AFR/2013/PI/H/7

UNESCO

Forum panafricain : Sources et ressources pour une culture de la paix

Session d'ateliers 2

Organisation des Nations Unies pour l'éducation, la science et la culture

Session d'ateliers 2 :
Gestion des ressources naturelles : facteurs de conflits ou sources d'opportunités pour un développement durable

Cette deuxième session d'ateliers analyse la coopération et la diplomatie scientifiques pour un partage des ressources transfrontalières, en l'occurrence l'eau pour la paix : bassins hydrographiques et océans/ biodiversité, sol et sous-sol, cosmogonies traditionnelles et les savoirs autochtones pour le développement durable (relation entre l'homme et la nature, la médecine traditionnelle, l'adaptation au changement climatique,…). Elle étudie également l'économie verte et bleue pour l'emploi pour tous, spécialement pour la jeunesse. L'intégration de ces derniers dans la vie active, la reconnaissance de leur qualité d'acteur social et économique. Enfin, sont abordées les thématiques de la formation technologique et professionnelles, l'éducation au développement durable, l'importance du développement des sciences, de la technologie et de l'innovation.

Atelier : ***Coopération et diplomatie scientifiques pour un partage des ressources transfrontalières : l'eau pour la paix : bassins hydrographiques et océans/ biodiversité, sol et sous-sol***

M. Ibrahima Diop - Point Focal National de La Réserve de Biosphère Transfrontière du Delta du Fleuve Sénégal, Conservateur du Parc National des Oiseaux du Djoudj
M. Eben Chonguica - Secrétaire exécutif de la Commission permanente du Bassin du fleuve Okavango (OKACOM)
M. Adigun Ade Abiodun - Président de la Fondation africaine de l'espace et du système global d'observation des Océans en Afrique (GOOS-Africa)
Modératrice :
Mme Noeline Raondry Rakotoarisoa - Chef de section, Réseaux de la biosphère et du renforcement des capacités, UNESCO

Atelier : ***Cosmogonies traditionnelles et savoirs autochtones pour le développement durable (relation entre l'homme et la nature, la médecine traditionnelle, l'adaptation au changement climatique,…)***

M. Vital Bambanze - Sénateur, ancien président des experts du mécanisme des Nations Unies sur les droits des peuples autochtones, Burundi
M. Max Ooft - Consultant, UNESCO
Mme Saudata Aboubacrine - Association pour l'épanouissement des femmes Nomades (tin Hinane), Burkina Faso
Mme Victoria Haraseb - Assistante régionale d'éducation, Groupe de travail sur les minorités autochtones en Afrique australe (WIMSA), Namibie

Modérateur :
M. Doug Nakashima, Chef de section, Petites îles et savoirs autochtones, UNESCO

Atelier : ***Economie verte et bleue pour l'emploi pour tous, spécialement pour la jeunesse. Leur intégration dans la vie active, la reconnaissance leur qualité d'acteur social et économique. Quid de l'égalité des chances ? Rôle de la formation technologique et professionnelles/éducation au développement durable/l'importance du développement des sciences, de la technologie et de l'innovation***

Mme Aminata Maiga - Spécialiste principal du programme “Entreprise et emplois verts”, Organisation internationale du Travail (ILO)
M. Kenneth Hamwaka - Directeur exécutif, Guidance, Counselling & Youth Development Centre for Africa, Malawi
M. John Simiyu - Chepkoilel University College, Moi University, Kenya
M. Giza Gaspar Martins - Coordinateur de l’unité des changements climatiques, Ministère de l’environnement, Angola

Modérateur : M. Hervé Huot-Marchand, Specialiste de programme, Bureau de l’UNESCO - Dakar
Synthèse des débats et recommandations / propositions d’action / meures de suivi

Président de séance :
S.E. João Teta - Secrétaire d’Etat, Ministère de la Science et de la Technologie, Angola

Rapporteurs :
M. Vincenzo Fazzino - Spécialiste principal du Programme, Département Afrique, UNESCO
M. Gabriel Luis Miguel - Directeur national du développement technologique et de l’innovation du Ministère de la science et de la technologie, Angola

Victoria Haraseb

Assistante régionale d'éducation, Groupe de travail sur les minorités autochtones en Afrique australe (WIMSA), Namibie

The traditional cosmogonies and indigenous knowledge for sustainability (relation between man and nature, traditional medicines, climate change adaptation,)

Indigenous people believe that they co-exist with nature and cannot be separated in any circumstances. My intervention will look at the natural resources availability and how it can be sustained in this regard.

Communities faced with dispossession over the decades and do not have access to natural resources in some instances. I must say that as Indigenous people are closely related to land it is difficult to function without the most important source of their being.

Coming from a hunter-gathering background, San communities find it difficult in southern Africa to access and manage their own territories and lands. Due to the fact that land belongs to the state, it cannot be called as the land of a specific tribe due to national reconciliation strategy used by the states. Most of the land belongs to either state or to commercial owners; in this case it means that San cannot move freely as in the olden days to practice their tradition.

However,rural communities have the option of establishing conservancies and community forests on communal land. San living in the conservancies are fortunate in comparison to most other San in Namibia in that they have access to land, are managing the natural resources of the land and are able, to varying degrees, practice their own traditional lifestyles.Conservancies also help the communities to generate income

Conservancies cannot be reported as a total success as communities are also faced with alcohol abuse when the conservancies pay cash payouts, which are meant for daily needs.

Some instances in the Kalahari cultural villages have been established to keep the culture alive for future generations by transferring knowledge to the young people. Here the elders have several cultural festivals and ceremonies which close the gap between the 2 generations.

Indigenous languages (San cases)

WIIMSA is in the process to revitalised San Indigenous Languages together with other partners in the region. Indigenous languages in many countries are in a threat to extinct. In some instances the languages is either only spoken or not written or vise visa. In South Africa one of the San languages in the Kalahari is only remaining with the 6 speakers currently and the elders are dying. WIMSA through its regional network is trying to strengthen the language committees by producing material in Mother tongue.

San education took place in the bush when parents and children went together on hunting and gathering trips. This was to educate the children on different veld food, medicinal plants as well as poisonous plants. In so doing children were well educated on nature without attending formal education.

The challenge is to see how the indigenous education systemcan be mainstreamed to accommodate traditional education.

In Namibia, the government promotes village schools together with the Norwegian Government although it is only in one community. This is the only success school which only attends to primary education. Unfortunately, when learners pass to Junior Secondary School, they often dropout.

Governing structure

Communities are now joining the other indigenous groups in dialogue to produce community Bio- cultural protocols.

Bio-cultural community protocols ("community protocols") are instruments that facilitate culturally rooted, participatory decision-making processes within communities with the aim of asserting rights over their communally managed lands and traditional knowledge.

Community protocols are based on communities' customary norms, values, and laws and set out clear terms and conditions to governments and the private, research, and non-profit sectors for engaging with communities and accessing their local resources.

Community protocols facilitate conservation and sustainable use of biodiversity by ensuring that decisions regarding communally managed resources rest firmly with the communities who have served as stewards of these resources over many generations.

In Namibia such structure is referred to as customary laws but needs to be strengthened as it does not cover wider area as in the bio-cultural protocols.

Representation and participation

In terms of their participation in decision-making bodies, the San are not co-opted into parliament. In the whole of southern Africa there is only one San women in the regional government representing a constituency.

San communities have their traditional structures in place and are in some instances recognised by government and some are not.

The issue of marginalisation of indigenous people by other dominant groups is not the only problem. The indigenous leadership are also oppressing and marginalizing their own community members hence they already suffer double. The indigenous leaders are exposed to corrupt practices and manipulation by states

officials and companies by signing agreements they do not understand if they are only given something in kind. Here the whole issue of 'free, prior and informed consent' is questionable.

We have a role to play as indigenous people in all this processes to also bring our part to be equal players and to be at the same page with others. However manipulation of leaders caused conflict among the communities and so does the latter goes up.

In conclusion the indigenous people are affected by the adverse impacts of climate change. One should also note that the indigenous people have the traditional knowledge in how to adapt and mitigate on the causes of climate. Indigenous people call for full and effective, meaningful participation in all processes and to be consulted in every aspect that has to do with them in order to make informed decisions.

By Victoria Haraseb

WIMSA

Victoria HARASEB est une spécialiste de l'éducation et des questions de minorités autochtones en Afrique Australe. Elle est actuellement Assistante régionale d'éducation, Groupe de travail sur les minorités autochtones en Afrique australe (WIMSA), Namibie. En fin de formation dans le cadre du programme en administration des affaires du Management College d'Afrique Australe basé en Afrique du Sud, Victoria a travaillé à WIMSA durant les 14 dernières années comme adjointe en éducation régionale. Elle a également siégé à divers conseils d'organisations différentes, à savoir Outjo Development Trust, à la municipalité à titre consultatif, à chairlady vice Community Empowerment and Development Association. Elle a également été membre consultatif du Fonds pour les femmes FIMI. Elle a été l'une des principales figures de la négociation sur le Gordonni Hoodia.

PRESENTATION DE LA RESERVE DE BIOSPHERE TRANSFRONTIERE DU DELTA DU FLEUVE SENEGAL-

SAINT-LOUIS
Site du Patrimoine Mondiale

GESTION DES RESSOURCES NATURELLES : FACTEURS DE CONFLITS OU SOURCES D'OPPORTUNITES POUR UN DEVELOPPEMENT DURABLE

BARRAGE DE DIAMA

Lt. Colonel Ibrahima DIOP

Point Focal

Luanda (Angola)
26-28 mars 2013

EXEMPLE DE LA RESERVE DE BIOSPHERE TRANSFRONTIERE DU DELTA DU FLEUVE SENEGAL

INTRODUCTION

Avec la volonté politique des autorités de la Mauritanie et du Sénégal, la Réserve de Biosphère Transfrontière du Delta du Sénégal, créée en 2005 ,couvre une superficie de 641768 ha dont 562470 ha en zone continentale et 79298 ha en zone maritime.

Avec l'appui financier de nos Etats, de l'UNESCO, l'UICN, la coopération espagnole ,la coopération française, la banque mondiale et le FEM depuis lors le PRCM poursuit l'appui financier à travers l'UICN qui a permis d'enregistrer les réalisations telles que formations,


ANDRÉ Aurélien

Les sources de conflits

L'eau est la principale source de conflit dans le Delta du fleuve Sénégal:

Source de conflits

Sources de conflits

Source de conflits

Source de conflits

Source de conflits

Source de conflits

Source de conflits

Source de conflits

Objectifs

- **Promouvoir la conservation de la biodiversité**
- **Développement durable basé sur la participation de la communauté locale**
- **Approche scientifique adaptée**
- **Formation**
- **de faire vivre durablement cet espace complexe du Delta, espace généreux, dynamique, mais fragile aussi, dans une alliance des pays et des acteurs, qui dépasse et fait converger les intérêts de chaque secteur pour faire jaillir l'abondance dans la paix.**


POLO
POLO
LA PERIPHERIE DU
DJOUDJ
Comités Villageois
AIVS
Partenaires
- CIVS
- IDADE
- UICN
PNDD
DPN

Les organes

- Grâce aux organes de gestion mis en place par la RBTDS entre les deux Etats et l'implication de tous les acteurs au niveau des organes et comités de gestion (Comité transnational ,Comité scientifique, Comité de gestion(2 points focaux)) qui favorise une bonne entente dans l'utilisation des ressources naturelles aujourd'hui source de paix vers un développement durable.
- Les différentes rencontres organisées avec l'utilisation des langues locales partagées par les deux pays avec les populations locales

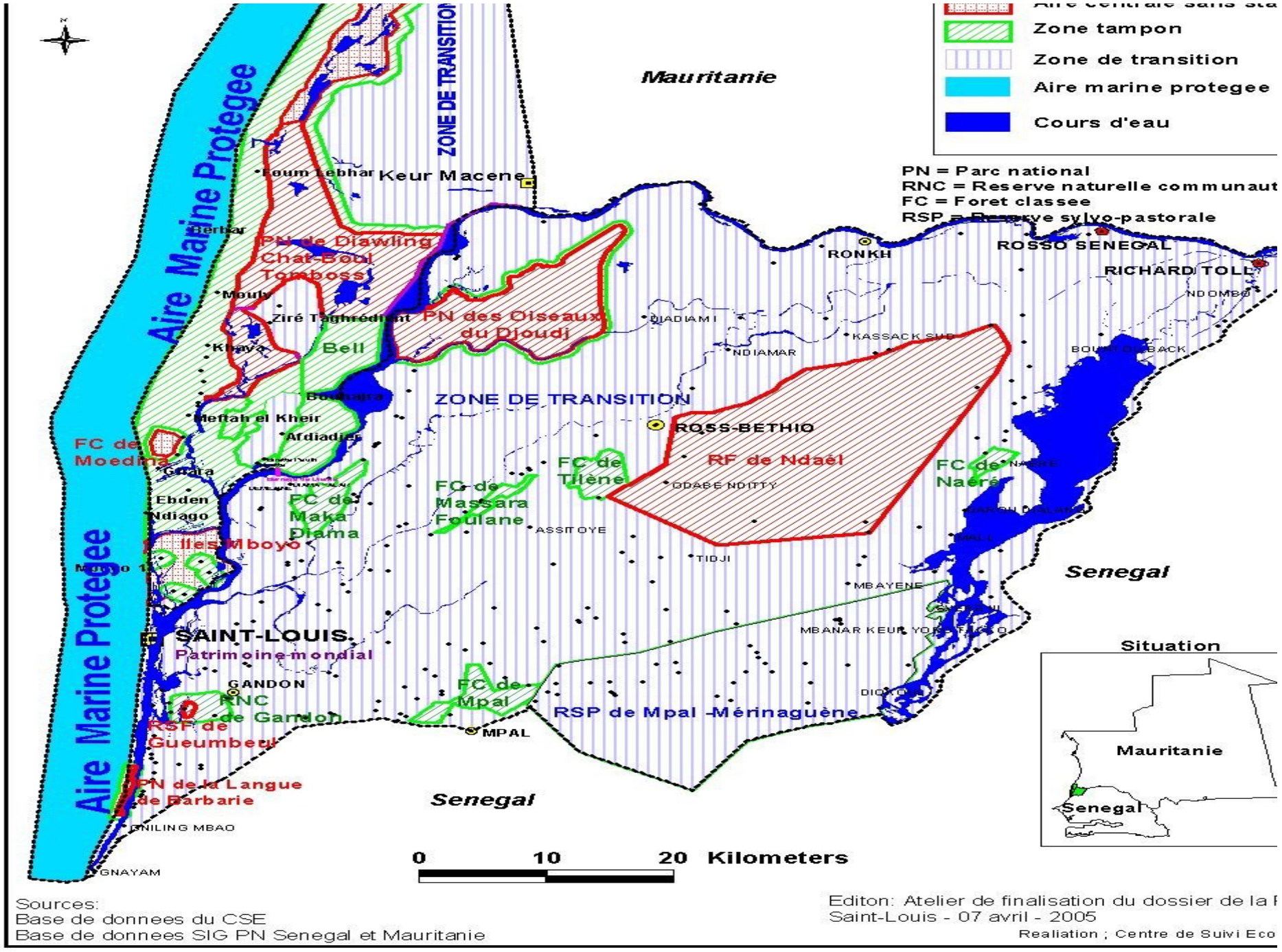
Les différentes rencontres organisées avec l'utilisation des langues locales partagées par les deux pays avec les populations locales qui partagent les mêmes ethnies cultures alimentation et mode de vie en général est source de paix dans la RBTDS.

