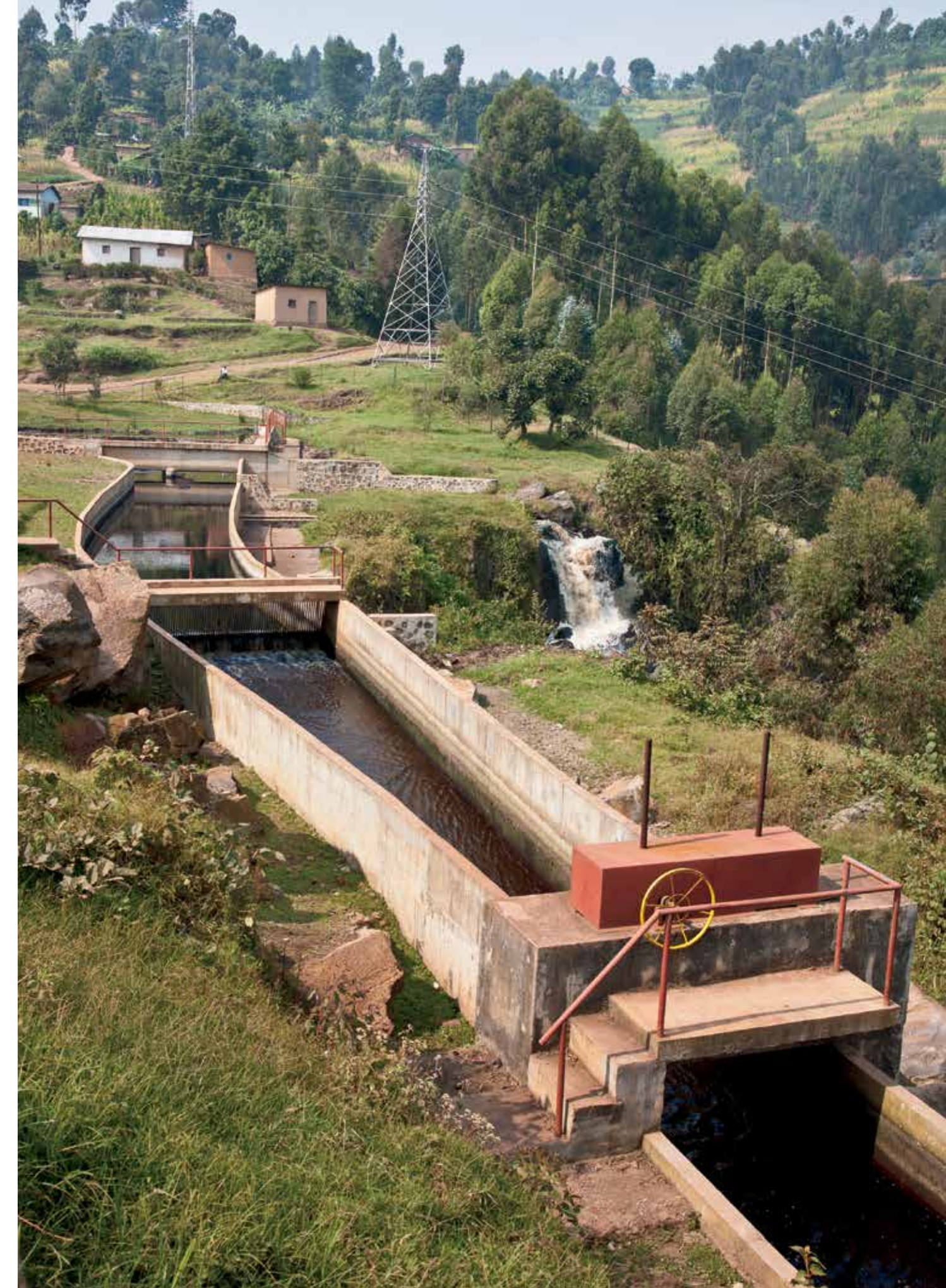
*right: One of Rugezi's hydropower plants
left: Drying tea requires enormous amounts of fuel wood*

TREES AND HYDROPOWER

The electricity supply is also clearly an important issue in Rwanda, with consumption increasing steadily as cities and the economy grow. Rwanda has no local sources of crude oil, which instead must be transported from the Indian Ocean and over rough roads, normally via Kenya or Uganda.

