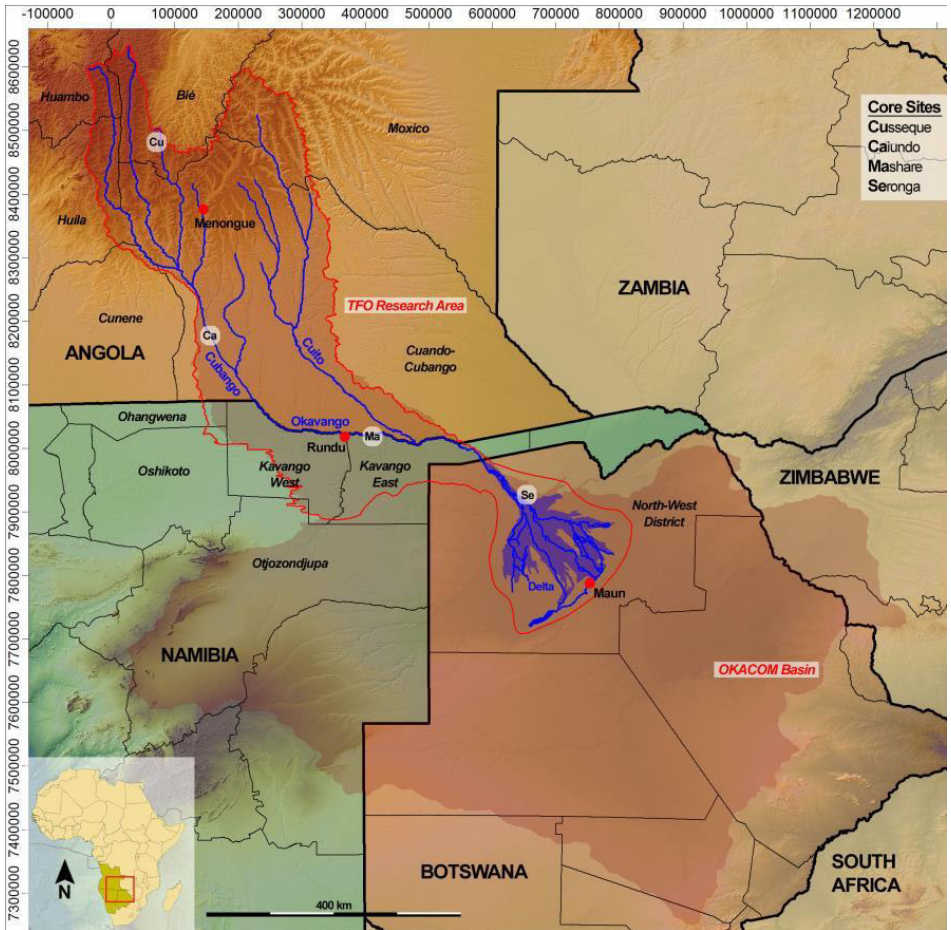


VISIONS 2030 for the Okavango River Basin

Inspirations from 27 stakeholders from all levels
Learning from one another to better anticipate the future

By Stephanie Domptail & Oliver Mundy





The Okavango River Basin and the four levels of TFO's involvement: local (core site), provincial, national, trans-boundary (Wehberg 2013)

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Foreword

Aims and objective: some food for thought

The booklet provides a feedback to stakeholders who participated in face-to-face interviews concerning land use and livelihoods in the Okavango River Basin (ORB) conducted from November 2012 to June 2013, in the context of The Future Okavango (TFO) research project. It further addresses all actors of the ORB, including the researchers taking part in the TFO research project.

Herewith, we hope to support the exchange of ideas among actors in the ORB and to raise the awareness among stakeholders of the basin that not only actors from different countries but also acting at different scales (from local to trans-boundary) may have different visions for land use and well-being in the ORB in 2030. The report aims to provide simple food for thought, in a process of preparation towards an equitable and multi-scale, integrated vision for the basin. Thus, exchange of ideas is the main purpose of this report. Note that no further evaluation, aggregation or analysis is communicated in this booklet. Such analyses will be conducted within 2014-2015 and presented in later reports or scientific publications.

In practice, this booklet illustrates the diversity of opinions existing in the basin about how land use and well-being should develop. The 27 selected visions for the Okavango River Basin in 2030 come from stakeholders from each of three countries of the basin and from different scales of decision making on land use (local, regional/district/provincial, national and basin).

More information can be found on the TFO website (www.future-okavango.org) or in the detailed report on stakeholder visions for 2030 in the ORB which will appear on the website under publications as from April 2014. This report can also be received upon request (please contact the author).

Context: TFO research project and scenarios on land use in the Okavango River Basin

The research presented in this report is conducted within the TFO research project. The aim of TFO is to provide an interdisciplinary assessment of ecosystem services and well-being in the Okavango River Basin (ORB), their value and their management at the local and at the basin scales. More specifically, the data presented here constitutes an input for the scenario

building process which TFO is currently carrying out. It is therefore part of a study undertaken to investigate stakeholder perceptions on important drivers of land use at all scales within the basin. The study also collects visions of stakeholders for the date of 2030 revealing the stakeholders' individual and personal realistic wishes concerning the development of land use and well-being in the area.

Collection of stakeholders' knowledge

Stakeholder interviews

This booklet communicates the answers given during interviews to the question about **the stakeholders' vision** for 2030:

“Imagine we are in 2030. If it was all up to you, how could land use, the environment and people's situation change for you to feel that the right changes or developments have occurred? Can you describe this situation?”.

If possible, this question was followed by asking about the **anti-vision**: “What do you believe will happen instead?”. The study was undertaken in the three countries of the Okavango River Basin (ORB) and at four different scales (basin, national, regional and local). Visions collected among 90 stakeholders using face-to-face semi-structured qualitative interviews from November 2012 to June 2013. Interviews were recorded except in few cases where participants objected. However, interviews and transcripts are anonymous.