- L’utilisation partagée des ressources naturelles comme nénuphars, sporobulus, gousses d’acacia, typha, roseaux… a produit des ressources financières supplémentaires avec les activités génératrices de revenues.
- Les femmes et les jeunes moteurs de développement dans l’espace RBTDS sont les plus actifs


INAUGURATION DE LA RBTDFS
04.02.2009 14:13


04.02.2009 14:07


محمية المحيط الحيوي العابرة للحدود لدلتا نهر السنغال
مقر المنسقية
Réserve de Biosphère Transfrontière du Delta du fleuve Sénégal
SIEGE DE LA COORDINATION
MAB
Bienvenue
مرحبا بكم



Sources:
Base de donnees du CSE
Base de donnees SIG PN Senegal et Mauritanie

Editon: Atelier de finalisation du dossier de la
Saint-Louis - 07 avril - 2005
Realiation ; Centre de Suivi Eco

FORMATION

DENOMBREMENT ANNUEL DES OISEAUX D'EAU
EQUIPE MIXTE

SEANCE DE PATROUILLE COMBINEE

Avifaune

- Entretien complet des ouvrages vannés du Parc
- Etude de faisabilité du curage du marigot de Bell

- Dénombrement spécial de la population de phacochères selon le protocole établi en collaboration avec l'ONCFS

- Entretien des échelles limnométriques

- Atelier de formation des guides et surveillants de la RBT sur les techniques de suivi écologique, guidage et éco touristique et tenu au Djoudj et Diawling.

- Débouchage des ouvrages d'alimentation de Cheyal et Lemer

- Protection de la digue de Ziré Taghredient, côté sud de l'ouvrage de Berbar par des sacs de jute plains de sable.

- Lutte contre le Typha en avale de l'ouvrage de Cheyal.
- Depuis juin, nous consacrons 10 jours pour parcourir toutes les zones centrales de la RBT côté mauritanien.

- L'objectif de cette tournée est d'effectuer un suivi écologique général et de sensibiliser les populations. L'UICN met à notre disposition un véhicule avec un chauffeur pour cette mission

- Organisation d'une journée de formation et de visite d'échange à l'intension des conservateurs et gestionnaire des zones centrales de la RBT : thème « la nidification des flamants rose et nain dans l'Aftout) ;
- L'installation de 04 échelles limnométriques à la cuvette d'Aftout Essahlie et 02 échelles aux lacs de Chat Tboul.

VISITE D'ECHANGE DES GESTIONAIRES SENEGALAIS EN MAURITANIE

CELEBRATION DE LA CEREMONIE DES QUARANTE ANS DU PARC NATIONAL DES OISEAUX DU DJOUDJ


TRALE DE LA

Confection de sacs de sel aux populations locales pour les activités génératrices de revenus

CEREMONIE DE REMISE DES SACS POUR LE SEL DES POPULATIONS DE NGAYE NGAYE par le Gouverneur en présence du Chef de mission de l'UICN


Labellisation du Sel de Ngaye Ngaye

PRATIQUE DE LA PECHE


PRATIQUE DE L’ AGRICULTURE
03/09/2012

PRATIQUE DE L'ELEVAGE

ENGAGEMENT DES FEMMES

ENGAGEMENT DES JEUNES

Séance de reboisement et de nettoiement de la plage

CELEBRATION JOURNEE DE LA RBTDSAU PARC NATIONAL DU DIAWLING


CULTURE FACTEUR D’UNION DANS LA RBTDS


DIAWLING
Activité
Sp/variétés
(12)
Pêche
(1)
Crevette
(7)
Légumes
INSTALLATION D'UN ARBORETUM
POUR LE DEVELOPPEMENT
DES ESPECES FRUITIERES ET FORESTIERS
MISE EN PLACE


MERCI DE VOTRE AIMABLE ATTENTION

SATELLITES AS TOOLS FOR PEACE IN AFRICA

by
Adigun Ade ABIODUN,
Founder, African Space Foundation

Invited presentation at the

Pan - African Forum on a Culture of Peace

Luanda, Angola , March 26 - 28, 2013

PEACE – What is it?

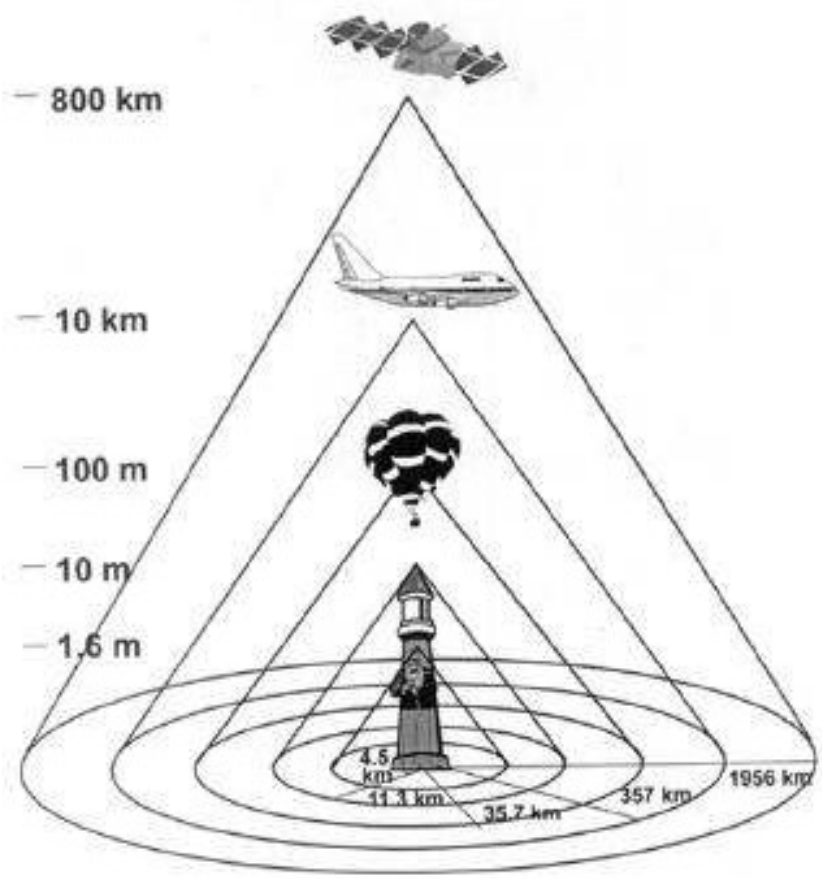
- Peace means different things to different people and entities:
  - Adherence of combatants or contending parties to the terms of an agreement or a treaty, that brings an end to wars or other hostilities between them, signifies the establishment of a peaceful relation;
  - Freedom from strife of any kind, a state where every individual feels secure and stable;
  - Part of that security and stability requires that the necessities of life of an individual - housing, food, shelter, health, education and human rights - are met, without any threat;
  - The United Nations and its agencies equate peace to human security everywhere on Earth and within its immediate environment, and have had access to a variety of satellites to accomplish the missions of the organisation in the fields of peace and security.

The First Known Statement about Earth and Space

Man must rise above the Earth to the top of the atmosphere and beyond, for only thus will he fully understand the world in which he lives

……Socrates

ATTRIBUTES OF SATELLITES



- Typical heights of watchtowers, balloons, aeroplanes and satellites and the radius of visual coverage.

ATTRIBUTES OF SATELLITES

- **The critical elements that make Earth observation satellites attractive for surveillance and intelligence gathering include their:**
- **Re-visit,**
- **Real-time; and**
- **Synoptic operational capabilities**
- **The ability of the sensor systems on board these satellites to see beyond the normal range of human vision.**
  - **Civilian satellites: spatial resolutions in the 10 to 30 metres range on *Landsats* 4, 5 and 7, as well as 20 m. (MSS) and 10 m. (Panchromatic) on *Spot*s 1, 2, 3 and 4.**
  - **Zenith and Cosmos (USSR) 2.0 – 5.0 metre**
  - **Ikonos, QuickBird, Topsat-1 and CartoSat Series (1.0-2.8)**
  - **IKONOS and QUICKBIRD (I m.) WorldView I &II (0.5m.)**

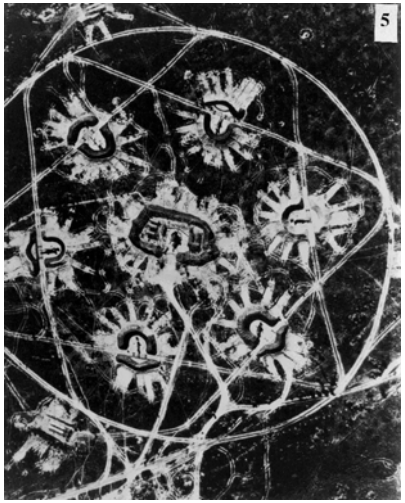
Current Satellites in Space

- **1046 operational satellites of which:**
  - **503 in LEO (these are mainly EO and oceanographic satellites and the LEO telecom satellites)**
  - **73 in MEO (these are mostly all GNSS satellites)**
  - **38 in Elliptical Orbit (these include Molniya type telecom satellites, Early detection satellite system (military) and some scientific satellites (telescopes)**
  - **432 in GEO (these are mainly telecom Satellites and several meteorological and military (early detection satellites).**

» **Data from UN-OOSA as of 30 November 2012**

HISTORICAL PRECEDENTS

Cuban Missile crisis of October 1962



HISTORICAL PRECEDENTS

(USA: U-2, Corona, KH-Series & Tiros) & (USSR: Meteor-series)

- **Agreements between the USSR & USA**
  - 1963 - Partial Nuclear Test Ban Treaty
  - 1972 - First Strategic Arms limitation Talks (SALT-1)
- **At the UNITED NATIONS**
  - Establishment of COPUOS
  - December 19, 1966 – Adoption of The Space Treaty which entered into force on October 10, 1967

HISTORICAL PRECEDENTS

Emergency & international cooperation

(a) Nuclear test detected in south Africa &
(b) Nuclear accident detected in USSR

Vela Satellite (USA)
September 22, 1979

Chernobyl Nuclear Accident on
April 26,1986 (Spot Satellite of France)

HISTORICAL PRECEDENTS

Environmental applications & human safety and security

- **UN-GA Resolution A/RES/1721(XVI) of December 20, 1961**
  - *Provided basis for the study on measures to advance the state of atmospheric sciences and technology in order to improve weather forecasting capabilities and to further the study of the basic physical processes that affect climate*

- ***1987 Montreal Protocol***
  - *An international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion*

- ***1997 Kyoto Protocol***

  Countries that ratify this protocol commit to reduce their emissions of carbon dioxide and five other greenhouse gases, or engage in emissions trading if they maintain or increase emissions of these gases

THE SECURITY COUNCIL

- Permanent Members of The Security Council are all space powers

- Making informed decisions based on array of space assets

- In recent years, and because of the global changing views of sovereignty, satellites have become invaluable tools for the Security Council in monitoring the conflicts in:
  - Bosnia, Liberia, Republic of Congo (Former Zaire), Rwanda, Sierra-Leone, Somalia, Sudan and Yugoslavia.

- Such information also formed the back-bone of Security Council Decision making during the 1991 Gulf war and prior to the occupation of Iraq by the Coalition forces in 2005.

Africa in Turmoil, Why?

Why is Africa in a state of turmoil?

Diamond, Gold, Oil, etc.

- Traditional rivalry among ethnic factions;
- Abundance of natural wealth – solid and liquid minerals and timber and the associated greed and desire of those in power to harness such societal wealth for self:
  - Local war-lords (with access to readily available guns that are equally laying claims to societal wealth and who, in the process, continue to take advantage of the illiteracy and poverty-ridden conditions of the people;
  - Unparalleled corruption by a number of those in power including utter disregard, with impunity, for the rule of law;
  - Total blindness of some of those in power to the plight and poverty-ridden state of the people, resulting in the absence of state initiated interventions that could enhance the quality of life of the people.

Pastoral land management problems in West Africa

Abuja, Nigeria, 2003

At Mali – Burkina Faso border *Malian farmers and livestock, forced south by conflict, put pressure on land and water resources in the borderlands*

Source: The UK Guardian, March 21, 2013.

Costs of Africa's state of conflict

- Africa's conflicts are costing the continent about US$18 billion (€13 billion) per year.

- The report estimates that, "compared to peaceful countries, war-battered African nations have 50 percent more infant deaths, 15 percent more undernourished people, life expectancy reduced by five years, 20 per cent more adult illiteracy, 2.5 times fewer doctors per patient and 12.4 per cent less food per person."

Oxfam et al, October 4, 2007

Radar Technology for land mines

- **A single landmine might costs $1, but once in the ground, locating it and making it safe can cost up to $1000.**

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Second level
Third level
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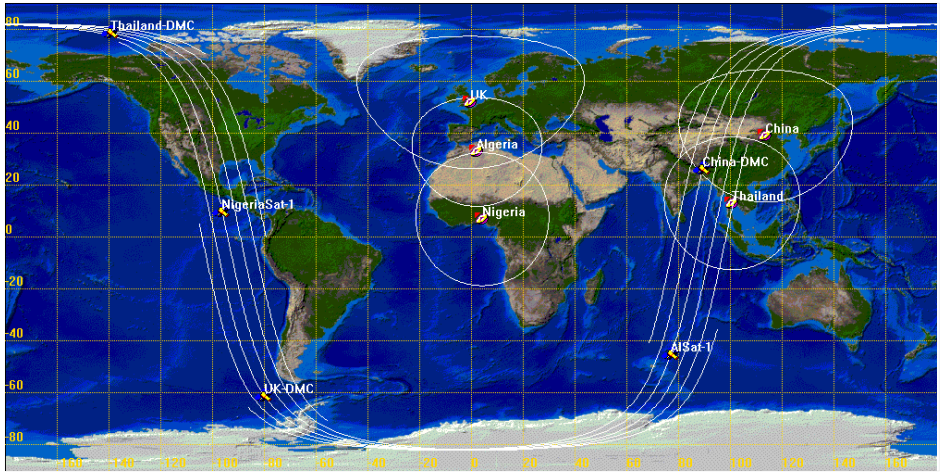
SATELLITES IN SUPPORT OF PEACE IN AFRICA

Early Warning System



- Satellites can monitor as well as provide advance warning of signals that could result in conflicts:
  - Identify projects on international rivers;
  - Map the tracks or routes of herdsmen;
  - Trace foot-paths of refugees;
  - Identify mobile units that may be in use for a variety of nefarious activities such as the transfer of fire-arms across national borders;
  - Radar technology under development to be used in locating land mines that are littered all over the world. Africa has the highest concentration of land mines.
  - Provide advance warning of droughts and tropical storms.