Provided that all turbines are in working order, Rwanda is able to supply 97 per cent of its energy using environmentally friendly hydropower. At the border of the Rugezi wetlands in the north of the country, we visited one such hydropower plant. We were told that even with hydropower, the forest and trees play an important role.

The wetlands are located at an altitude of 2000 metres and feed into many rivers and lakes in the lowlands. Until a few years ago, the area had been used for agriculture. When it began to dry up, so too did the possibilities for electricity generation. To counter this, the Rwandan Environment Management Authority (REMA) set a plan in action: they planted a twenty metre wide belt of trees around the perimeter of the wetland, with a tree every 2.5 metres, across 214 hectares in total. The plan provided support for locals in their search for alternative sources of income and restricted access to the wetlands. Evidently these measures have been successful and the power plant's turbines can turn again.





BIODIVERSITY



THE VALUE OF DIVERSITY

CRADLE OF HUMANKIND

The Rift Valley defines the East African continent, cutting across from the Gulf of Aden all the way down to Zimbabwe in the south. The Rift Valley is home to an astonishing diversity of plant and animal species. It is also where we all come from. Scientists are now certain: here stands the cradle of humanity.

One part of this zone, the Albertine Rift, stretches through the countries of Rwanda, Burundi, Uganda, Tanzania and the Congo (DRC). This rift is home to more native mammals, birds and amphibians than any other place in Africa. According to the REMA atlas, Rwanda is home to 5,793 distinct species of plants, 1,061 of birds, 293 reptile species, and 403 kinds of mammals, representing 40 per cent of Africa's total number of mammal species.

OUR CLOSEST RELATIVES

Rwanda is home to many primate species, including a population of around 500 chimpanzees. Most famous, however, are the rare and endangered mountain gorillas. Rwanda is one of only three locations in the world where these apes can be seen in their natural habitat.

There are three national parks in Rwanda, which together cover about 10 per cent of its land area. All three parks extend beyond Rwanda's national borders and into neighbouring countries. The Volcanoes National Park is shared with DRC and Uganda, the Akagera National Park with Tanzania, and the Nyungwe National Park with Burundi.

VOLCANOES NATIONAL PARK

Volcanoes National Park in the north of Rwanda is dominated by eight awe-inspiring volcanoes up to 4,000 metres in height which extend in a chain across the Virunga massif. The slopes of these volcanoes are covered with dense native vegetation which varies widely in accordance with altitude. This is the home

of the famous mountain gorillas. The last gorilla population survey was taken in 2010 and found 480 animals in 36 groups, as well as 14 solitary silverbacks. According to this survey, the population has increased in recent years from just 380 individuals in 2003.

Beginning in the small village of Kinigi, guided tours take you into the mountains to visit the gorillas. The service is not cheap, but the money benefits all national parks and pays for their maintenance and upkeep. Around five per cent of total income goes to local projects around the parks.

Once a year, in a special ceremony in the tiny town of Kinigi, the newborn baby gorillas receive their names. The ceremony is called "Kwita Izina", or "name giving", and has a long tradition with the Banyarwanda. The ceremony has grown in recent years as government officials and VIPs have begun to participate and local dignitaries and the workers involved in maintaining the park are invited along.

Kwita Izina is intended to strengthen the local population's understanding of the gorillas' importance as well as to promote Rwanda as a travel destination.

*below: Dawn breaking at Volcanoes National Park
left: Gorilla baby, around two years of age*





right: The “Old Chief” in Akagera National Park
left: Group of impalas in Akagera National Park

AKAGERA NATIONAL PARK

The 1000 square kilometre Akagera National Park in the east of Rwanda contains one of the region’s most complex savannah ecosystems. Its landscape is dominated by grass-covered plains, knotty acacia, and small forests. The Akagera River cuts through the park, feeding many wetlands and lakes. Zebras, antelopes and giraffes wander serenely across the savannah and the hippos laze in the water. The park is also said to contain over 700 species of birds. The park’s management is currently looking for support from South Africans with experience in park management. A boundary fence is planned to both protect the unique area and permit the potential future resettlement of lions and rhinos.