Selection of interview partners among the stakeholders

The identification among the stakeholders of potential interview partners was of crucial importance and followed two steps. First, a preliminary study was conducted by TFO in order to assess all actors relevant for land use in the ORB and classified these actors by country, sector and in term of importance (relevance, interest and potential impact). Second, based on this data and on the already existing national networks for the management regional parts of the basin (such as the OkBMC, the OKACOM, the stakeholders contributing to the ODMP, ...) and with the help of experts in each country, we selected the most important stakeholder groups and correspondingly identified potential interviewees. Criteria for the identification of stakeholders include the power/involvement of the stakeholder in decisions concerning land and resources (including water) use, whether the stakeholder is affected by land

and resource use; whether the stakeholder has good knowledge of the land and resource use system for the ORB, the national part of the ORB or locally around the core research sites of the TFO project (Chitembo/Cusseque in Angola, Mashare in Namibia, and Seronga in Botswana) and whether the stakeholder is accessible for in-depth interviews.

How were the visions selected?

We strived to select an approximately equal number of visions from each country and scale, although that was not always possible. In total, 10 visions from Botswana and Namibia respectively and 7 visions from Angola are included. Second, we considered how rich and informative the vision is. As the report aims to show the diversity of visions among the stakeholders of the ORB, the selection was further grounded on the identification of differences concerning key features of the vision 2030 such as the perception of the environment and nature, the economic drivers related to land use, and which actors benefit from an improvement of the well-being.

Why were visions summarised?

The summaries were produced in order for the reader to acquire with a quick glance an overview on the diversity of the visions 2030 of the stakeholders of the ORB. They were organised following the scale at which the interviewee is active and the country he/she comes from. Full texts of the visions are available in an additional report which can be received upon request (contact author) or available from April 2014 on the TFO website (www.future-okavango.org).

Acknowledgements

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Abbreviations

ACADIR:	Associação de Conservação do Ambiente e Desenvolvimento Integrado Rural
F&M:	foot-and-mouth disease
KaZa:	Kavango-Zambezi trans-boundary conservation project
KCS:	Kalahari Conservation Society
KFW:	Kreditanstalt für Wiederaufbau, (<i>Reconstruction Credit Institute</i>)
ODMP:	Okavango Delta Management Plan
OKACOM:	the Permanent OKAvango River Basin Water COMmission
OkBMC:	Okavango River Basin Management Committee
ORB:	Okavango River Basin
SAREP:	Southern Africa regional Environmental Program
SASCAL:	Southern African Science Service Centre for Climate Change and Adaptive Land Management
TFO:	The Future Okavango research project

27 Visions on land use and livelihoods in the Okavango River basin for 2030

Angola - Countries' comparative advantages benefiting the basin

What we are dreaming of is going to take place. OKACOM will lead to improved livelihoods for the riparian population. Everybody will be happy. Each of the three countries is going to manage the Okavango River Basin (ORB) by using its comparative advantages and know-how: Angola will concentrate on agricultural production for the basin, Namibia on producing hydroelectricity for the basin and Botswana will develop tourism in the basin. All three countries are going to invest in each other and benefit from joint projects. Employment will increase.

The Delta remains pristine and wildlife is conserved. The population will grow. There will be strong dedication towards the management of the basin as a whole by policy makers. A local force, a local intelligence with a local attitude will manage the basin. Academia will be trained for this purpose. Migration is going to be encouraged. Those remaining behind will look after the river basin, while those migrating will seek different professions and will also contribute by sending remittances.

Namibia - Planning, preparing & promoting urban growth

The Okavango Basin should have an identity and it should be world famous. There should be an agreement between the three countries on how to manage and use the basin. Managing involves using it.

I am a fan of urbanisation, so I would like to see more cities and more well-managed cities in the basin and fewer people living in rural areas. I'm saying this for several reasons. (1) Rural subsistence farming with slash-and-burn practices in this kind of environment [of low summer rainfall and poor Kalahari sandy soils] is a low input/low output system. You have to keep on clearing new land and this damages the environment. (2) In addition, people living in rural areas are extremely poor. They don't have any access to services or cash. Especially remote villages in Angola are desperately poor. I do think especially young people in Namibia, Angola and Botswana don't want to live in the bush anymore.

We should be promoting urban growth, we should be preparing for it. We should be doing urban planning and making sure we have proper water

systems and proper sewage systems and not like currently. We would not promote rural development, because I think it's just another way of keeping people poor. Instead, agriculture should be done properly, in a well-managed, economically viable manner. Areas would be dedicated to urban growth, others to agricultural development and the rest they can just be left to come back to their natural state, unused.

Tourism in the Angolan and Namibian part of the basin is possible, but it is difficult because the system is really nutrient-poor and I don't think that there will ever be much wildlife there, so there is not much to see. Tourism in Botswana is such a success, because you have lots of elephants, lions and birds. But the Okavango basin could become attractive for people wanting to see remote and dangerous areas. Adventure tourism could fit here.

Proper planned, well-managed, economically viable urban growth, an identity of the Okavango Delta, good agreements between the neighbouring countries and if land is assigned for agriculture gets used properly - this is a good vision for 2030.

Namibia - Our biodiversity is our best development opportunity

I believe now is the chance to stand back and do some significant planning based on an innovative vision for the Okavango Basin.

So what are the most important aspects; I think, for people to stop thinking of this river basin as a third yours, a third his and a third mine and start thinking of it more like a company. People should think "I am a third shareholder in this company and you are a third shareholder and he is a third shareholder. What you do in your part of the basin affects my third of the shareholding, even though it's in your part of the basin. We're equal shareholders in this basin." We must start thinking of it in terms of total planning and production and how we are going to develop the use as company and where this company is going to go rather than thinking of it as your third, my third, their third.

But then of course you'd need to have a mechanism in place to implement that. And the structure would need to have teeth so the vision couldn't be violated by individual ministries, individual people, individual countries. But now if one has to move to a big vision it needs the right sort of mechanisms and the right powers and authorities *devolved* to make it work. You see, your allegiance, the primary allegiance through decentralisation is to your central hub whereas to

devolution it's to the people that you need to support.