PLANNING FOR PEACEFUL CO-EXISTENCE -The case for an African Satellite Monitoring Institute

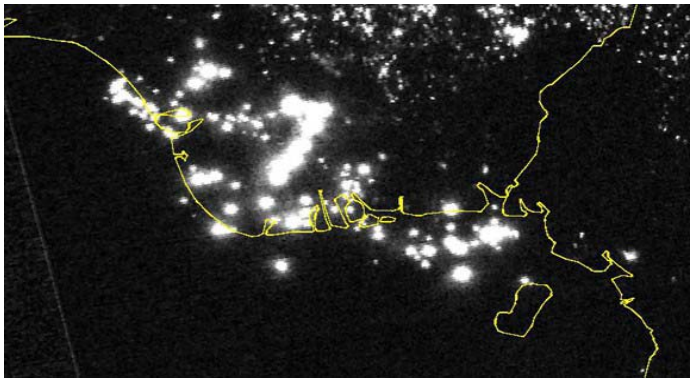
To be an effective manager of the crises within the African continent, the African Union (AU) would need to establish its own independent African Regional Satellite Monitoring Institute (ARSMI). Such an institute should be established and adequately equipped and staffed as a unit of one of the existing regional space-related centres in Africa. The mandate of such an institute should include, *inter-alia:*

- **Regular collection/acquisition and management of data (ground, air and space-acquired) of Africa's troubled spots;**
- **Proper collation, processing, analysis as well as interpretation of such data;**
- **Identification of sources of conflicts before they develop into major crises;**
- **Dissemination of such analyzed and interpreted information to member States through an officially designated organ of the AU; and**
- **Monitoring and verification of compliance with terms of agreement arrived at by combatants.**

*******ARMSI can be an integral part of the African Space University**

Africa's Coastal and Marine Environment

OIL & FIRE RELATED POLLUTION



Satellite image of
gas flaring at night

Vulnerability and special threats to the marine environment

- **Coastal area degradation, including sand harvesting and depletion of living resources.**

- **Gas flaring and its attendant impact on the health of the people, their food and economic crops, animals, and fisheries as well as the native vegetation;**

- **Land and ship-based pollution, soil erosion, flooding and forest fires - all attributable to oil exploration, processing and transportation - and resulting in large-scale destruction of living and non-living resources.**

Source: *Strategic Action Programme (2008). A Programme of the Governments of the GCLME Countries et al , GCC Secretariat, Accra, Ghana, September 2008*

Vulnerabilities and threats in pictures

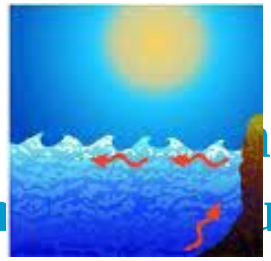
Beach Sand mining in the Gambia

Harvesting of mangrove forest wood for fish drying in Senegal

Oil spill and Related fires in

Beach Erosion in Cotonou and related road destruction

The Seas and their natural endowments –Upwelling



Upwelling occurs w
nds blowing across
th urface push water away from an area and subsurface water rises up to replace the diverging surface water.

- Subsurface water that rises to the surface as a result of upwelling is typically colder, rich in nutrients, and biologically productive – thus becoming a good fishing ground.

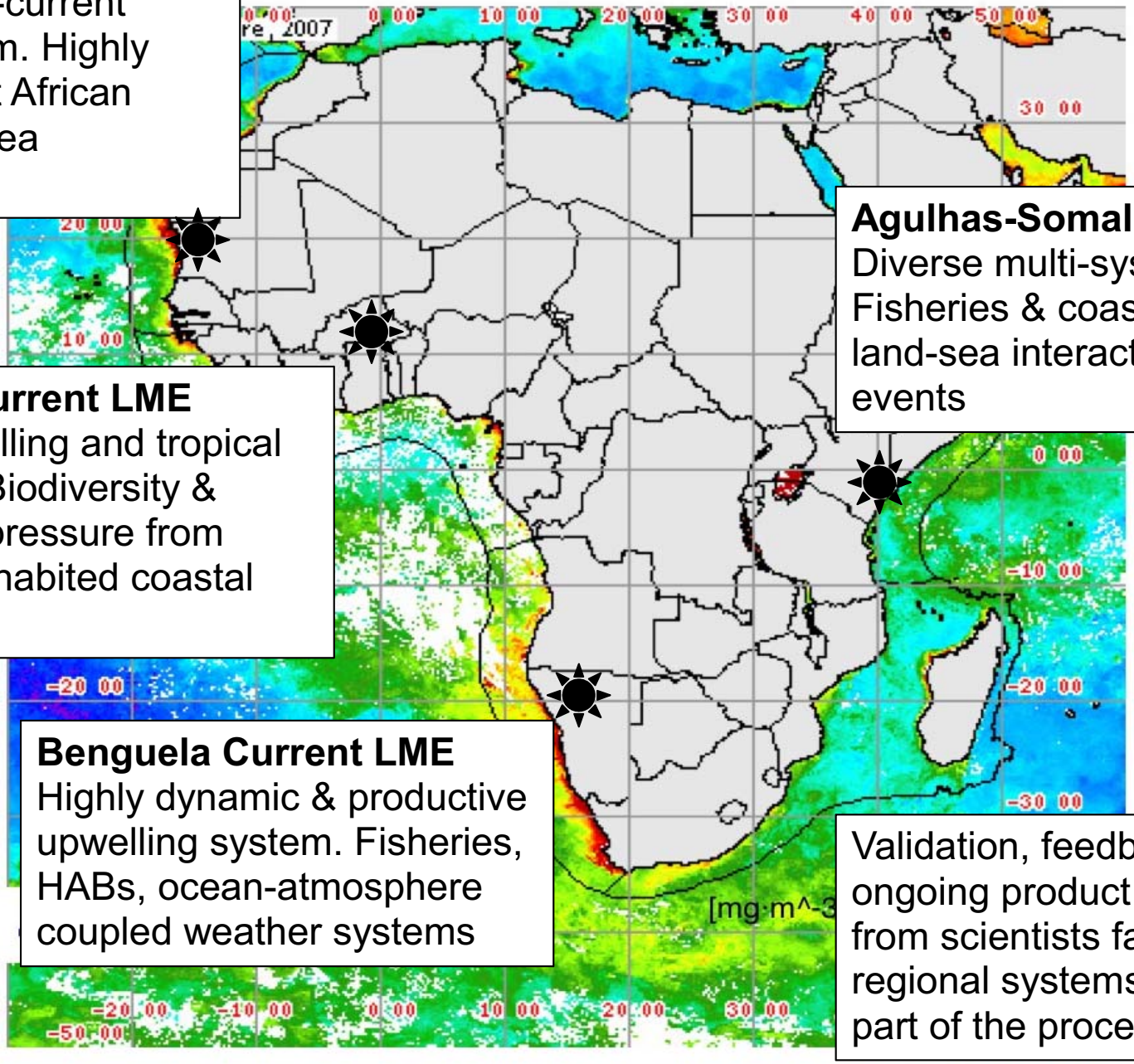
- Upwelling occurs in the open ocean and along coastlines, and all year round along West Africa's coastlines.

Major upwelling areas along the world's coasts

are highlighted in red.

GOOS-AFRICA
African Large Marine Ecosystems Connection

Canary Current LME
Major boundary-current upwelling system. Highly productive West African fisheries, land-sea interaction



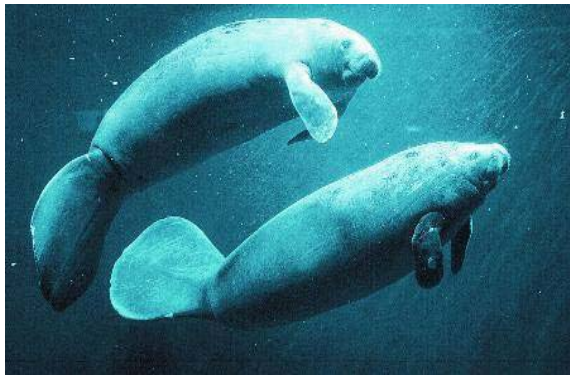
Agulhas-Somali Current LME
Diverse multi-system LME. Fisheries & coastal ecosystems, land-sea interactions, extreme events

Guinea Current LME
Both upwelling and tropical systems. Biodiversity & fisheries, pressure from densely inhabited coastal zone

Benguela Current LME
Highly dynamic & productive upwelling system. Fisheries, HABs, ocean-atmosphere coupled weather systems

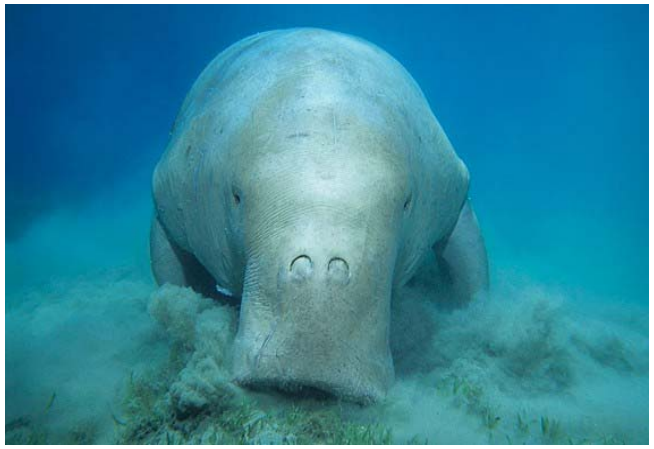
Validation, feedback and ongoing product development from scientists familiar with regional systems an essential part of the process

Africa’s Ocean and Marine Lives



Manatee

Parrot fish, Angelfish, Sardine, Groupers, Barracudas, Moray eels, Manta rays, Sharks, Marine turtles, Tilapia, Catfish, Lobsters, Prawns, Shrimps, Hake,



Elephant seal In Mozambique’s new coastal marine reserve

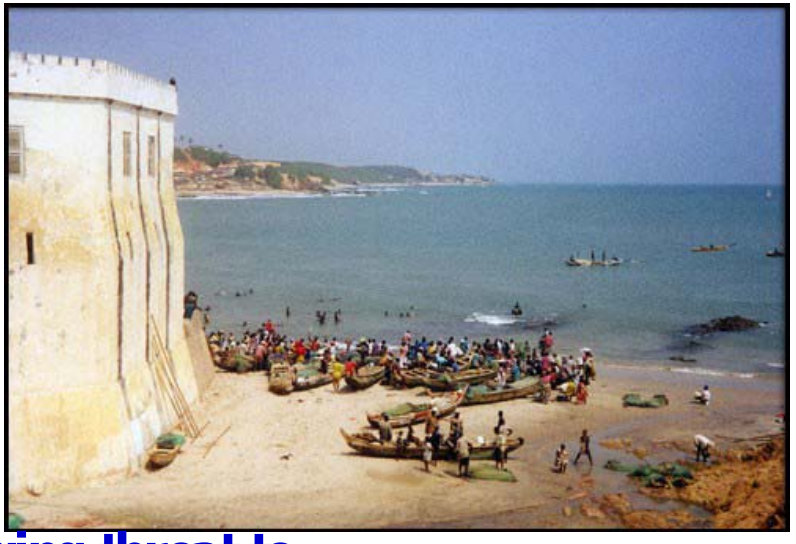
Catfish

Tilapia

Sea Turtle

The Fisheries Problems

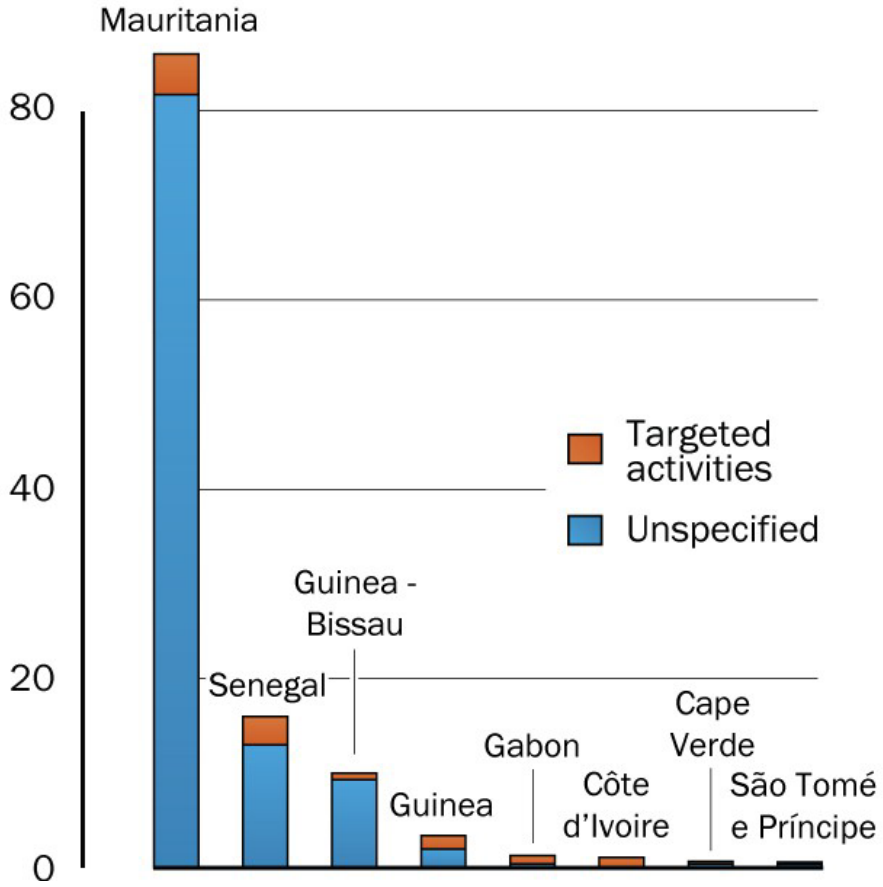
From artisan fishing & EO assisted fishing



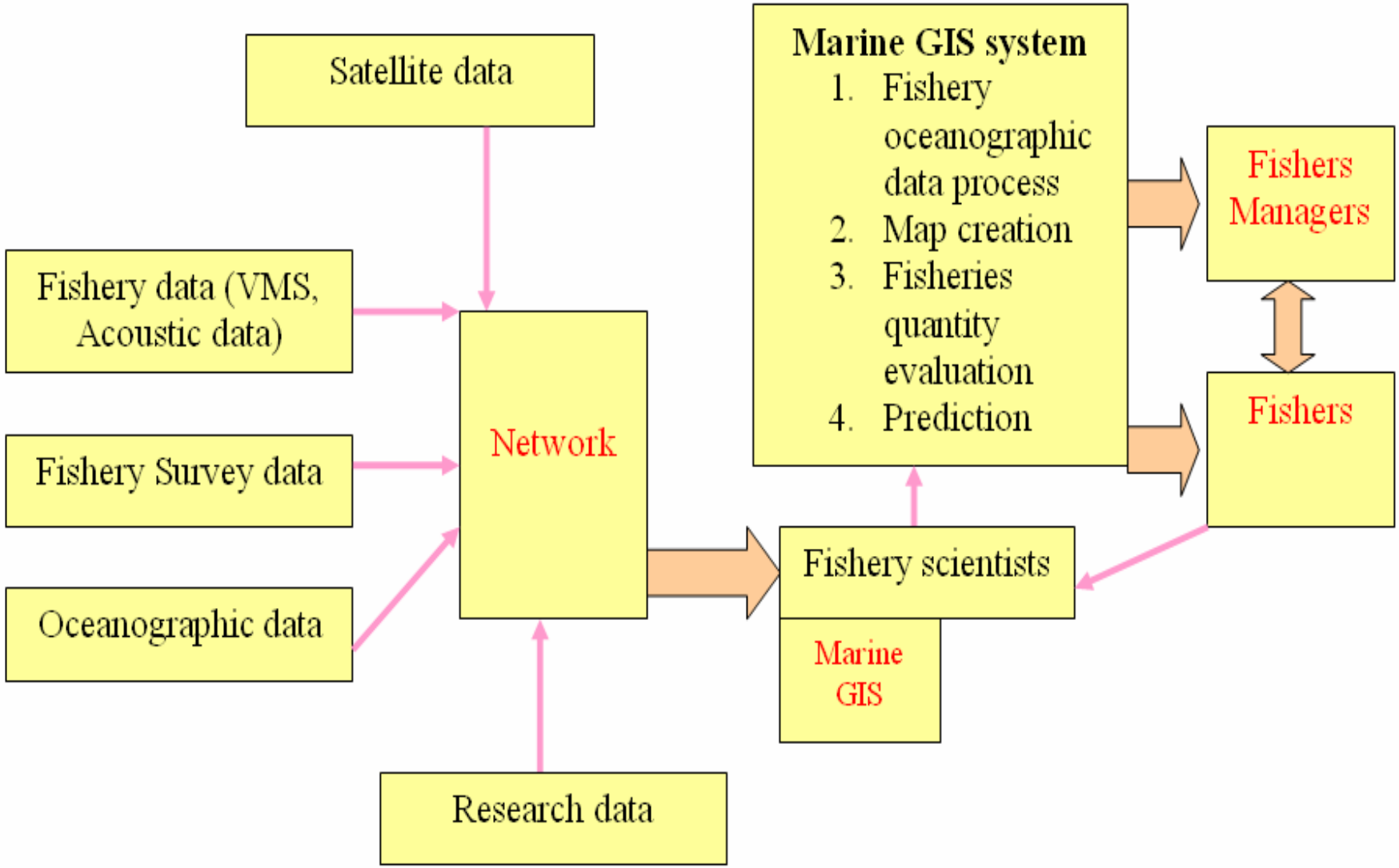
Pirate fishing has become a growing threat to the 85,000 people who work in the Guinean fisheries sector as well as the millions dependent on fish as an affordable source of protein. —— Environmental Justice Foundation (EJF)