NYUNGWE NATIONAL PARK

In the southwest of the country, about the same size as Akagera but with a completely different landscape, lies the Nyungwe National Park. Nyungwe is dominated by mountainous tropical rainforest. Together with the adjacent Kibira National Park in Burundi, this forms the largest connected forest in East Africa, according to the UNEP. The park is home to 13 species of primates, including chimpanzees. Overall, the park contains a rich biodiversity with more than 125 different kinds of butterflies and 140 species of orchids.





left: Magical tree in Buhanga Forest
right: Rwanda's crowned crane is one of the protected species

DIVERSITY MUST BE VALUED

What is biodiversity? According to the definition of the Convention on Biological Diversity (CBD), it includes not only the diversity of species, but also the genetic variation and diversity of ecosystems. Biodiversity benefits many spheres of human existence, including ecology, genetics, science, society, education and aesthetics. Beyond these applications, biodiversity also has a strong intrinsic value. This means that its existence in itself is desirable.

Biodiversity also has a cultural value to humans. Much of our knowledge about genetic resources is based on the traditional knowledge of indigenous societies, which has been passed down from generation to generation. This knowledge is also valuable.

THE PRICE OF BIODIVERSITY

Who owns this wealth? As in all considerations involving value, there is a need to solve the issues of ownership and access. The concept of “access and benefit sharing” was developed to address such issues. In order to implement this concept, the Nagoya Protocol was drafted, named after the 10th Conference of the Parties in Nagoya, Japan, in 2010. Its intention is to create a balance between the interests of supplier and consumer nations with respect to genetic resources and their use.

From the Kigali Declaration

(We decide to) ... commit, consistent with customs and traditions, to establish strong and comprehensive governance on biodiversity at the local, national and regional level, integrating biodiversity into all relevant policies and actions in line with international agreements, specifically the CBD Strategic Plan for Biodiversity 2011 2020 and signing and ratifying the Nagoya Protocol on Access and Benefit Sharing and implementing the actions in the UNFF Forest Instrument ...

NAGOYA PROTOCOL

Climate change, land use changes, human encroachment and invasive species have led to a loss of biodiversity on a scale unknown until today. Rwanda is clearly one of the world's greatest hotspots of biodiversity. The idea behind “access and benefit sharing” is that the protection of biodiversity should benefit the country – not just in an ecological, social or aesthetic sense but also financially. By the summer of 2012, 92 nations had signed the Nagoya Protocol, though thus far only five, including Rwanda, have ratified it.

“The Nagoya Protocol offers Rwanda an opportunity for moving forward its policy on biodiversity to harness its conservation and sustainable use, aiming at supporting sustainable economic development



and improved livelihoods,” Marie Laetitia Busokeye, CBD Focal Point Rwanda, explains.

For years now, the World Future Council has been working together with the Centre for International Sustainable Development Law (CISDL) on the matter of biodiversity legislation. We produced a report and training materials regarding laws and guidelines for protecting biodiversity and future justice. These materials offer an overview of the world's best biodiversity laws, designed to prevent species loss, from Costa Rica, Norway, Bhutan and South Africa. Further visionary measures positively influencing species' diversity are also presented, including policies from Australia, Namibia, the Tuscany region, and Rwanda.



WITHOUT PLASTIC
BAGS IS FINE, TOO!



above left: Clean lake in Rwanda
below left: Waste at a lake in Madagascar
right: Waste separation even in rural areas

RWANDA GETS RID OF THE PLASTIC BAG

Somewhere between Musanze and Gicumbi a discarded plastic bag lies next to the street. Normally this wouldn't be worth mentioning, but in Rwanda's case, it is unusual. Rwanda is a clean – even tidy – country. This caught our attention repeatedly during our travels, making us feel very German. However, others seem equally impressed: in 2008, Rwanda's capital Kigali was awarded the title “Cleanest City in Africa” by UN Habitat.

Perhaps this is because landscape maintenance is included in the Umuganda communal work, which may have raised greater awareness of littering. Certainly this is because Rwanda produces less rubbish than other countries: Rwanda outlawed plastic bags back in 2008.

Before, plastic bags had been a huge problem. The light bags were carried by the wind and snagged on trees and shrubs. They clogged up stormwater drains, causing flooding. They ended up in fields and eventually even penetrated the soil, reducing agricultural productivity, as a study by the National University has shown. Bags had been found in the stomachs of fish and farm animals, while those bags that were collected were burned on the spot in smelly and smoky rubbish fires.

During Umuganda in 2005, Rwandan citizens were asked to collect all the plastic bags they could find. The result, as REMA director Dr. Rose Mukankomeje reported, was a shock: “We came up with a huge, huge amount of plastic – in the land, around our compounds, everywhere – everyone was scared.” This was the turning point. The public's attention was drawn to the problem, and the politicians came up with a plan.