We could look at the basin and say "It doesn't matter if it's yours or mine or his. Where are the best bits to get agriculture going? Where is mutual help? Where is production having the lowest impact? And we share the benefits and we share the costs, where is the best place to get this or that going? And how about towns supporting our university and education settings and so on? And how can we mobilize all of that to achieve the best results for the basin and its people in the long term and ultimately the countries by using our money most wisely?

To enable that two things have to change with regards to skills and capacities. First, education in and outside of schools must lead to empowerment to decision making skills. Second, the government needs to change: top leaders need to share power and decision making and reward people who are good at training, who are good at management. In addition, I see that Botswana should take over the lead of negotiation and developing a common vision as all types of land uses in Botswana are dependent on the water flowing in the river, that is, on the willingness of Angola and Namibia to not tap it all.

My interest is in seeing the Basin develop in a direction which creates a global comparative and competitive advantage for that basin which will help it unlock its economic and financial opportunities for the people of the basin and for the countries involved. I believe that the way to do that is not through the typical characteristic ad hoc slow creeping development and traditional thinking around areas with rivers running through them. The thing that's important is that the value of indigenous biodiversity in Africa is so much higher than the value of indigenous biodiversity in other parts of the world just because of what we have here, the charismatic mega-fauna, the big wildlife, the crocodiles, elephants, lions, all the ungulates, all the plains game. Other continents don't have that and so that gives us that competitive advantage.

For this purpose, we need to direct land use away from conventional agriculture and towards generating income from wildlife instead of from agriculture at the landscape scale. In low rainfall conditions, such as in the Kuando Kubango Angola, in the whole of Namibia and in Botswana, you can make more money from using your indigenous biodiversity and natural resources than with conventional farming which uses exotic species to the system. So we don't need to protect nature, we need to make natural resources our main income source in which we diversify its uses: Angling,

photographing, hunting, meat production with wildlife, from research via training to recreation within landscapes.

Conservancies are ideal tools to show this as managers themselves reap the benefits from good natural resource management.

So now I believe there is a chance to stand back and do some significant planning based on an innovative vision for the Okavango Basin, the whole basin, where it should be going and where could be doing, using indigenous biodiversity of the area, protecting and maintaining the natural ecosystems around that basin and thereby creating a global comparative and competitive difference for the Okavango from all other basins on the world using that comparative, competitive difference, to market the basin, to further get investment going in the wildlife and tourism sector to open up the basin for tourism, to create jobs around tourism and make it the centre-piece fact of the whole KaZa system. There is a real window of opportunity to make something globally totally different here and then first countries that are involved to reap the benefits of that.

All you need is a policy change towards wildlife, as has happened in Namibia (in the 1960's there was nearly no wildlife left!) and the realisation that even in Angola and in the whole basin there is potential to make large income with wildlife which has a very high value (up to 250 000 NAD for some ungulates).

I think what is really important here is we must stop letting the rest of the world dictate to us how we should value and use those resources. We should stop any Europe and North America tell us that we've got these animals here, that we must look after them and we must use them so that their tourists come visit us and look at them. Of course, this could also be part of it, but these resources are our resources, they are Namibia's resources, they are Africa's resources! We need to decide what the best use of them is and how we can extract the global comparative competitive advantage of them for our development. It's up to people in Africa to get their minds right about this and then tell the world "This is how we are going to deal with it."

From a practical perspective, at the local scale, many activities are possible, also with agriculture. But you have to locate your agricultural spots safely (use a buffer zone next to the river) and chose your crops wisely, not for the sake of producing but because you have a comparative advantage in producing this crop (e.g. raisins). We must get away from subsidised para-statal agriculture which in cases may squander a very important resource, water, and give it

away at subsidized prices.

I also see a great opportunity in fisheries with indigenous fishes from the Okavango. Fish ponds and off-river fisheries, such as those we just developed in the Caprivi on the Okavango River associated with sanctuaries for fish protection in the river, would deliver both breeding grounds for rest of river and tourism income through catch-and-release angling. This will be exported through KaZa to the whole ORB.

Finally, I wish to see good town and urbanisation management which is necessary to put far less pressure on the environment in which urbanisation is well planned and administered. It is important in Namibia as Rundu will probably count 100,000 people by 2025.

Anti-vision: Just as any other basin. Botswana keeps on acting as if the Okavango water will never stop flowing. The other two countries start taking more and more of the water for the development of land uses that are both rather unproductive and damaging. Many exotic species and production systems are introduced and will creep in an uncontrolled manner. The basin will 'develop' just as every other basin in the world, get degraded and will in end have nothing more to offer than any other river basin elsewhere. It will lose its comparative advantage and slide slowly towards degradation.

Namibia - Zoning to reap best value from each landscape

I'd like to see a basin where the land has been zoned for comparative advantage: that means that each zone would be used for the land use or activity that conveys the greatest value, rather than homogenising land use all around the basin. These land uses would range along a value of chain gradient from cities and intensive agriculture to naturalness and conservation, depending on the place and seizing the opportunities given by the current state of the local ecosystems and socio-demographic situation.

For instance, I would like to see the population concentrated in some population spots well located next to water sources and the river, rather than scattered in the bush or countryside. There, the population would have good access to services and a higher standard of living. Around these towns and population spots would be a good place to locate peri-urban sedentary intensive irrigated agriculture and animal husbandry to feed the population. If possible these should use organic methods to avoid damaging the river and

increase the value of the produced products. Some areas suitable for dryland agriculture with few animals would be separated from other where only extensive cattle posts and production or wildlife production or hunting are viable. Other areas with potential for wildlife and for tourism, with their beauty or naturalness would be reserved for non-consumptive uses or tourism uses (ex: in the Delta). Other areas rich in carbon sequestration such as the Cuito sub-basin with its peatland and forests would be best put in value under REDD+ contracts and managed for timber production.