Results of EO Assisted Fishing Money for Fish

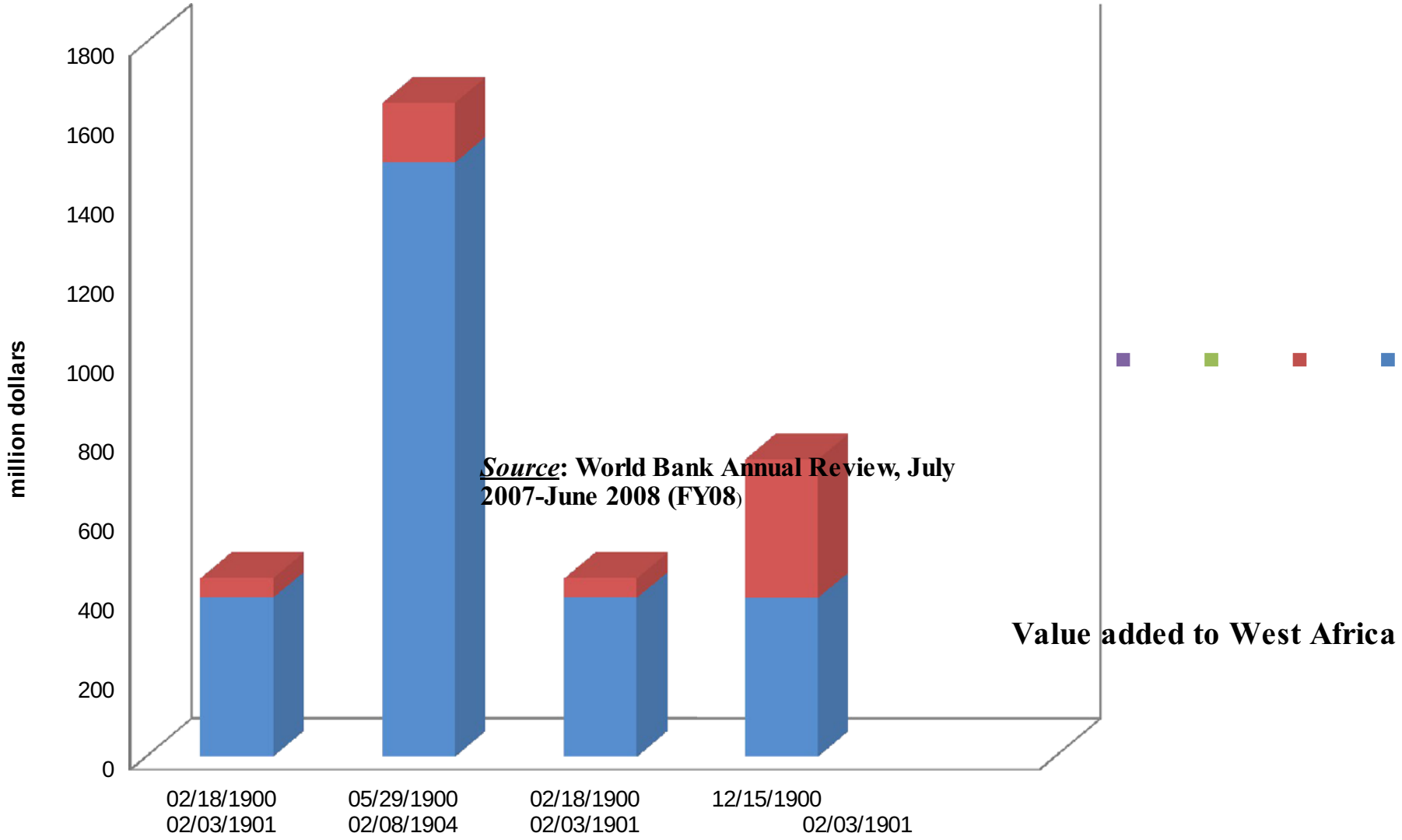
Financial contribution under EU fishing agreements (million EUR per year)



Earth Observation assisted fishing



Economic Impact of foreign EO Assisted Fishing in West Africa



Source: **World Bank Annual Review, July 2007-June 2008 (FY08)**

Sustainability of Marine Resources

- **Better enforcement of coastal rules and regulations.**

- **Mozambique's best-known national park has no safari game: Bazaruto NP is a marine reserve, home to the endangered dugong and many coral and fish species.**

- **Namibian Coast Conservation and Management: A GEF Grant of** US$1.92 million **approved on December 20, 2012.** The objective of the project is to assist the Government of Namibia in their attempt to conserve and sustainably maintain the biodiversity of the Namibian Coast.

From artisan fishing to EO assisted fishing

The Indian Experience: Village Resource Centres (VRCs) at the local government level in 22 states:

In India, information on land and water resources extracted from satellite images is organised using Geographical Information System (GIS) and provided to the villagers through *the VRCs*, hereafter referred to as *the centres*.

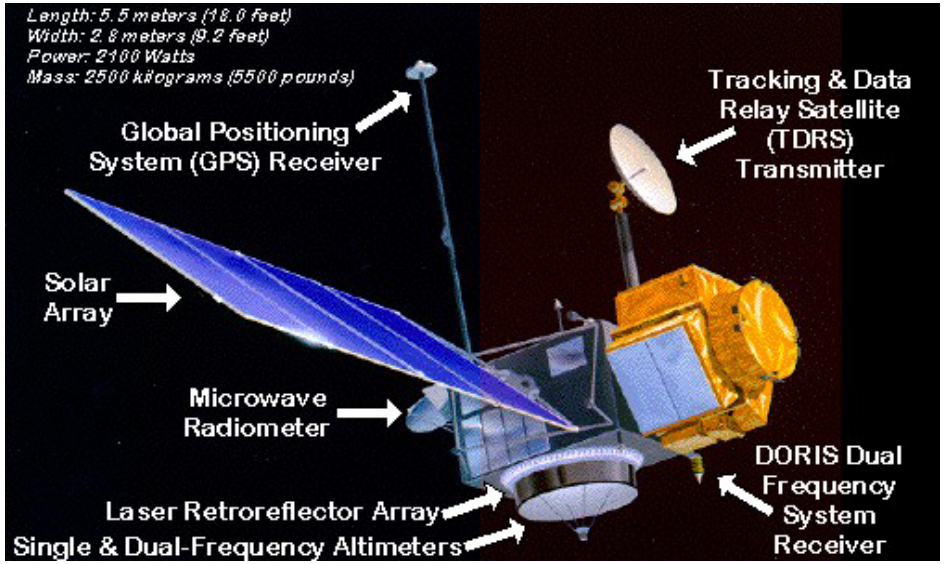
'*The Centres* are connected to Knowledge/Expert Centres such as Agricultural Universities, Skill Development Institutes, Hospitals and reputable NGOs.

Over 6500 programmes have been conducted by *the Centres* in many areas including agriculture/horticulture, fisheries, live stock, water resources and tele-health, tele-education and weather.'

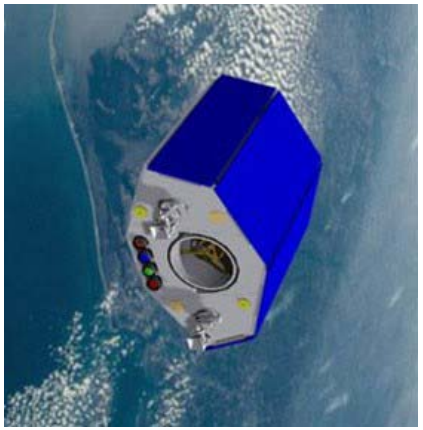
With the support of the skilled/trained personnel that manage *the Centres*, the local farmers utilise information available through t*he Centres* for a better management of their land resources. *The Centres* facilitate interactive advisory services between the local people and experts at the knowledge centres - Agricultural Universities, Technical Institutes, etc - on a wide range of subjects

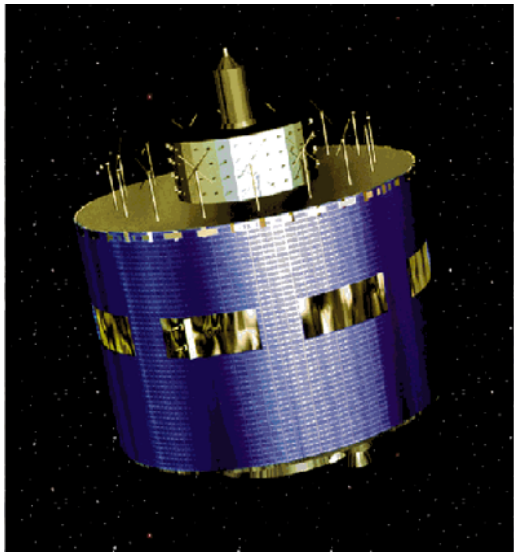
EO Satellites for Marine Ecosystem Management

- **Amongst the satellites that are acquiring such geo-referenced data of the GCLME are the following:**

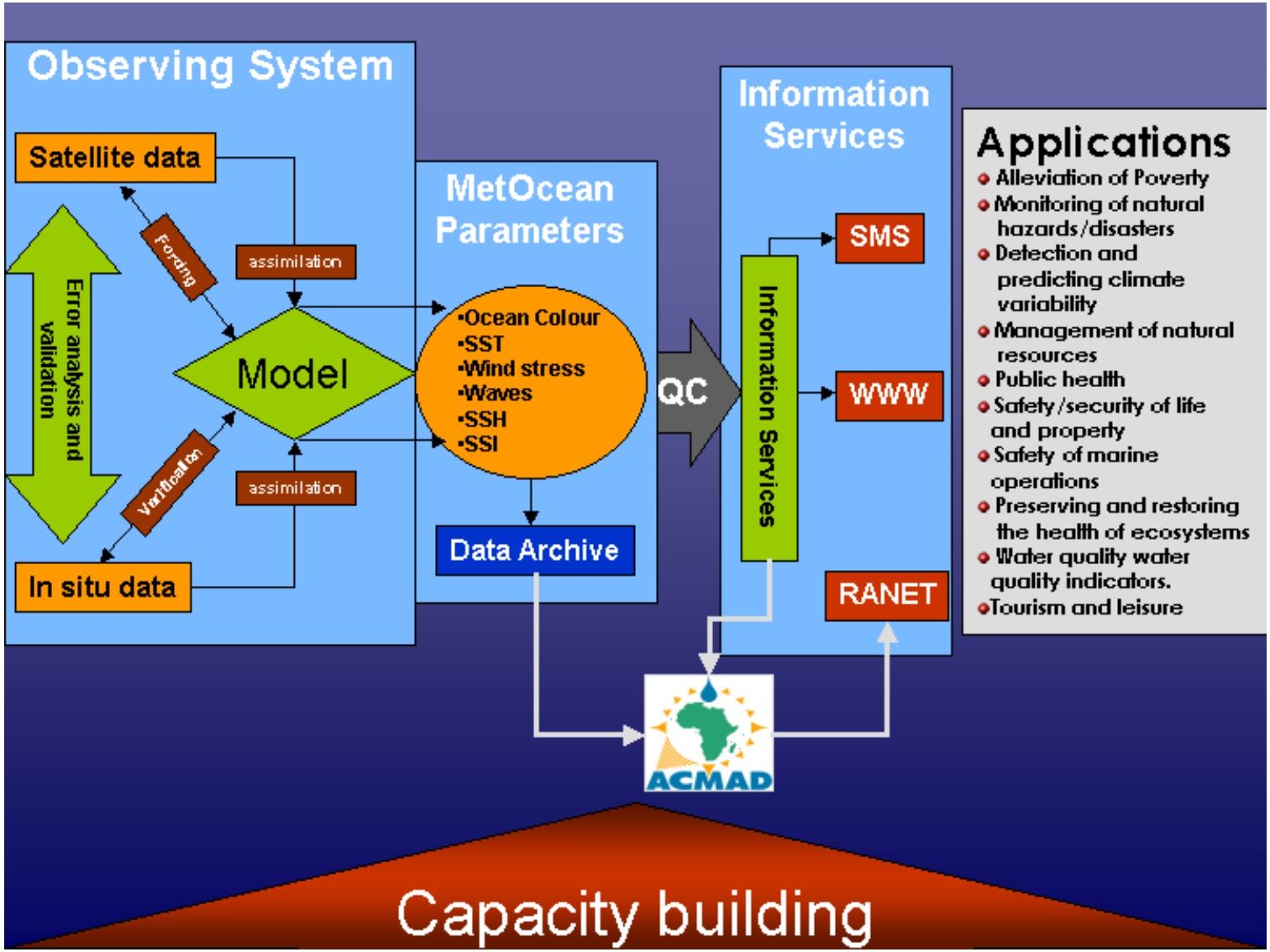


- **USA -** NOAA's GOES & POES Series, Orb View & IKONO Series and Jason Series;
- **USA & FRANCE** – ARGOS Series;
- **ESA**'s Earthnet Missions (Envisat, SMOS, GOCE, ERS);
- **EUMETSAT** (Meteosat series);
- **Malaysia-** RazakSat;
- **Algeria – Alsat-2; and**
- Nigeria - NigeriaSat-2





GOOS-AFRICA
CAPACITY EMPOWERMENT STRATEGY



Understanding and use of EO data

- The collection, analysis and use of geo-referenced data, such as earth observation/remote sensing data, is a starting point on the path towards any meaningful plan of action.

- Member States can subsequently analyse and interpret such data to obtain requisite information and knowledge needed for the sustainable development and management of an ecosystem, its resources and its environment.

- The challenge is to know what to extract, how to extract it and how to apply the end-result.

Local knowledge development to help solve the Gulf Current Large Marine Ecosystem (GCLME)

Designate and promote the GCLME sub-region as a Learning Laboratory for all its member States and their citizens who should benefit from all available space acquired information and knowledge of the sub-region.