From the Kigali Declaration

(We decide to) ... support a move towards the prohibition of the importation, manufacturing, sale and use of polyethylene bags, utilizing instead sustainable products such as biodegradable products, including for example reused paper and cloth ...



GOOD STORIES ABOUT BAD BAGS

The first step was to communicate with people the problem. The public's experiences were collected and retold, such as the story of a farmer whose cows died after eating plastic bags. This was accompanied by a nationwide television and radio campaign against plastic bags, including films which were shown on busses and planes.

Local organisations and companies were addressed to produce environmentally friendly bags made mainly from cotton, palm or banana leaves. In the beginning there were problems, as production could not keep up with demand. However, local bag production has now led to the creation of new jobs.

Asked what other countries could do to get rid of plastic bags, Dr. Mukankomeje advises creating incentives for the economy to produce alternatives, raising public awareness, starting social media cam-

paigns, and including the media. Laws and regulations should be introduced which include all public institutions. However, as Dr. Mukankomeje concludes: “You need a policy to get rid of plastic bags, but it must be wanted to be successful.”

AND IN EUROPE?

Western countries are finding it difficult to outlaw plastic bags. A report by the European Union concluded that a full ban would be impossible, and instead recommends imposing an environmental levy on each bag. Each citizen of the European Union uses an average of 500 plastic bags per year – and most of them just a single time. The Mediterranean Sea alone contains 250 billion plastic particles with a combined weight of 500 tonnes. Degradation could take centuries.



WOMEN IN POWER

Marie Chantal Ntawera (centre) in a discussion with Hon. Gertrude Imenda, Cyrus Jeke, Prof. Mosad Elmissiry, Ansgar Kiene and Hon. Stephen Kampyongo (from left to right)



left: Peasant woman on her way to the field
right: Collecting water is women's work

POWER FOR WOMEN

Rwanda is a world record holder: 56 per cent of its members of parliament are women, the highest proportion of women at this level of politics worldwide. In comparison, Germany has 33 per cent of female representatives, the United Kingdom 22 per cent, and the United States just 17 per cent.

Gender equality is enshrined in the Rwandan constitution. It legally mandates that at least 30 per cent of positions in decision-making organs at national, regional and local levels are held by women. There is a Minister for Gender and Family Promotion in the Prime Minister's Office and the Women's National Council ensures that women are able to have their voices heard locally and nationally.

FAIR LAND TENURE

The right to own and inherit property is central to gender equality in Africa. Here, land tenure is a complex topic and rules of tradition, religion and law exist in parallel. During the colonial period, the introduction of new laws which did not harmonise with local traditions caused many problems. Women

are often restricted or even prohibited from owning land, while many traditional rules prohibit its inheritance by women. Often women are permitted to work the land, but are not granted any property rights.

Consequently, any reform of property rights faces a host of challenges. Finding a balance between environmental protection and agricultural usage is one thing, but unjust land distribution is another. In particular, the rights and livelihood of marginalised groups must be protected.

Rwanda is pursuing reforms to tackle the challenges of property fragmentation and gender inequality. Since 2004, the national land policy states that land is the common heritage of all current and future generations. Justice is to be placed in the centre of the land tenure question. The inheritance laws treat women and men equally.

POVERTY – A GENDER ISSUE

In recent years, African nations have made some progress towards achieving gender equality. The UN

Development Program states that most of the continent's primary schools have successfully achieved equality between their pupils, and that the overall proportion of women in parliament is growing, from 15 per cent in 2009 to 18.5 per cent in 2010.

However, great challenges remain for women who face fundamental cultural and structural disadvantages. The death rate of mothers, for example, has hardly dropped. Violence against women is still a fundamental problem with horrific consequences. Furthermore, it will be mainly women who carry the burden of climate change and the world economic crisis. The supply of food, water and energy are women's tasks almost everywhere. The United Nations point out that there is a gender dimension to poverty. They estimate that 70 per cent of the world's poor are women.

Rwanda has a long road ahead of it, especially in rural areas where far-from-equal traditional values continue to dominate. Out here, women also shoulder the main burden of household and farm work, while the birth rate is high and pregnancy and raising children drains their energy.