Botswana - Well managed socially-fair & ecological development

We will see that the land conversion of subsistence farmers has taken place in the less sensitive areas in a planned, orderly, and systematic way. People will have improved livelihoods through agriculture and diversified economies.

The government will have increased its conservation efforts and more land is going to be protected through national parks, game reserves and community conservation areas. Many conservancies will be managed by the communities themselves. They will have taken over the responsibility of governance and of protecting the natural resources. Generally biodiversity is going to be enhanced and protected. Wildlife populations will be stable if not improving, thus reversing the current trend.

Policies across countries will be harmonised and collectively implemented. For example fishing is going to be jointly controlled and the payment for ecosystem services will be in place. Good managers upstream will be rewarded a compensation. I emphasise that it is important that the three governments get equitable value out of the basin.

Commercial irrigation will be carried out within sustainable levels and abstraction limits of water from the river will not be exceeded. Also pollution either of the land or of the river itself is controlled.

We would see that there are very good and productive agricultural and commercial markets trading products from natural resources or agriculture. These markets should be viable and give fair return to the communities in order to avoid that communities keep on being ripped off as it is at the moment. There would be fair trade across the basin – not only in agriculture but also in natural resources and tourism.

Tourism will be a vibrant sector of the Angolan economy. OKACOM will reach up to its role as a management organisation and will have enough science based tools and data sets available in order to make good wise decisions.

There will be no conflicts in the future and a lot of happiness.

Botswana - Creating a trans-boundary World Heritage Site

The river basin would look the same as it does today with viable wildlife populations, but it would be better managed and less threatened. People living next to the Delta would benefit equitably from the natural resources. This is not happening at the moment.

In my vision the benefits of tourism revenue are shared among state, private actors and communities. There would be less threats for the cattle sector from the foot-and-mouth disease than currently thanks to a smart tactic of fencing/defencing in order to secure wildlife movement and on the other side the value of the cattle production. In this context people and wildlife would coexist both in close proximity with minimal conflict.

The mining industry and the irrigated farming sector would use water from the river sustainably and be well-regulated by the state.

I would see the establishment of a trans-boundary World Heritage Site in and around the Okavango Delta stretching from Southern Angola through Namibia down into Botswana. The Ramsar site would secure protective status of other core areas of the river basin. There would be a viable tourism industry in all three countries. New protected areas would be established and would be effectively co-managed by government and communities. Nature parks in Angola would effectively be managed and secured after they have been demined. We would have a free movement of wildlife through national parks using migration corridors in the whole basin area. Rural communities and governments would effectively co-manage natural resources and fish populations.

If you wanted to put my vision down into a sentence, it would be the existence of functional connected ecosystems with human communities which derive equitable benefits from those systems and governance institutions (OKACOM and governments) that are acutely aware of the sensitivity of the system and are best placed to manage the system in an adaptive manner. This requires that

they conduct ongoing monitoring and use the resulting data to feed an adaptive management loop.

For this purposes, we also need to increase the capacity of the people so that the information flow comes from the communities. Co-management approaches would be applied at different levels and management would be multi-scale. This would enable the information flow to come all the way through to the top. This can lead to the adjustment of decision makers' plans in a clear and professional manner.

Angola - Improving and harmonising levels of well-being

Angolan water resources are currently unexploited. If three times more water is extracted in a well-organised and managed way, the population's living conditions will improve. Rural communities will have access to all basic services: energy, clean water, food, education and health. It is important to maintain cultural traditions of the people and to achieve a balance between modernisation and traditional cultural values/activities.

As resource utilisation and living standards between the countries Namibia, Botswana and Angola differ, it is important to harmonise and improve levels of well-being along the river basin. In addition, governments will be convinced of attending the needs of each region for its own good (and not only for the country), including the Kuando Kubango Province.

Angola - Conserving the environment for future generations

Population growth is a major challenge. In 20 years time we will need more land and natural resources to sustain our population. Education is the key to reduce the population growth.

In my dream I can find fish in the river and I can fish them. I can swim in the rivers and will not find any water-borne diseases. People are going to be happy. There will be good roads and the landscape will still be beautiful. People will have smaller families with two children instead of ten.

We have to take care of the environment and natural resources of our country. We have to use the resources in such a manner without destroying them and to use the ecosystem rationally. We have to consider that natural resources (energy, biomass and raw materials) will increasingly be needed with the growth of population. Conserving them now is essential for the future. Future generations will be dependent on the ecosystem as well. Currently, charcoal production is problematic mainly because the production is not for the needs of the local population but rather is exported to areas that have already been destroyed. These areas are exporting their resource destruction problem to the charcoal producing areas. It is a motor of ecosystem destruction. We have to spare the ecosystem. Awareness for less use and less demand of natural resources will be achieved through education as well.





Oil/petrol will only be a short term alternative to renewable resources. And it will bring in problems of climate change. Now, the focus on oil and diamonds leads to a degradation of the environment and at the end you are left with nothing. Tourism may be the most important economic activity in the future, but it has to be eco-tourism in order to ensure that the environment and the natural resources are not damaged. Eco-tourism would be carried out by private companies. They would follow good rules coming from the government, because many companies rather focus on profit maximising than respecting the environment.

Namibia - Soil conservation and innovative agriculture

I wish that every household in the basin area has at least one person with a permanent job, so that the households don't rely so much on natural resources. They would be more self-sufficient and economically strong to purchase all the necessary livelihood articles they need.

I also wish that the local people develop a heart for the system, a strong sense of ownership, and give their best to watch over each other in safeguarding the river. They must have the feeling: "This is our land, we must look after it. It is our responsibility."

I wish that smallholders do more conservation agriculture, more organic farming and fertilise their fields with compost and manure. Our soils are very poor in nutrients. Enhancing your soil fertility by using compost and manure is more sustainable than applying chemical materials, because organic matter is important for soil quality and water retention. We don't have to only import chemical fertilisers.