Identify and endow relevant and credible research and application institutions in the GCLME sub-region that will welcome inquiring minds with interests in those aspects of coastal and marine sciences and oceanography that are critical to the challenges within the GCLME, and link the GCC Secretariat with such institutions with a viable communication network. This effort should also include the promotion of intensive space related education, particularly in marine sciences and oceanography, at all levels of education in the GCLME sub-region.

Identify sources of earth observation data of the GCLME sub-region and establish long-term agreements for gaining necessary access to such data for the operational use of the GCC.

UNESCO's Contributions

UNESCO/IOC secretariat should support the work of the GOOS-AFRICA Coordinating Committee based on African grassroots, ownership and leadership

UNESCO to maintain its support to the UNESCO Initiative of Satellite Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa

UNESCO to promote the development of UNESCO Chairs in Space Sciences, Technologies and Innovation in Africa.

UNESCO to promote twinning between African marine institutions and universities.

CONCLUSION (1)

- Human history confirms and reminds us daily that peace cannot be taken for granted; it has to be properly conceived, carefully nurtured and persistently cultivated.

- Above all, peace is more than the absence of war.

- Political stability and national development are inseparable aspects of a sound peace agenda; a society that is able to guarantee individual human security within its borders is not likely to experience the types of conflicts that are rampant within the African continent today.

CONCLUSION (2)

- Peace and security, particularly in each African country, and in the global community at large, also cannot be divorced from poverty eradication.

- A given satellite-acquired image of the Earth's surface contains an array of information that can be used for a variety of purposes including the alleviation of conditions that often degenerate into conflicts.

- Space technology is successfully addressing developmental problems, it is contributing to human security and safety and to the reduction of poverty in many parts of the world.

- When undertaken with a sense of commitment here at home, it can do the same for Africa.

THE AFRICAN CHALLENGE (3)

Contributing effectively to Africa's and global development

- **To be an effective contributor to these and other human global endeavours, Africa must rid itself of its endless internal conflicts. Only a stable Africa can develop and share knowledge within its own community of nations as well as with the international community - an indispensable critical step in sustainable development and poverty eradication in Africa**

END

Promotion des opportunités d'emplois verts pour les jeunes en Afrique

Forum PANAFRICAIN: Sources et Ressources pour une Culture de la Paix

Promotion des opportunités d’emplois verts pour les jeunes en Afrique

What is a Green Economy?

- One of two themes of RIO+20:
  - Green economy in the context of sustainable development and poverty eradication.
- Green Economy Report (UNEP, 2011)
- UNEP working definition:
  - Green economy is the one that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities.
- Green economy as a pathway to sustainable development.
  - The definition above clearly touches on the three essential pillars of sustainable development.

Why is an Inclusive Green Economy needed?

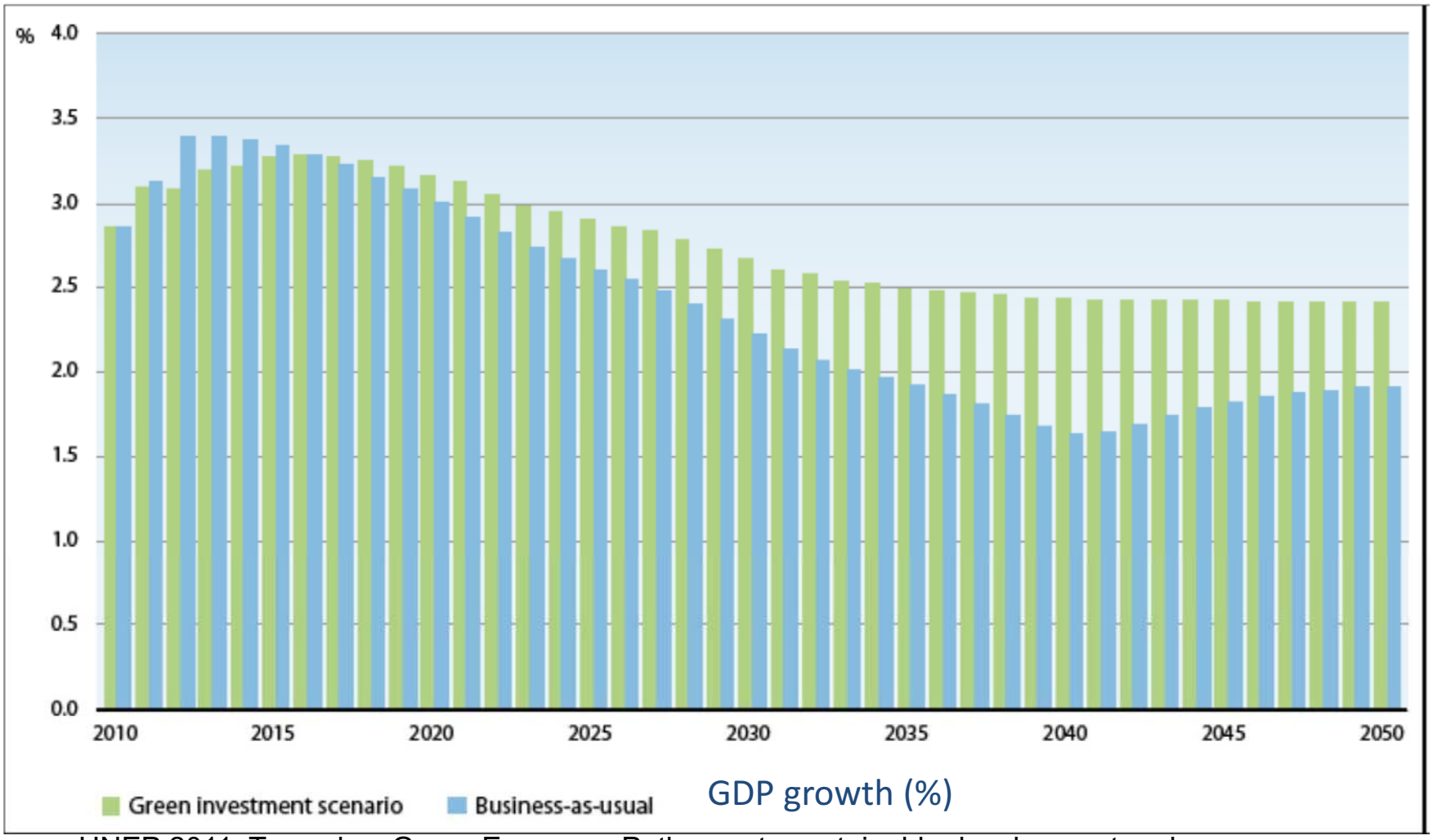
• A business-as-usual approach is no longer feasible: planetary boundaries constrain economic growth as traditionally conceived.

• Science tells us we are approaching and crossing bio-physical tipping points: environmental degradation threatens to undermine our collective well being.

•Threat exacerbated by a mounting social crisis, with growing unemployment and a daunting challenge to provide for new jobs and income opportunities, especially for youth.

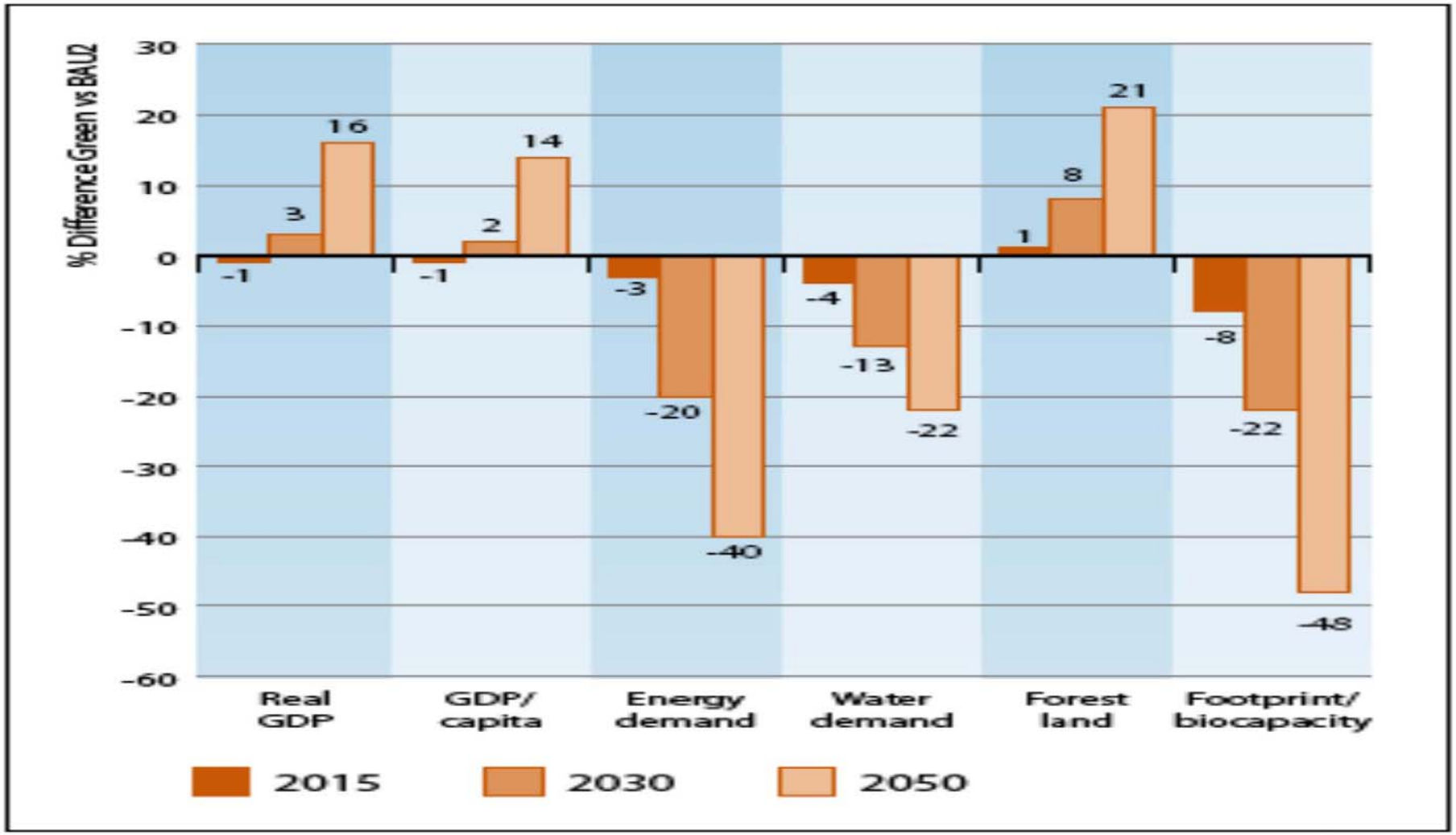
•This calls for bold action to find new pathways for creating prosperity, decent work and income within a resource-constrained world.

….. a green economy stimulates growth, exceeding BAU over time…



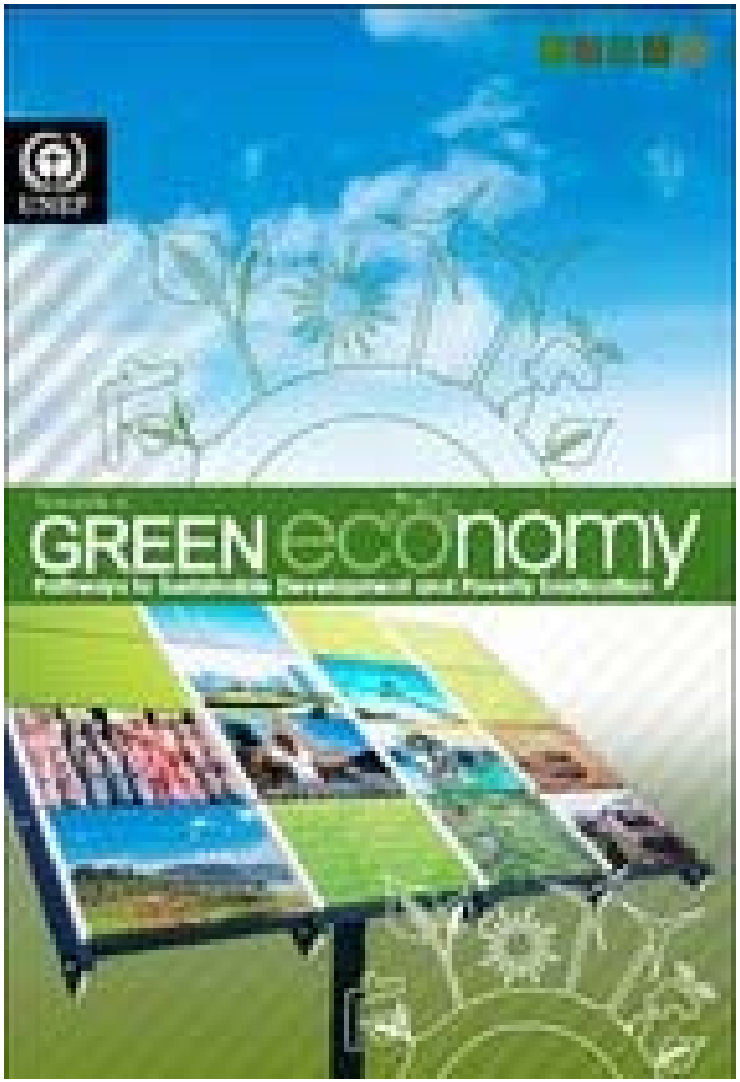
Source: UNEP 2011. Towards a Green Economy: Pathways to sustainable development and poverty eradication – A synthesis for policy makers

…while reducing ecological scarcities and environmental risks



Source: UNEP 2011. Towards a Green Economy: Pathways to sustainable development and poverty eradication – A synthesis for policy makers

Employment potentials under a Green Economy



- **Agriculture** - shifting to sustainable agriculture could increase global employment by as much as 4% by 2050
- **Forests** - forest conservation and reforestation could boost formal employment in this sector by 20% by 2050
- **Transport** - improved energy efficiency across all transport modes combined with modal shift would increase employment by about 10% above business-as-usual by 2050
- **Renewable Energy** - expansion of renewables and investments in energy efficiency could generate employment that is 20% higher than business as usual by 2050.