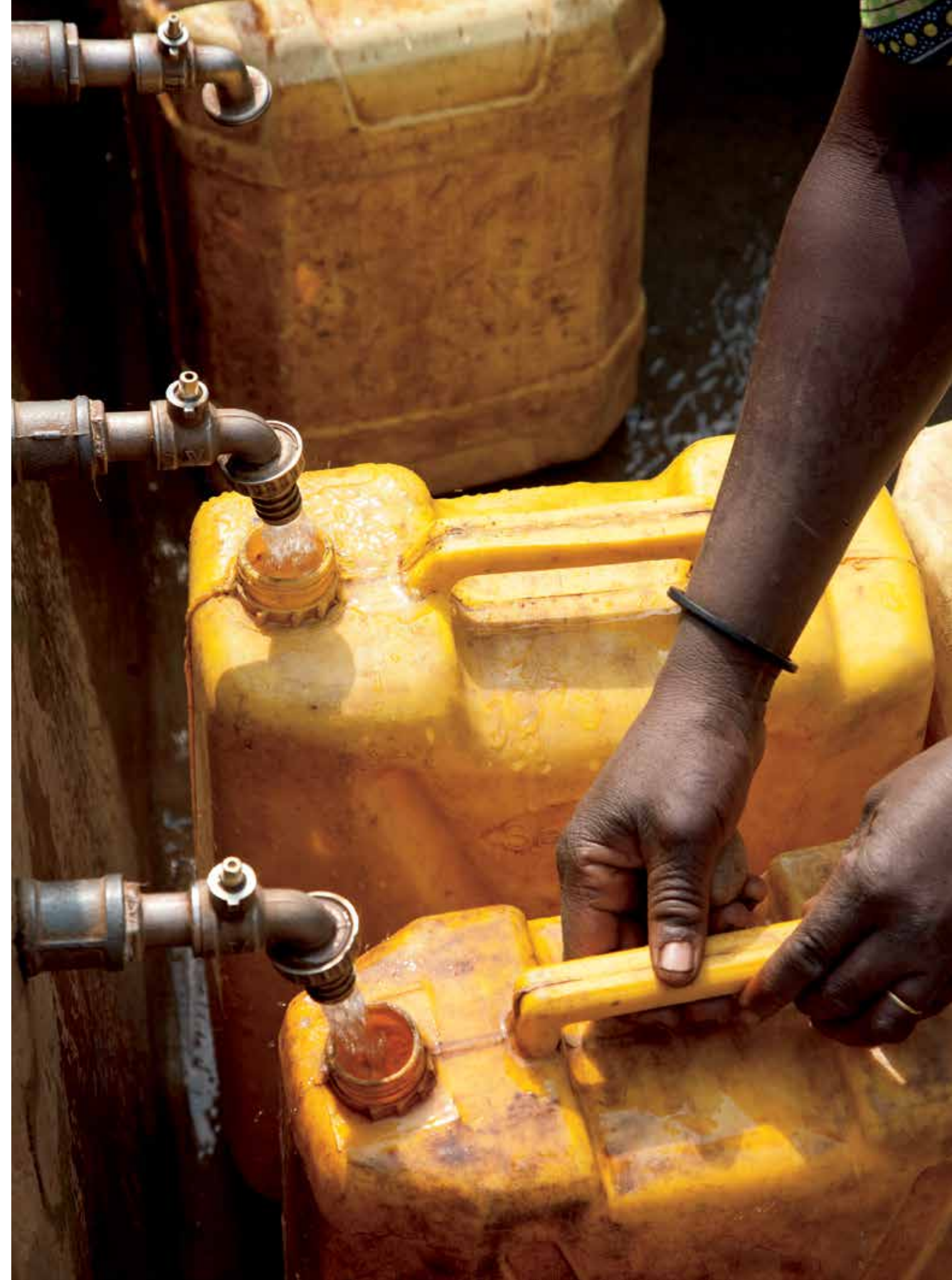
From the Kigali Declaration

(We decide to) ... integrate into our countries' laws the importance of clear land and tree tenure for communities and notably women ...

GENDER EQUALITY IS A MINDSET

Together with the other participants of the conference, we visited a lake in the Bugesera Region and were told how a 50 metre wide strip of planted trees around the lake has reversed siltation and made fishing possible again. One member of our group asked if we were allowed to talk with the people, for example the women by the lake – of course, the answer was yes.