I wish to see that the extension service is also improved, that agents have a good education in horticulture and irrigated cropping and can help the smallholders to farm more sustainably and engage in many improvement projects. I also wish that fencing is allowed for fields and that titles are given so that long-term investment in soil fertility like with agro-forestry systems, among others, can be implemented.

On green schemes, currently we are doing minimum tillage and using new machines to spare the soil. That is good but I wish to see that people use also green manure, rotation with legumes and other organic agriculture techniques to farm: I think it is a must! Even if not everyone will like it.

I also wish that the local people, especially households in the Rundu area, use more water harvesting techniques, so that they do not rely so much on ground water.

I have no wish for diamond mining in this area. I have heard that there may be outcrops in the Kavango and I hope it is wrong.

Namibia - Trans-boundary sustainable resource management

I think of a healthy wetland, protected under the Ramsar convention, for the whole basin and not just for Botswana. The Mahango Park would be extended on both sides of the river within Namibia until the Angolan border to protect, especially, the forest on the eastern (Caprivi) side of the river.

The population would be using the resources sustainably, at a rate not larger than natural replacement can be done. Fishing activities would follow regulations (no use of illegal nets). In the case of deforestation, reforestation would be active and done with indigenous species. Rehabilitation of riparian forest would be supported by state nurseries specialising in indigenous species. Clearings for new agricultural area (be it commercial or subsistence) would have stopped to the current level (no expansion of the agricultural area). Remaining agricultural areas would use techniques that prevent any leaching of fertilisers or chemicals in the water.

A healthy human population. AIDS would be cured or at least under control. Malaria would be tackled well with other remedies than the spreading of DDT to avoid further contamination of the water and environment. Cities and health infrastructures (hospitals) are controlling and treating their wastes before they reach the river.

We would see a good cooperation between the three countries in terms of trans-boundary resource management. The central governments support the international work of his agents who are cooperating within the basin through the clarification of texts and incentives. The government devolves decision and management rights to its agents working in the trans-boundary management committees. More support is given to basin and the local management committees by providing constant training.

Botswana - Moving forward through sharing benefits

I think I want to try to be more practical and less idealistic. All Angolans, Namibians and Botswana, we all have our own different aspirations and dreams which we would like to realise. It is important to understand the value of this basin to each of us, but also to put all aspirations in one pot and to find together a sustainable pathway for the basin as an entity. Let us share the benefits across all three countries by uplifting everybody out of poverty. Eradicating poverty is the very first step. By addressing poverty issues, we are going to be able to address a whole lot of other things e.g. regarding conservation. We will make sure that conservation is beneficial to the people living around game reserves and national parks. This is not the case at the moment. We have to put the people of the basin first, otherwise nothing is going to work out.

At the scale of the basin, we will have joint-development projects like building a hydropower plant in Angola and energy would be sold back to the other trans-boundary regions of the ORB. Botswana already faces serious energy issues. We could have irrigation projects for agriculture in Namibia. They have the land, they do not have the water. Maybe this will help to address issues of food security in the region and across the basin. I think there are ways of how every country can benefit. We are just not opening ourselves up to explore them. We are thinking very nationalistically. I think we need to think more regional, more outside the box.

Even in the local context, tourism must and will make itself relevant by offering proper benefit sharing to local communities. Tourism will and has to contribute to alleviating poverty at the local scale.

Anti-vision: Niger Delta. The Delta might become like the Niger Delta. In Ngamiland we have almost 200,000 people who have no other option than to exploit natural resources. Tourism and conservation are not sustainable because the very poor local population does not benefit. The poaching, resource harvesting and deforestation will increase. It will increase racial tensions: You already find very difficult racial relations in Maun between the rich white community and the poor local community. It can turn to a social disaster and to a collapse of tourism industry. People might even burn down lodges, and organise resistance!

If we continue to ignore the need for sharing benefits from tourism at the local scale among local populations, the social fabric is going to completely fall apart. We already have high levels of illiteracy, high levels of school drop-outs, high levels of teenage pregnancies, high levels of crime, high level of gender-based violence, AIDS, unemployment. That is a recipe for a disaster.

Botswana - "High value for low impact" strategy

The environment will be as it is now. I would expect to see the basin still in its natural form. Everybody would be playing their role in ensuring that we keep the basin's ecological integrity as it is. Maybe we will have increased the tourism activities within the basin, but they will be operated in an efficient and sustainable manner, whether it is tourism or fishing. We will find a way to solve the human-wildlife conflicts. The two can coexist.

There will be growth and employment. There will be more partnerships and engagement between operators and communities through community-private partnerships. People will share the same values.

We will start developing tourism outside of the core area inside the Delta. We will focus on other areas, such as the South-East and the North-East, where I see much potential to develop new products. We will be innovative. We will conduct proper studies to guide our tourism development. Tourism is already well developed in the Delta. Its capacity is reached, so I don't see much increase there in the future. We even have to reduce it. We have to keep following our strategy of "high value for low impact" which is satisfying in terms of income generated.

I believe this vision will come true, because the government of Botswana has done all its best to ensure that there is proper use and there is proper management of the basin. The government will continue playing an active role in managing sustainability.

Angola - Emphasising small-scale & community-based solutions

Tourism in Angola should be targeting Angolans as customers, as well as foreigners. In this context local communities should be involved in the development of tourism, for instance via community-based tourism and management of natural resources. Through sustainable management communities will benefit economically.

With regards to the agricultural sector more emphasis should be placed on small-scale solutions. Draught animals should be distributed to smallholders to increase their productivity and improved farming techniques should be introduced to increase yields. A stronger recognition by the state this approach is necessary.

Fazendas should also develop, but they will not be the object of a particular support by the state as they are now. Fazendas have the capacities to develop themselves. They will be regulated and state support will concentrate on smallholders.

Citizens should be involved in general in decision making in order to create and share more knowledge. More associations from citizens have to be developed such as farmers associations, parents associations and churches. I think the diversity of organisations is important. In this context, the existing and traditional concept of solidarity plays an important role and will strengthen the social cohesion of an association.