Employment opportunities

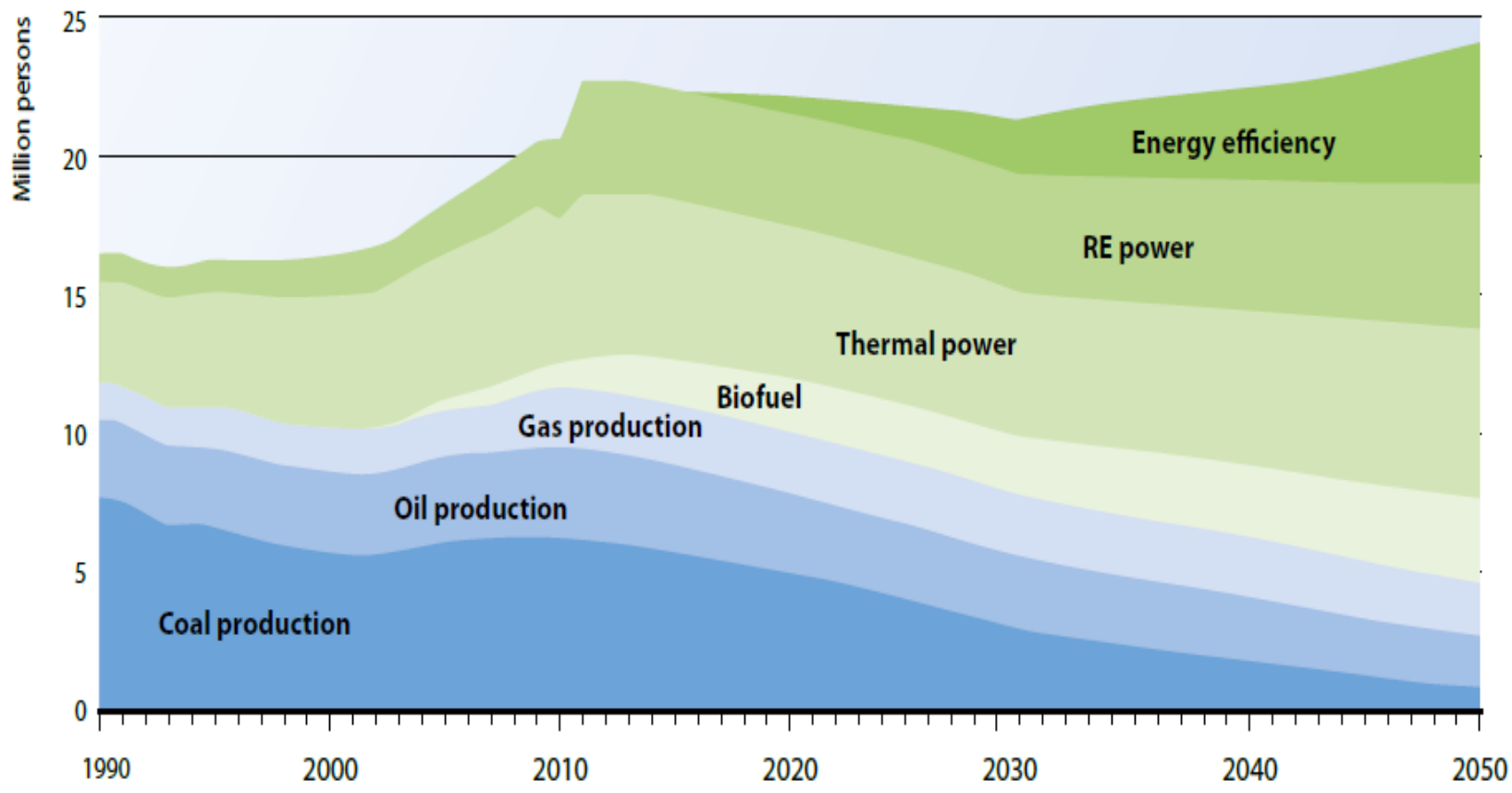


Figure 8: Total employment in the energy sector, and its disaggregation into fuel and power, and energy efficiency under the G2 scenario

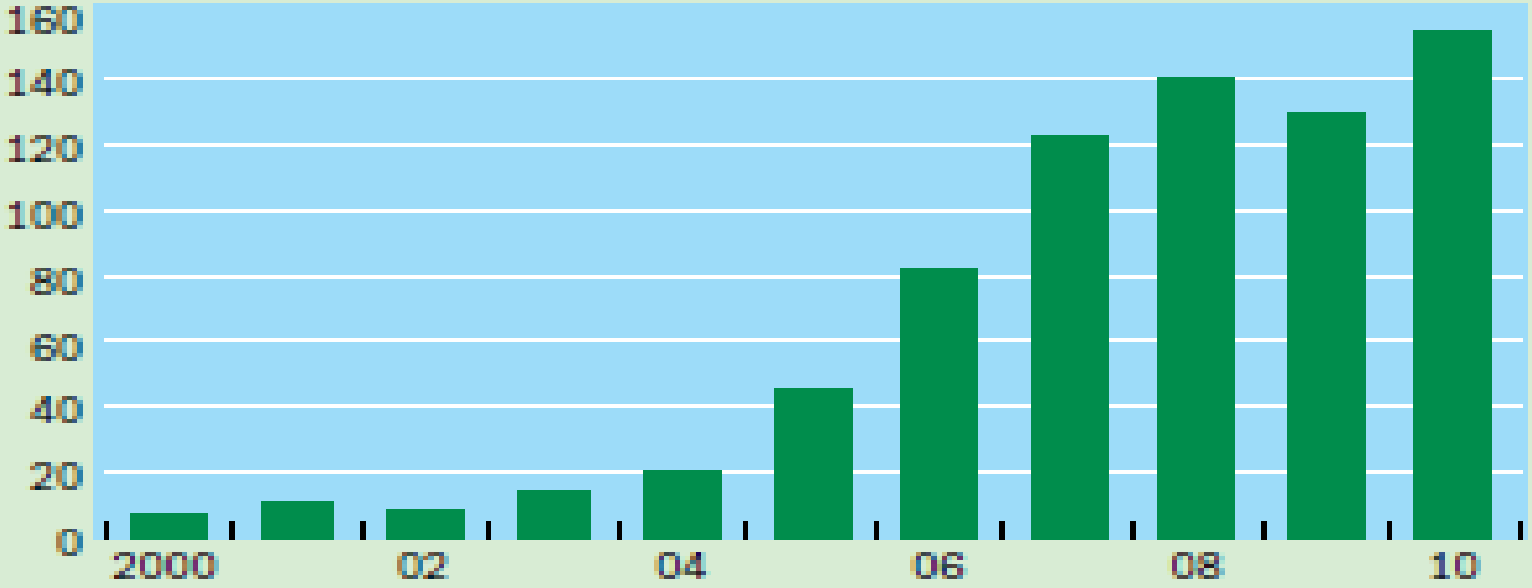
Trends in investment in renewable energy

Chart 2

Renewables rising

Global investment in renewable energy sources has been growing quickly since the early 2000s, except for a brief dip during the height of the recession.

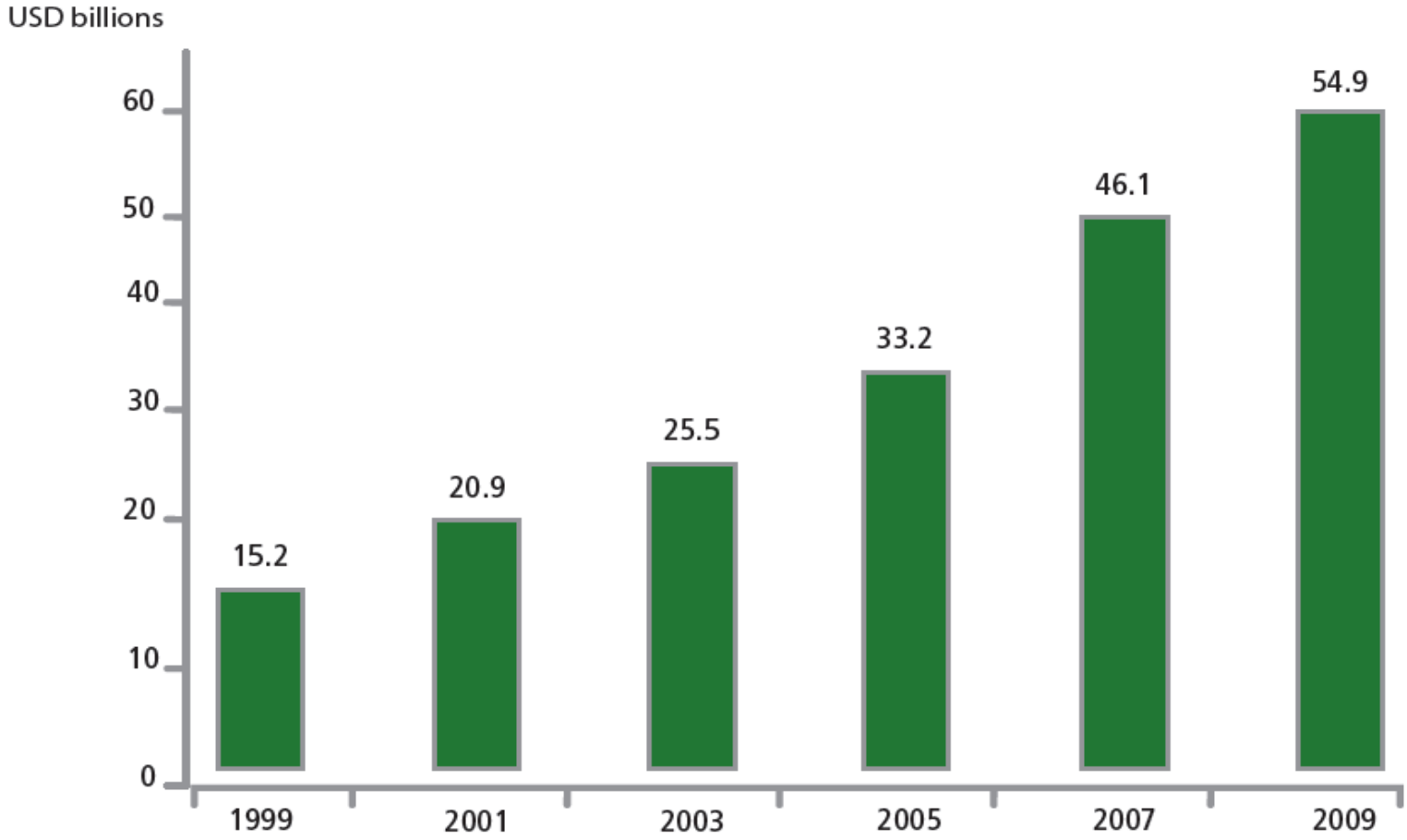
(billion dollars)



Source: Bloomberg New Energy and Finance.
Note: Renewables include solar, wind, biofuel, and biomass, but not hydropower.

The increasing opportunities for green exports

(Source: UNEP, 2012, Green Economy: Briefing Paper – Trade)



How can African Youth seize those opportunities?

Definition of Green Jobs

Green jobs are **decent jobs** in agriculture, manufacturing or service that:

- Reduce consumption of energy and raw materials
- Limit green house gas emissions
- Minimize waste and pollution
- Protect and restore ecosystems

Global unemployment and unemployment rates, youth (15–24), adult (25+) and total (15+), 2007 to 2012

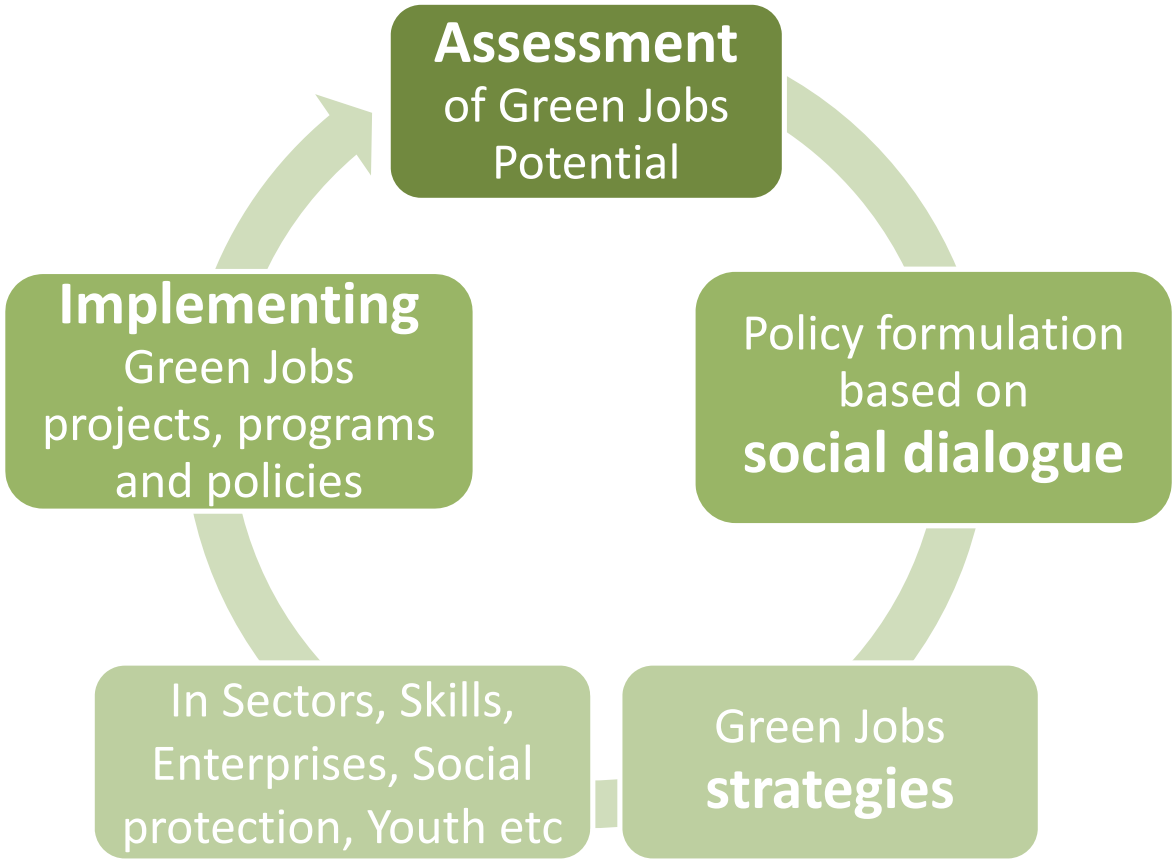
	2007	2008	2009	2010	2011	2012p
Youth	11.6	11.7	12.6	12.7	12.6	12.7
Adult	4.0	4.1	4.7	4.6	4.5	4.7
Total	5.4	5.5	6.2	6.1	6.0	6.1
Ratio	2.9	2.9	2.7	2.8	2.8	2.7

- Two Main reasons for Youth unemployment

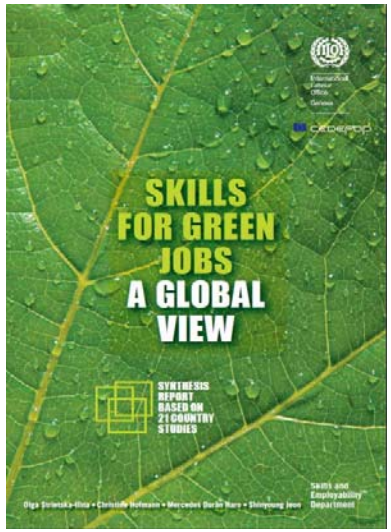
1)Lack of economic opportunities

2) Skills (technical, entrepreneurial, managerial, etc...)