Marie Chantal Ntawera is 30 years old, has four children and three younger siblings she cares for, and she is pregnant again. She works on a small farm and catches fish. Shy but willing to talk, she pricks up as she learns that members of parliament and public institutions are in our group, and seizes her chance. Women are not equally represented in the local fishing cooperative and she wants the representatives to look into this. She also needs to invest in fishing equipment and asks for support with financing. Finally, she would like it if the government could supply fruit tree saplings again – she would be able to make good use of them!





“SEEING IS BELIEVING”

Every piece of land is used for agriculture



Hon. Stephen Kampyongo

Member of Parliament,
National Assembly of Zambia



“The information and networking opportunity I accessed at the hearing in Kigali was very useful not only to me as an individual legislator, but to my country also. The experience I generally got from the Hearing has helped me to contribute meaningfully during the process of reexamining the various laws which govern all the conservation activities in my country. The practical example of how local communities can help governments to implement sustainable programs in wetland and other natural resource conservation was amazing and beneficial too.”

left: The sun setting in Akagera National Park
right: Curious children

WE LOVE SOLUTIONS

With this book, we want to offer insights into good solutions for the challenges of our time. Not everything in Rwanda is working, and we want to make it clear that we do not support all political measures of the country.

Our engagement in Rwanda was preceded by an intensive evaluation process, at the end of which the country’s forest policy was awarded with the Future Policy Award for 2011. However, the conference in Kigali showed us that in addition to the scientific analysis, “seeing is believing” holds true for us as well. Experiencing the reality gives us greater motivation. For this reason, it was important not just to sit in a conference room with experts from Burundi, Cameroon, Ghana, Malawi, South Africa, Tanzania, Uganda and Zambia but also to travel the country, talk to people and experience real solutions first hand.

OUR THANKS

By signing the Kigali Declaration, the participants committed themselves to supporting the advancement of policies in their countries for creating a fairer world for current and future generations. They agreed to report not just on their successes, but also on their failures. The World Future Council would like to thank all the hardworking parliamentarians and renowned experts who accepted our invitation and gave us their trust.

The conference in Kigali would not have been possible without the support of the Rwandan Ministry of Natural Resources, the Rwanda Natural Resources Authority (RNRA), the Rwanda Environment Management Authority (REMA), the United Nations Forum on Forests (UNFF), and the United Nations Food and Agriculture Organization (FAO).



OUR OBLIGATIONS

Now our work continues. From 2013 through 2017 we want to work on developing and fostering good solutions for “Forests for People” and facilitate their spread and plan subsequent conferences in African countries on the topic.

We are a charitable foundation funded by donations. Our thanks go to our donors, without whom our work would not be possible. Our gratitude goes to all those who enabled our forest work in 2012: Barbara Woschek, Mag. Angelika Wesonig-Weitzer, and Dr. Michael Otto.

We want to make a difference and are hoping for your support.

Your World Future Council Team.

From the Kigali Declaration

(We decide to) ... request both public and private funding in support of holding Inter-Parliamentary Hearings on ‘Forest for People’ for parliamentarians, policy makers and experts in Africa on an annual basis in order to exchange views and highlight best practices in policies and legislation in Africa and to report on national progress in line with implementing the Kigali declaration.



right: Tree of Unity in Buhanga Forest
left: The conference participants on fact finding mission



SIGNATORIES OF THE KIGALI DECLARATION

Hon. Louis Roger Essola Etoa, Member of Parliament, National Assembly of Cameroon

Ms Capitoline Nsabiyumva, UNFF Focal Point, Ministry of Water, Environment, Land and Urban Planning, Burundi

Mr. Cyrus Jeke, Director, Ministry of Gender, Children and Social Welfare, Malawi

Hon. Ambassador Stanislas Kamanzi, The Minister, Ministry of Natural Resources, Rwanda

Ms Caroline Kayonga, Permanent Secretary, Ministry of Natural Resources, Rwanda

Dr. Rose Mukankomeje, Director General, Rwanda Environment Management Authority (REMA)

Ms Lilyose Umupfasoni, Director of Forestry and Environment, Ministry of Natural Resources, Rwanda

Mr. Alex Mulisa, Technical Advisor, Rwanda Environment Management Authority (REMA), Rwanda

Ms Marie Laetitia Busokeye, CBD Focal Point, Rwanda

Mr. Dismas Bakundukize, Director of Forestry Management Unit, Rwanda Natural Resources Authority (RNRA), Rwanda