Elections for a local government are another thing that should happen until 2030. Communities electing leaders they know and they believe in will solve their problems more efficiently. Local leaders would rather focus on solving a region's problems than concentrating on the party's self-interests.

A great opportunity lies within smaller infrastructure projects with little impact with regards to water. We have plenty of water. We could make a much better use of it by building very small dams for micro-power or small agricultural projects like grinding cereals or fish ponds.

Angola - Commercialised, mechanised & modernised agriculture

I would like to see a Bié with a lot of structural changes and a lot of qualified people. The agriculture will change from a semi-subsistence rudimentary farming to a commercial and mechanised modern agriculture. This will be an industrial agriculture, a strong agricultural sector as it used to be under Portuguese. Harvests will be above 500 kg per ha up to several tonnes. Agricultural products from Bié are going to be labelled with a Geographical Indication (GI) (*“Appelation d’Origine Controlée”*) Bié. Bié would be recognised internationally for its agriculture.

People will be educated and support this change. As a result the landscape will change. The land cover and the infrastructure will change. There are fewer trees and more roads. Towns will grow. The Human Development Index is going to improve. Everybody is going to have access to water, energy and roads. The world shall become a better place to live in.

Namibia - Achieving a guided sustainable development

Let me think realistically before I dream. We cannot avoid development. There will be green schemes, sand mines and fisherman in the Kavango basin. Towns will expand and lodges will be built along the river. These developments are inevitable.

My dream is to see a sustainable guided development. All these developments will take place along the river without any pollution. Species composition and river quality will remain the same. Sustainability will run along in harmony with development. We should not go beyond the capacity and the limitations of the natural resources.

We have to guide development, because we know industries will come. Our task, especially the government's task, is to tell them where their limits are, so that thresholds are not exceeded. To determine exact thresholds we need to include the scientific sectors, which are also located in the Ministry of Fisheries, the Ministry of Lands and Ministry of Environment and Agriculture. So we will know these thresholds.

People will not depend on the river as a source of food anymore, because they will be employed in different sectors and generate enough income for their survival. Fishing activities will be more recreational than for subsistence. Another part of my dream is that each household will be having a pond in their

backyard to cultivate fish. Aquaculture would be another source of income and an alternative to the use of natural resources. The nutritious pond water can be used for irrigating gardens.

But we don't need to limit ourselves to small-scale solutions. I wish to see the development of public-private-partnerships for the development of large scale aquaculture projects. We need to bring in the business people who can afford to and go for large scale with aquaculture. Public-private-partnerships in aquaculture should bring benefits to the community. The government will ensure by all means that there is no pollution to the river. Mechanisms assuring this are already in place.

Government-owned farms are one other solution. The government should play their role and have their own production creating employment.

Namibia - Safeguarding traditional land use systems and tenure

It is difficult to know what the next generation will want, because things are changing quickly nowadays with education. Still, in 2030 we want to see that the land is being used in a proper manner. People must take care of their land, because the young generation who is coming is going to inherit the land.

They should neither sell the land nor give it freely away nor resettle people there who are not going to live there. If you misuse your land someone will grab it and at the end of the day there will be a land dispute. Many countries have started wars because of this.

If your land is unproductive, you are bankrupt and you are out of the system. No development takes place if you are not producing something. All of us, we must live from the land. Land has a very high value. No matter where you come from and where you earn your money you need land where you can stay. Without land you cannot enjoy the money, because you don't have a place to stay.

Traditional manners and rules should be maintained and are sufficient to manage the environment. Our headmen make sure that the resources are kept for the next generation; for instance they forbid cutting too many trees or burning unnecessarily. Also regarding fencing, we do not want to change our system, it is not needed. We did not grow up in this system of fencing and we know the boundaries of our land.

We want to encourage people to continue with farming. You must produce something so that you have a source of income and others can benefit. We want businesses taking care of all people, not only poor people. Namibia's economy is driven by agriculture. The horticultural green schemes of the Kavango are also going to contribute in that.

Tourism is important in each country in Africa as it brings income and it will increase in Namibia. But the conservation areas which we are currently having are enough. We do not want convert the whole area to conservation in the future, because there are too many restrictions. If we want we will get rid of some of them.

Namibia - Modern agriculture, decentralisation & better services

We have a policy as a government and we are working on implementing this policy. We want to become an industrialised nation. I want to see in 17 years that rural communities have a good access to potable water, health facilities and sanitation. I want to see that remote communities have proper roads giving them market access and allowing them to sell their produce. I want to see internet and computers in the most remote areas so that our children can receive a quality education. At the local scale, solar energy is the way to go, as Namibia has a lot of sun and solar panels are cheap and easy to transport and manage. At the national scale, uranium could be used: we have huge reserves.

It is very important to me that proper land use planning is done in order to give all things a space. Everything boils down to land, to earth!

First the protection of the natural system is important to me. I want to see snakes in the forest, mosquitoes alongside the rivers and crocodiles and hippos in the river. I want to see the landscape, the greenish of forest trees and indigenous fruit trees - a harmonious ecosystem with many different kinds of animals and also grazing areas for livestock.

Concerning agriculture, I envision this area as the bread basket of Namibia. We have got water, fertile soils and the human resources. We need to equip our people with knowledge and modern technology. We need to intensify agriculture following the European model so that land productivity increases strongly. We can produce a lot of food without extending farmland with the appropriate technology. People need to receive education and techniques towards this end.

In 2030, I would like that the regional council is a link connecting the government to the people in terms of decentralisation. I really want to see that regional councils are empowered. Regional governments and regional councils know what is happening on the ground and they would be the ones to render services to our communities effectively and sufficiently (not the central/national level).