Green Jobs Program Cycle



Skills for Green Jobs project



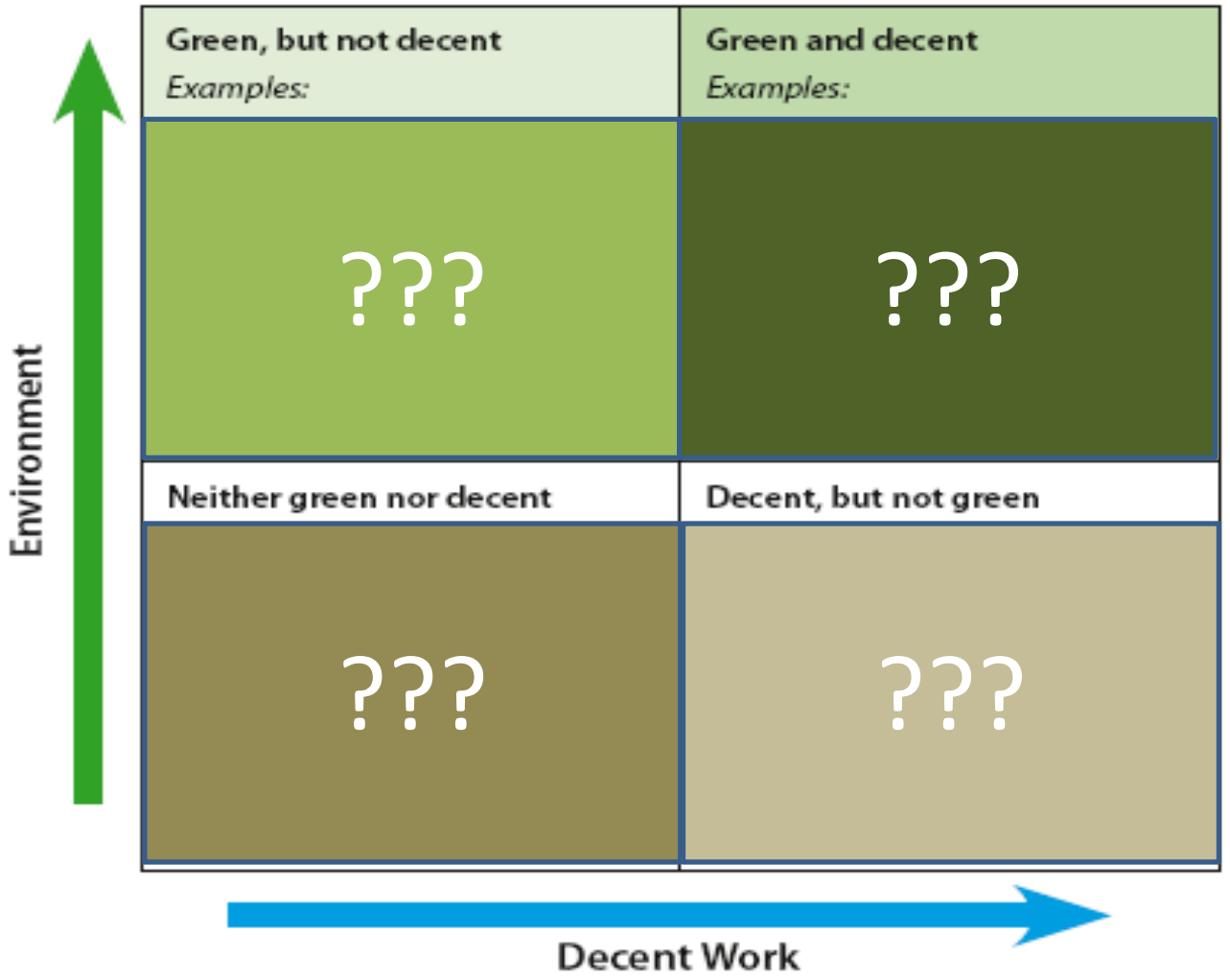
Main findings of 21 country study:

- Underestimated growth of green sectors
- General lack of scientists and engineers
- National skill structure does not meet skills demand
- Low reputation of sectors – failure to attract trainees
- Poor coordination

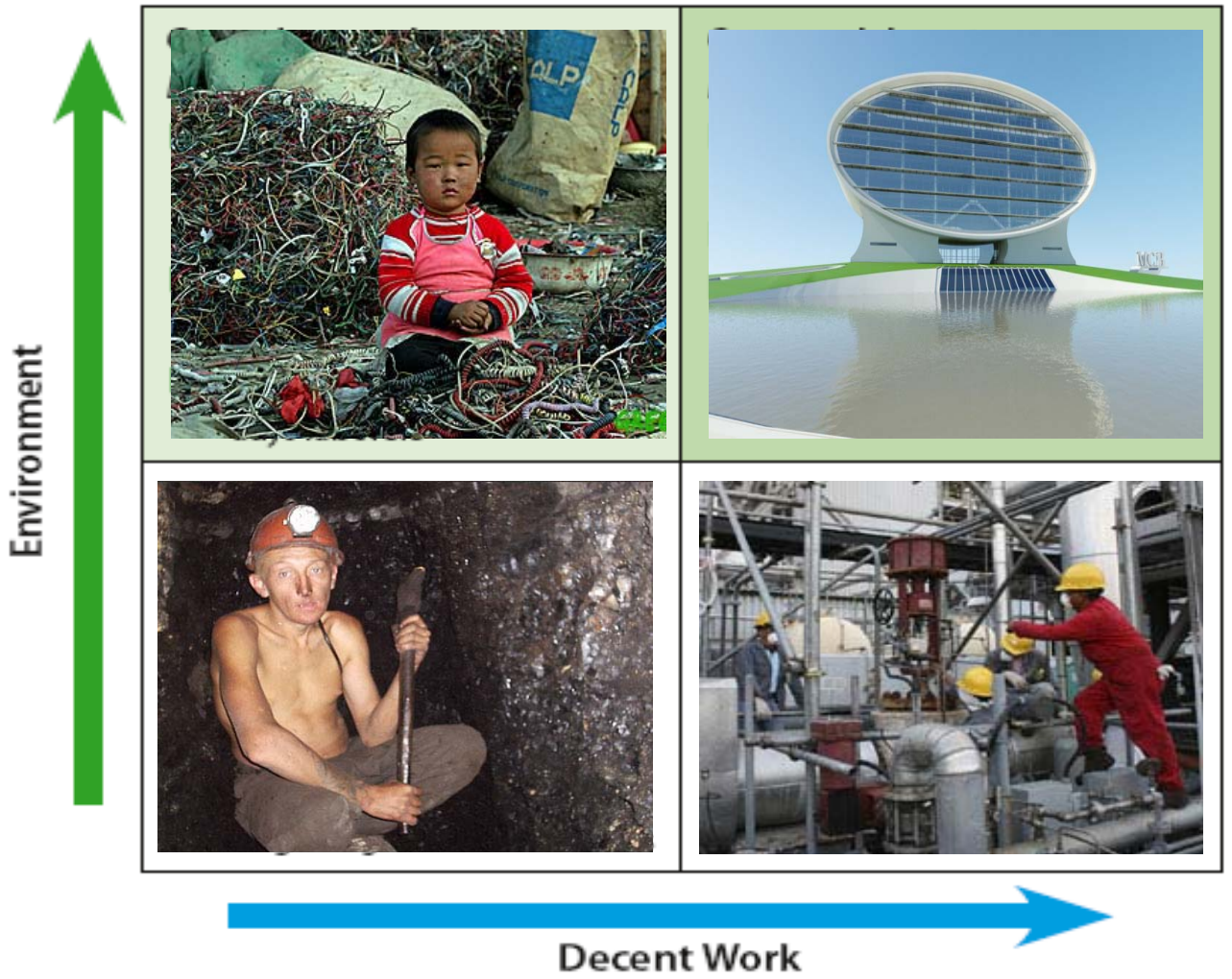
Employment Shift

New job creation	Renewable energy sector; energy performance service companies; mobility services
Elimination	Mining; packaging (materials discouraged or banned)
Substitution	Shifting from fossil fuels to RE&EE, automobiles to mass transit, waste disposal to recycling, primary metals production to secondary production
Transformation	Existing jobs greened along with changed workplace practices and methods. Supply-chain effects (steel for wind turbines)

Can you give one example of each?

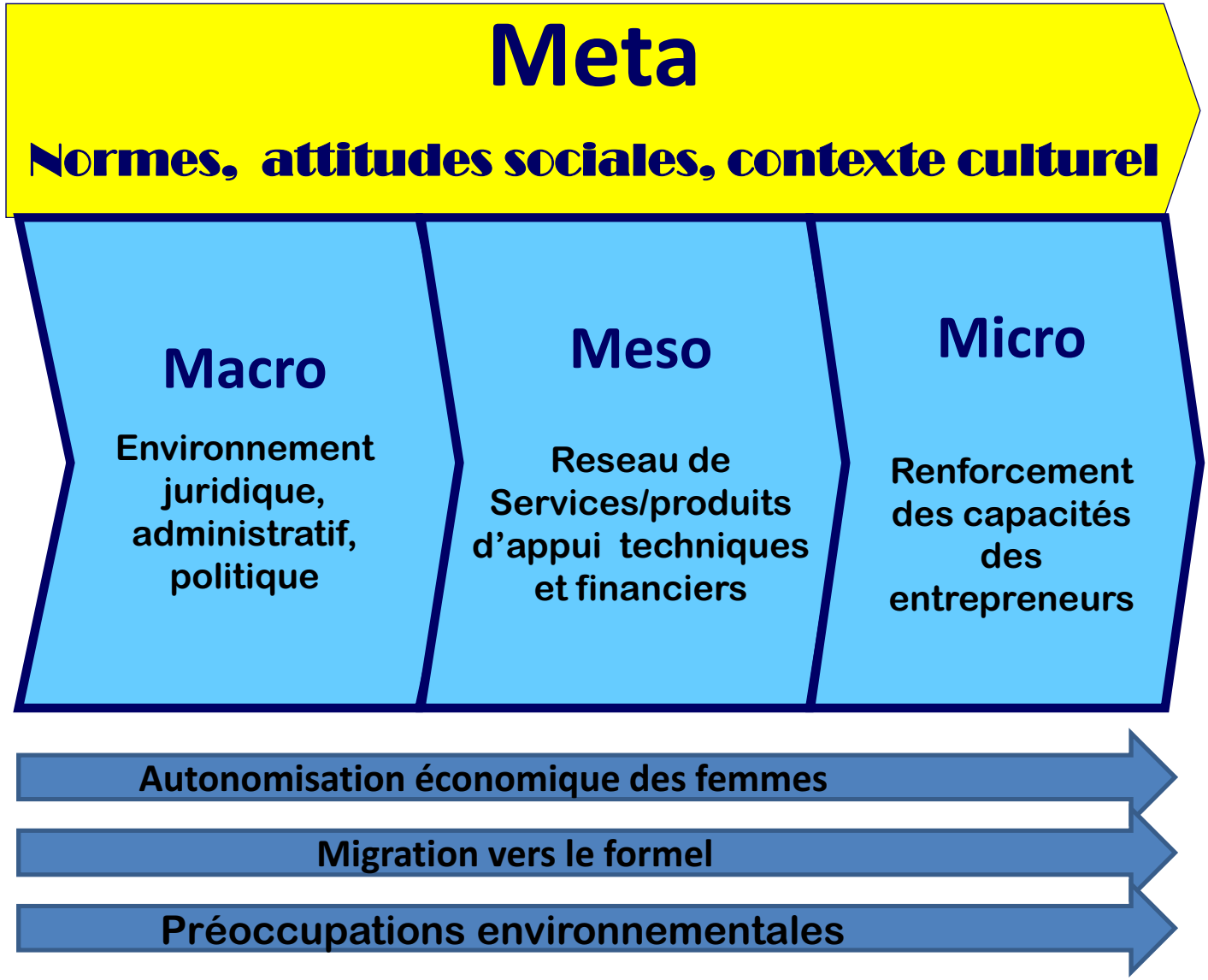


Green vs Decent: Examples

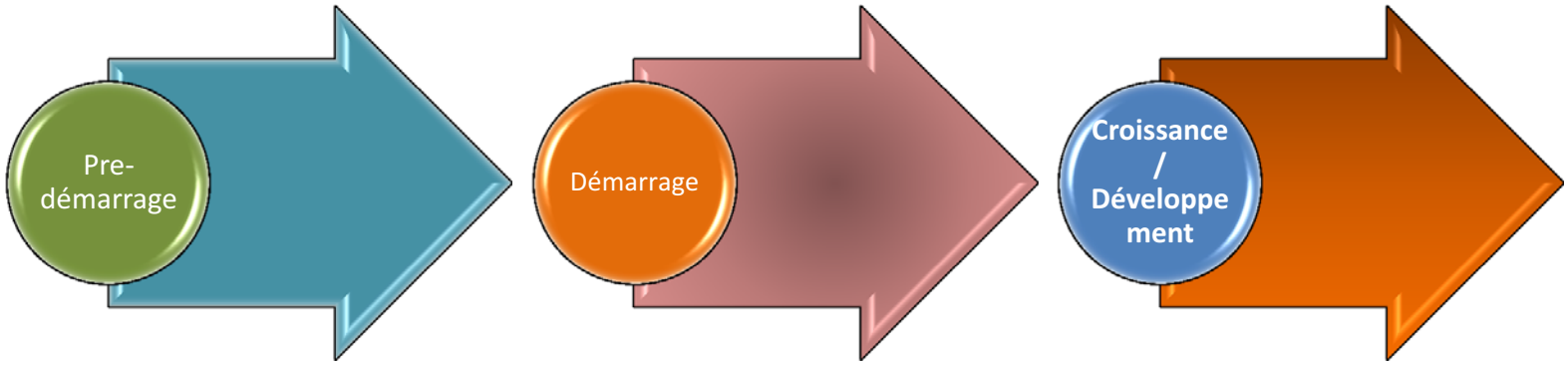


Promotion of Youth Entrepreneurship

STRATEGIE DE DEVELOPPEMENT DES ENTREPRISES



PROCESSUS ENTREPRENARIAL



Know About Business:

Promoting entrepreneurial youth through entrepreneurship education

Know
About
Business

Entrepreneurship Education
for Secondary, Vocational
and Higher Education

General Background

- In the next ten years, 1.2 billion **young** women and men will enter the working population in the world
- The unemployment rate for young persons is often two to three times higher than the national average
- **85%** of young people live in the developing countries
- Unemployed youth make up almost 50% of the world total unemployed

$\Rightarrow$ Need to better support young women and men in their school-to-work transition, especially in a time where an estimated 1% of companies are large while those with less then 10 employees constitute 90% of all businesses. Young people are thus often forced to search for jobs in the private sector and in an economy where most businesses are small.

4 specific objectives of KAB

- Develop positive **attitudes** towards enterprises and self-employment among the population, by targeting youth but also stakeholders for enterprise development.

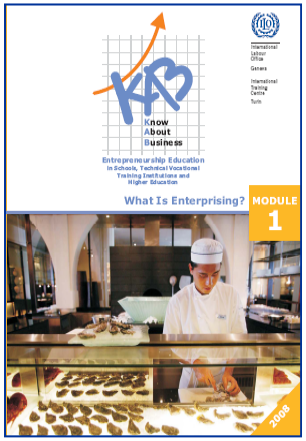
- Create **awareness** about entrepreneurship as a **career option** for young people in secondary and vocational schools and higher education.

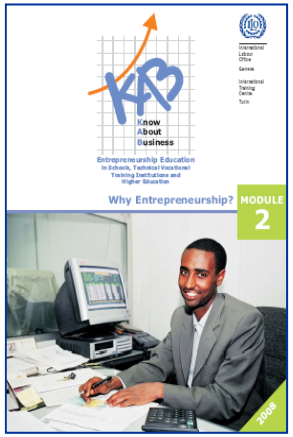
4 specific objectives of KAB

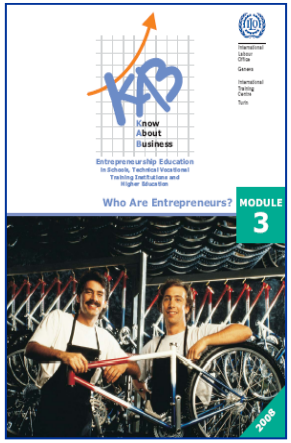
- Provide **knowledge** and **practice** of the desirable attributes for and challenges in starting and operating a successful enterprise.