Mr. Serge Nsengimana, Executive Director, ACNR, Rwanda

Hon. Landrada Umuraza, Member of Parliament, Parliament of Rwanda

Hon. Marie Thérèse Murekatete, Member of Parliament, Parliament of Rwanda

Hon. Josephat Sinkamba Kandege, Member of the Land, Natural Resources and Environment Committee, Parliament of Tanzania

Hon. Alex Byarugaba Bakunda, Member of Parliament, Parliament of Uganda

Hon. Stephen Kampyongo, Member of Parliament, National Assembly of Zambia

Hon. Gertrude Imenda, Member of Parliament, National Assembly of Zambia

Ms Jan McAlpine, Director, United Nations Forum on Forests

Prof. Mosad Elmissiry, Head Energy Division, NEPAD, South Africa

Dr. Athanase Mukuralinda, ICRAF, Country Representative, Rwanda

Mr. Foday Bojang, Senior Forestry Officer, FAO Regional Office for Africa, Ghana

Dr. Gordon Ajonina, National Coordinator, Cameroon Wildlife Conservation Society

Ms Alexandra Wandel, Director, World Future Council

Mr. Ansgar Kiene, Director Africa Liaison Office, World Future Council, South Africa

Ms Ina Neuberger, Consultant, World Future Council



Wangari Maathai

Founder of the Green Belt Movement,
Nobel Peace Prize recipient and
Honorary World Future Councillor

*“When we plant trees, we plant the seeds of
peace and the seeds of hope.”*



THE FUTURE POLICY AWARD

WHAT ARE “BEST POLICIES”?

Together with the Centre for International Sustainable Development Law, the World Future Council has developed a methodology for identifying and evaluation policies. The methodology is based on the seven principles for sustainable development law of the International Law Association:

1. Sustainable use of natural resources
2. Equity and poverty eradication
3. Precautionary approach to human health, natural resources and ecosystems
4. Public participation, access to information and justice
5. Good governance and human security
6. Integration and interrelationship
7. Common but differentiated responsibilities



*left: Jakob von Uexkull, WFC Founder, Alexandra Wandel, WFC Director, Hon. Isatou Njie-Saidy, Vice President of The Gambia and Secretary of State for Women's Affairs
page 58: In a nursery*

THE BEST POLICIES OF THE PAST YEARS

Costa Rica's Biodiversity Law of 1998 was the winner of the Future Policy Award 2010. It is considered a milestone on the path towards the objectives of the UN Convention on Biological Diversity. With this law, Costa Rica has become a pioneer in biodiversity and a worldwide model. Accordingly, the World Future Council advises politicians in workshops at major international conferences on how they can introduce good biodiversity legislation, inspired by Costa Rica's Biodiversity Law, in their own countries.

In 2009, the Future Policy Award went to a law of the Brazilian city Belo Horizonte, which assures good and sustainably produced food to everyone. The child mortality rate was reduced by 60 per cent and malnutrition by 75 per cent. Now we are working to convince policy makers in other cities to introduce this law.

THE 2011 WINNERS

Rwanda's National Forest Policy won the 2011 Future Policy Award. Furthermore, two Silver Awards were assigned.

The Gambia's Community Forest Policy (initiated in 1995) received a Silver Award. The country achieved a net increase in forest cover of 8.5 percent over the last two decades. The awarded policy fosters sustainable forest management and poverty alleviation by handing control of forests to the communities that use them. Over 350 villages now manage twelve percent of the country's forests.

The second Silver Award went to the US Lacey Act amendment of 2008 which prohibits all trade in wood and plant products that are knowingly illegally sourced from a US state or any foreign country. The

strength of the Act lies in its ability to target and place responsibility on every stage of the timber supply chain. It has forced importers to take responsibility for their wood products and has already produced positive results in increasing due diligence assessments and demand for certified wood products.

“The Lacey Act enforces the environmental law of even the weakest of countries in the most powerful way. If all countries followed its example, environmental law would be globally enforced and our biosphere would be protected,”

says jury member Tewelde Berhan Egziabher, Director General, Environmental Protection Authority, Ethiopia, and World Future Councillor.

Tewelde Berhan Egziabher
Director General, Environmental
Protection Authority, Ethiopia,
and World Future Councillor





left: Buhanga Forest

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