Botswana - Pristine Delta: world jewel of upmost value

My dream is that they discover oil about five miles from Gaborone. Everybody is going to rush there to find a job. Less than 30,000 people will remain in Ngamiland and a maximum of 100,000 people in the North-West District. The economic base of Botswana moves away from this district. The development opportunities must go away from natural resources. Economic alternatives will lie outside of the North-West District.

Tourism will be the main income source in Ngamiland. The Delta will become world famous as a pristine and unique area in which people can rest their soul escaping the increasingly overcrowded, polluted and noisy cities everywhere else on the globe. Visitors will be queuing in to see the area and will be paying ten times more than today to enter this area and they will be marvelled when they get there! Botswana must recognise this high potential. If we achieve this, we will have a high quality of living and a low impact and a contribution to the national economy that is significant.

In association with other parks (Chobe, KaZa) the Delta will also perform important ecological functions: clear water and air and be a refuge for biodiversity. The implementation of the KaZa vision will provide a strong trans-boundary bond and thereby an additional incentive for the trans-boundary management of the ORB. The foot-and-mouth disease cattle disease will be eradicated. Meat production will take place but with a maximum of 50,000 cattle heads for Ngamiland. Meat from the region will feed the growing demand of the three million people living in the south of Botswana or will be traded internationally at the highest price on Earth.

AIDS will be made insignificant; people will not rely on natural resource any longer for their livelihoods and adopt a modern lifestyle away from farming. Food production will take place in special centres zoned for this purpose.

Anti-vision: The city of Maun keeps on increasing in size and resources around the cities and villages of Ngamiland become increasingly exploited and depleted, as the local population still relies on natural resources for their livelihoods. The current trend continues and the local population will eat up the whole of the natural resources of the Delta until 2100. Everyone fights to have his own share of the “Okavango Pie”: all want to get benefits from it in an uncoordinated way.

Botswana - Supporting local innovation and empowerment

I think that the Okavango river system looks very good right now. It's Beautiful! I would like to keep the environment the way it is. In my imagination I cannot see anything better.

Physically the basin will remain the same, but socially I see the local Riparian people in charge. They would have the rights to demand people to report to them. Us researchers, we will be accountable to them. At the moment they do not know which research I am doing and why I am researching. The Riparian people should get more say, more decision-making and more control of what goes on here. They should be involved in serious things like research agenda and planning. I foresee a move towards having an engaged research. A research that is about the issues that the people see as important and that influences their decision making.

In future the Riparian people will be doing the things that they are doing now and better. They will have become innovative. They would be doing their fishing, livestock and farming as well as tourism. But they would know how to do it, they would be innovative and efficient and have the resources to do it. They would be doing whatever they would like to do. Their creativity will have no limits. And we will support their creativity.

The people's innovation potential should be supported by organisations and by us. Institutions have to listen to people, support their visions and help them to enhance their creativity. So far, they have been made to think that their knowledge is not good enough. Their creativity has been discouraged. We have to serve the people better.

I foresee this great change and I think it will happen as the youth in these riparian areas is the same as us and will be negotiating with us on the same levelled ground.

Botswana - Controlling elephants for producing livestock

For me, the key point is the convention of international threatened and endangered species which over-protects the elephants. The population of elephants exceeds 60,000 animals and this is more than our environment can sustain.

In my vision, the elephant is delisted from the appendix of the convention and controlled hunting and trade in ivory is reintroduced for population control. The foot-and-mouth (F&M) disease control infrastructure will benefit from this measure, as elephants would destroy far less fences. Incursions of buffalos in the cattle area would not occur anymore do to the better fencing.

In addition, farmers would start fencing their cattle posts and animals would not be roaming unherded. All that would lead to a control or even eradication of F&M disease: vaccinations would no longer be necessary.

As a result, livestock would become a lucrative business and will gain in importance. Farmers will fetch better prices and adopt more intensive husbandry practices.

Angola - TFO findings benefiting the local level

I would love to see all the houses in the village roofed with iron sheets. Instead of using bricks we will use cement blocks. All the households will be equipped with toilets to avoid dirt here. We will have an improved water access through a borehole and pumps. I also wish to have a tractor in order to develop the farming activities.

I wish to see benefits for our community resulting out of this research that TFO is carrying out. Local communities provide information to researchers, but the scientific findings and its benefits do not have an impact on the local level. I would like to see cooperation between research projects and the government as well as between the government and communities. Alone we cannot do anything here. Researchers identify our problems, where we fail, and they ought to communicate them to the government.

Angola - Rural production for city needs

As I'm the house head of a big family my children often ask me about the future. I place great importance on honey making and on cassava, because they are important sources of income, and very much demanded by my children in Luanda. Especially honey making gives a good income, so I will continue to make honey in the future. I need to produce more food to send to my children in town.

Tourism is rather happening around the Kwansa River, because it is more beautiful there, but I believe that our area is also attractive for tourists. I believe my children will explore tourism further. I wish to have more visitors coming to our village. Visitors bring change and change is good for development. As in the past, we can learn a lot from visitors, because they tell us things we did not know before. Many foreigners establish shops along the road. I think we are also capable of doing that.

Namibia - Success through conservation farming

In my dream in 2030 I want to see that conservation agriculture is really doing well in the community because it feeds back to the soil. We will have food

security and will produce a surplus that we can sell to generate income. We will be able to pay the school fees for all the children in the village.

Thanks to conservation agriculture, I will produce much surplus and will sell in big numbers using more land than I do now and maybe even having people work for me on my fields. I will have acquired land and will have learnt many agricultural techniques. In my dream I produce and sell a lot. Trucks will come to collect the harvest in an organised way. I will have income and will be able to build a brick house with a metal roof and have electricity.

Collecting natural resources will not be my strongest priority, because I will concentrate on farming. I will gather firewood in the case of power cuts and timber for construction purposes only if I need to.

My children living in town will remain in town, but I wish that my children currently living with me at home will stay here and at least one of them will continue farming. I would like to pass on the culture and traditions that were taught to me by my parents to my children. I encourage all my children to learn conservation agriculture. Then, I would just sit and relax because I have worked at lot.

Namibia - Green schemes feeding the people

My dream for 2030 is supporting the government's vision that people in the rural areas will have clean drinking water, nice houses and better living standards. Each and every community has electricity. Poverty is reduced. The green schemes produce enough food to feed the people. Education will be free. If people are educated they will get different jobs in different departments and will contribute in improving living standards and developing the green schemes.

Agriculture in the village will disappear. All the agriculture will come from the green schemes. All people will be working outside agriculture except for those who could not get good education. In this case, they will continue farming but it will not be productive enough. But education is important even for agriculture. With education, we can achieve better results with the green schemes.

Botswana - Tourism businesses developing a city

I would like to see us running our own businesses. I would like to see the young generation also running their own businesses and camps. My dream is to see the youth succeeding in their dreams. They would be able to create employment. Youth will be engaged in making bricks, having other businesses, doing tourism, all sorts of things. The people who are not employed will receive employment through local businesses. The people will be still making baskets, even nicer ones. The basket weavers will have a market. Instead of looking for other people to market their products they will sell their art and crafts directly to the tourism camps.

My dream is by 2030 to have a bridge and a tarred road coming to Seronga. Business is difficult at the moment, because transport is complicated. The tarred road will bring development to Seronga such as supermarkets and create employment. Maybe one day we will have our own university here in Seronga. Or a training centre for tourism guides! My dream is also to have a big hospital in Seronga with good facilities, sufficient equipment such as x-rays, qualified doctors and other specialists. Seronga should not have any shortages of medication. I would also like to see a good water plant in Seronga. Currently we are having water shortages.

Botswana - City growth boosting economic activity

Things are changing rapidly. In 2030 Seronga will be a town or a big big village. There will be a tarred road ensuring good access to Seronga. There is going to be a parliament for the Mohembo-Gudigwa area and Seronga will become a sub-district. Many offices will be opened and will employ people. Many people will still be farming and are going to sell their produce to people working in the service sector. Also many industries and butcheries will develop. Livestock will be an important income and will be given priority. Maybe wildlife should also be prioritised, as it brings tourism and tourism can also bring income to the area.

There will be a water plant for pumping water from the Delta in order to cope with the sinking groundwater levels, which come from the less rains we are receiving.

Botswana - Seizing unexploited opportunities in tourism

I see Seronga as a town in 17 years. Seronga now has all the necessary preconditions such as schools and electricity for such a development. Also a tarred road will contribute towards this. Zoning in the form of allocating areas for agriculture, wildlife, tourism and industry will improve land use. The zoning is going to attract investors and shops will come. Especially the township will offer the capacities and will represent the core for development. This area will resemble something like Shakawe in 30 years' time and will develop into something we cannot even imagine!

Tourism will be the strongest motor of this region. Bed-and-breakfasts, lodges and 4 or 5 stars hotels will be built. Tourism will develop and be important especially from Seronga to Gudigwa. Many visitors will come and enjoy restaurants, picnics and scenic roads on the Panhandle, or cruises on the river: the "Panhandle scenic cruise and route"! The youth should be involved and should make a living out of these opportunities. Sanctuaries for nature protection should be created here in the area of Seronga as an alternative for tourists to driving to the Delta.

If we can eradicate the foot and mouth disease, then cattle and agriculture can also contribute importantly in the area Seronga to Shakawe. There will also be integrated land-use of farming and livestock, but this depends on how the people want to farm.

Unexploited opportunities for tourism or simply for the transport business will be seized by the people: for example a regular boat transportation between Sepopa and Seronga or up and down from Shakawe, at regular basis.

Unfortunately, currently people have no funds to make the investments: they strongly rely on governmental funding and resources. Also, at present, the people do not realise the potentials in the area. They have to be educated about unexploited opportunities in tourism.

Illustrations

1. The River Cubango, in Kuando Kubango province, Angola, 2013. ©Domptail – 2. Kudu Antelope in Buffalo National park, Namibia, 2011. ©Kowalski – 3. City Mall in Gaborone, Botswana, 2013. ©Domptail - 4. Agro-industrial agricultural public-private irrigated agricultural scheme, “green scheme”, Mashare, Namibia, 2011. ©Kowalski – 5. Semi-permanent subsistence farming, Seronga, Botswana. ©Domptail – 6. Close up on the irrigation system of horticultural production (here sugar cane) in a fazenda (commercial farming) close to Menongue, Angola. ©Domptail – 7. Borderline between the agriculturally used land and the protected area of the Okavango Delta, close to Maun, Botswana. ©Domptail – 8. Field prepared for cultivation in a slash-and-burn system, Cusseque, Angola. ©Domptail – 9. Field preparation for conservation agriculture, Mashare, Namibia. ©Domptail – 10. Elephant in Seronga Protected area, Botswana, 2011. ©Domptail – 11. Middle-scale horticulture in the Longa River bed, Longa, Angola, 2012. ©Domptail – 12. Daily market in a large village, north of Kuando-Kubango, Angola. 2013. ©Seidel – 13. New road, Chitembo, Bié province, Angola, 2013. ©Kowalski – 14. Community forests, one form of devolution for natural resource management, Western Kavango region, Namibia. ©Domptail – 15. A village in Kuando-Kubango province, Angola. © Seidel – 16. Education of present and future generations, here a board from Seronga secondary school, Botswana, 2013. ©Domptail – 17. Small scale irrigated horticulture, Tjeyje, Namibia, 2012. ©Domptail – 18. Tourism camp in the Okavango Delta, North-western district, Botswana, 2013. ©Domptail – 19. New town in construction next to Cuito, Bié province, to provide middle and high class accommodation, 2013. ©Domptail – 20. Man fishing with fishing net in the Okavango River, Mashare, Namibia, 2011. ©Kowalski – 21. Floodplains next to Cuito Cuanavalle, Kuando-Kubango province, 2012. ©Domptail - Charcoal for sale, rural area of Bié province, Angola, 2012. ©Domptail