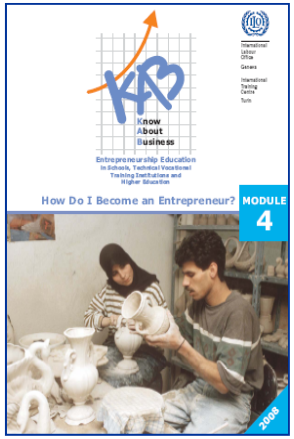
- Facilitate the *school to work* transition as a result of a better understanding of functions and operations of enterprises.

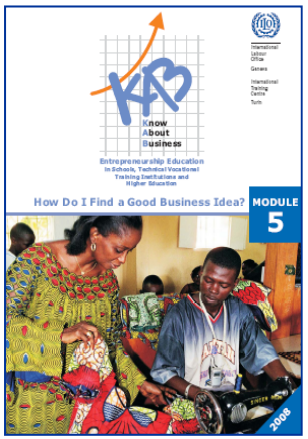
The KAB Trainer's set

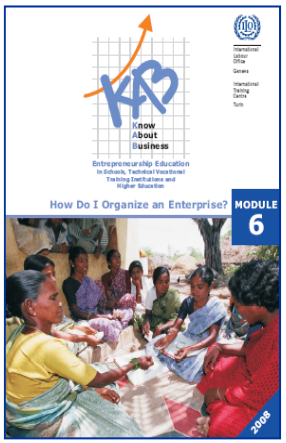


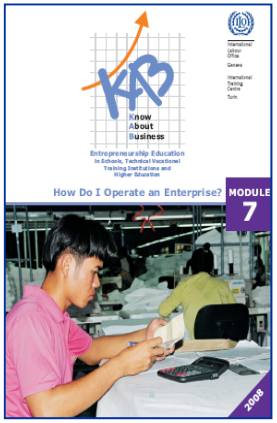


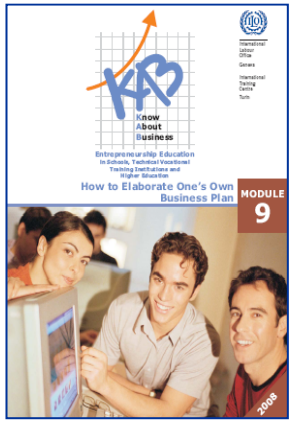


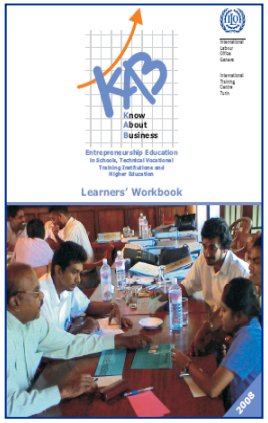




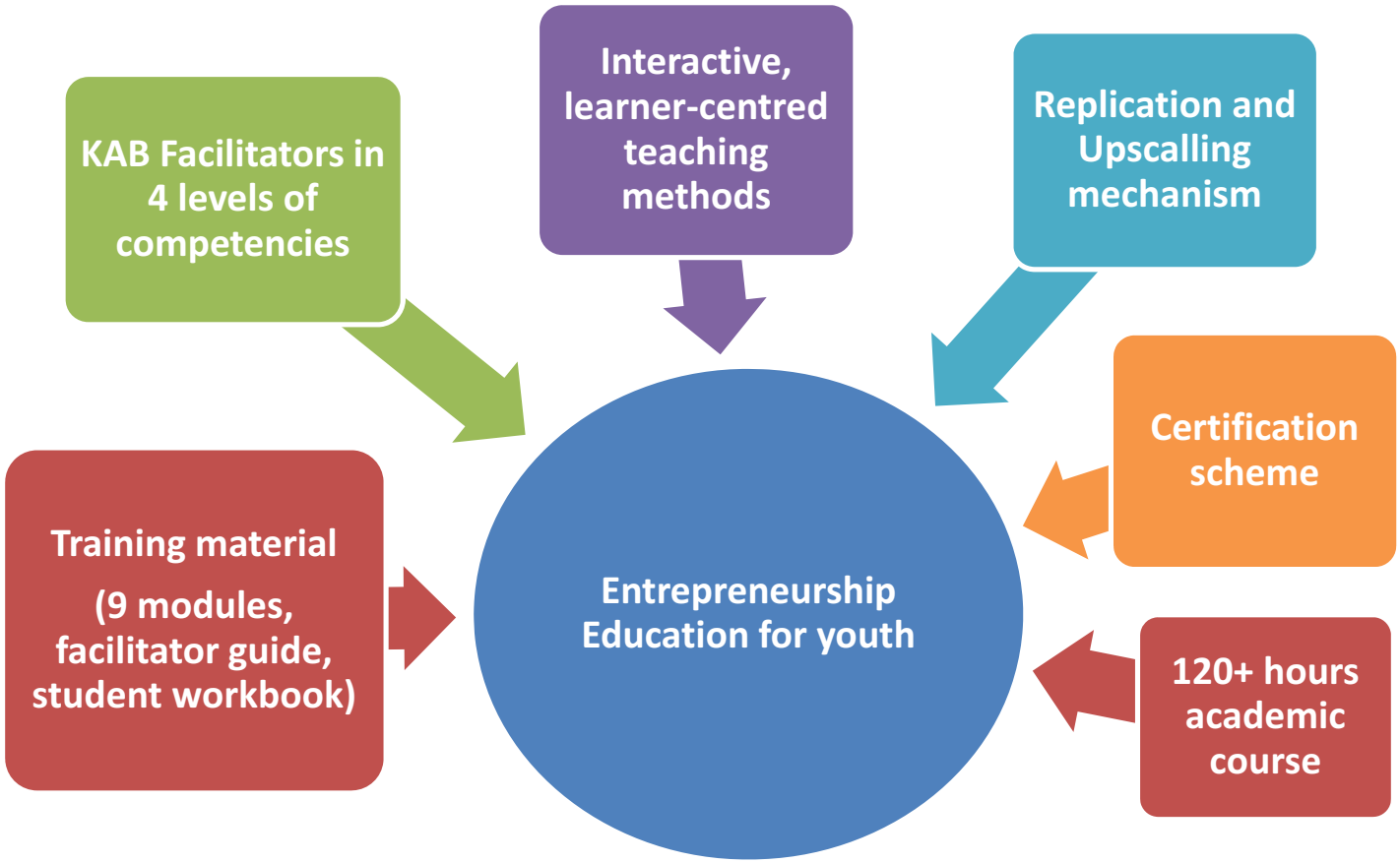








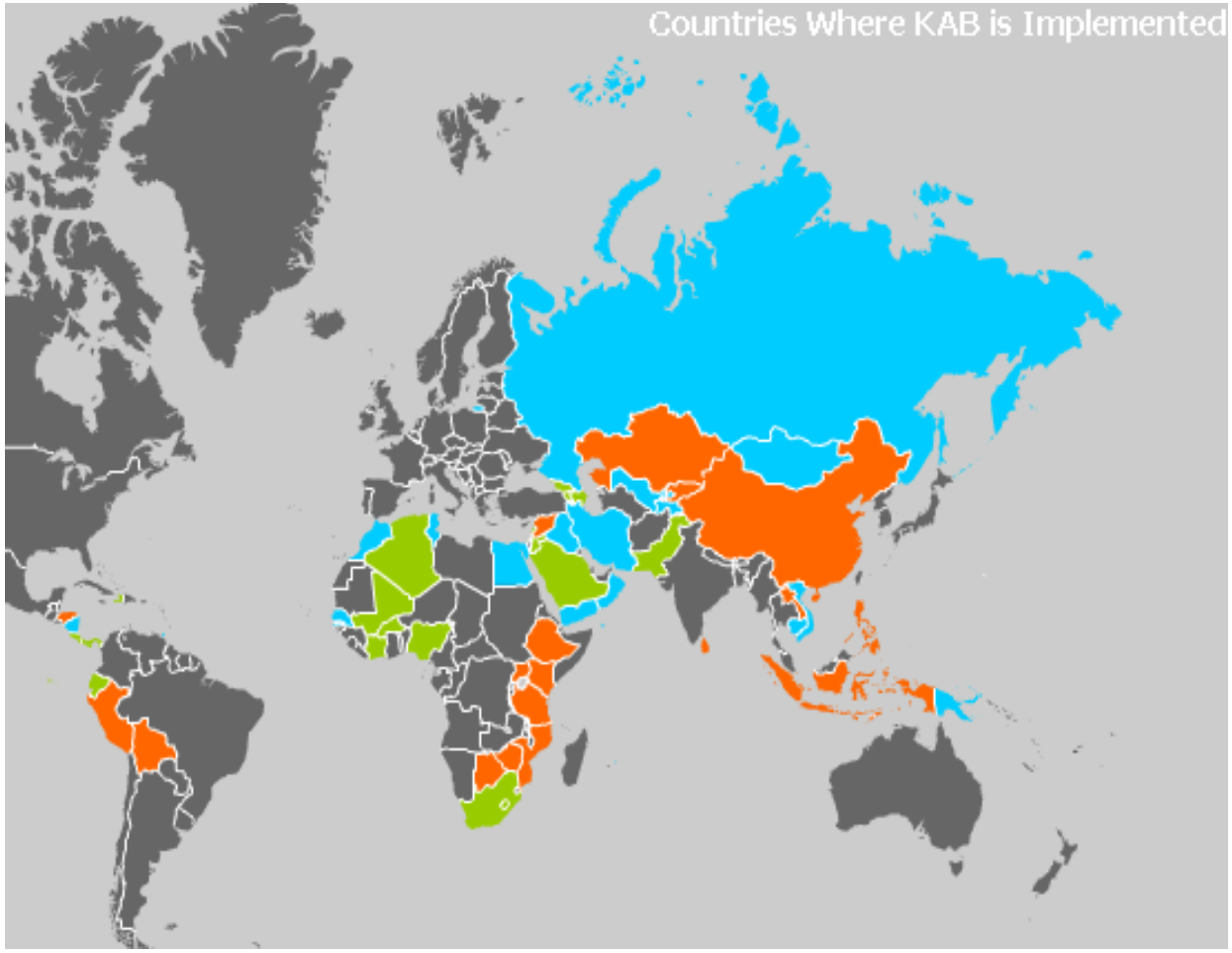
What KAB is…



What KAB is not…

- Not an enterprise training (business start-up) training tool
- It is **not** directly aimed at making young people start business, but at generally stimulating positive attitude towards entrepreneurship

KAB global implementation: 56 countries



- 1st level: information workshops for national partners, preparation of the school pilot test
- 2nd level: implementation of the school pilot test
- 3rd level: integration of KAB in the national curriculum and replication

Addressing the needs of developing countries

Important points of differentiation:

- The structure of the economy
- The environmental priorities
- The impact of regulations and policies
- The focus on job quality
- The quality of information systems and relative balance of the formal and informal economy

Policy conclusions

- Green jobs are a reality
- Play a key role in enabling a green economy: technically and politically
- More and better jobs than ‘business as usual’
- Social inclusion: potential to benefit excluded and vulnerable groups
- Need for just transitions

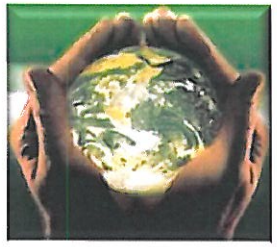
Recommendations for policy

Win – win not by default, but by design

Policies that work:

1. **Map** employment/income opportunities and risks
2. **Coherent policies**
3. **Target:** SMEs + disadvantaged groups
4. Engage stakeholders in **social dialogue**

Merci !



Como os recursos minerais podem contribuir para o desenvolvimento sustentável

Diamantino Pedro Azevedo

Luanda, Março de 2013

Objectivos

Partilhar idéias sobre a importância dos recursos minerais, os desafios, as estratégias e a visão africana de mineração para o desenvolvimento sócioeconómico sustentável de África.

Sumário

- **Introdução:**Recursos minerais e a sociedade idéias opostas sobre a mineração.
- **Desenvolvimento**: Mineração como factor importante para o desenvolvimento sustentável de África, desafios, estratégias e a visão africana de mineração.
- **Conclusão**
- **Bibliografia**

INTRODUÇÃO

Recursos minerais e a sociedade

- História da humanidade confunde-se com a história da descoberta dos recursos minerais;

- Recursos minerais estão na base do desenvolvimento e do progresso da humanidade, contribuindo para a satisfação das necessidades de habitação, educação, saúde, transportes, telecomunicações, etc.;

- Não é coerente abordar a questão da melhoria da qualidade de vida, do combate a pobreza e do desenvolvimento sócioeconómico, sem ter em conta também o uso sustentável dos recursos minerias.

Duas idéias opostas sobre a mineração

Mineração é uma má opção

- Maldição dos recursos minerais;
- Dutch Disease;
- "Rent-seeking", em vez de "rent creation";
- Capital intensivo;
- Enclave;
- Preços volatéis (incerteza nas receitas);
- Corrupção;
- Conflictos;
- Impactes ambientais e sociais negativos, etc.

Duas idéias opostas sobre a mineração

Mineração não é uma má opção:

- Não existe nada intrínsico à mineração que a impede de ser motor do desenvolvimento sócioeconómico;
- Estatísticas não são conclusivas para permitir generalizações;
- Desempenho económico diferenciado;
- Capital natural importante;
- Exclusão da mineração: o crescimento económico de muitos países poderá ser afectado;
- O outro campo não apresenta alternativas à mineração!

Constatações sobre a mineração

- Mineração gera efeitos macroeconómicos positivos e induz o crescimento através de:

  - ✓ Receitas fiscais (Impostos, taxas, emolumentos);
  - ✓ Divisas;
  - ✓ Oportunidades para o desenvolvimento de PME;
  - ✓ Oportunidades a montante e a jusante (clusters minerais);
  - ✓ Criação de empregos;
  - ✓ Desenvolvimento tecnológico e obtenção de experiência profissional;
  - ✓ Criação de Infraestruturas.

DESENVOLVIMENTO

Mineração como factor importante para o desenvolvimento sustentável de África

- África possui os recursos minerais;
- Competição crescente pelos recursos minerais (China e India);
- Maior crescimento e menos riscos para os investidores em África;
- África terá cerca de 2 mil milhões de pessoas em 2050;
- Grandes empresas de mineração estão prontas para negociar.

Desafios da mineração para os países

- Legado histórico (enclave);
- A irreversibilidade dos recursos minerais;
- A criação da riqueza mineral;
- O desafio do investimento;
- O desafio da distribuição da riqueza mineral;
- Os desafios macroeconómicos;
- Os desafios institucionais.

Resposta de África aos desafios da mineração no continente:

A
Visão Africana de Mineração

O que é a visão africana de mineração?

- Meta: exploração transparente, equitativa e optimal dos recursos minerais para fomento de uma base alargada para o crescimento e desenvolvimento socioeconómico sustentável;

- Ela no essencial procura usar os recursos minerais de África para transformar a trajectória do desenvolvimento económico e social do continente;

O processo da visão africana de mineração

- Adoptada pelos Chefes de Estado em Fevereiro de 2009.
- Tornou-se no marco para o desenvolvimento do sector mineiro africano e está a ser usado por vários países na reforma das suas políticas, estratégias e legislação;
- Reconhecida internacionalmente;
- Em 2012 foi aprovado o instrumento para a sua implementação.

Princípios da visão africana de mineração

- Indústria competitiva e diversificada com conexão económica alargada;
- Sector transparente e responsável, rendas optimizadas usadas para o desenvolvimento económico e social;
- Participação das comunidades e cidadãos;
- Equidade na distribuição dos benefícios;
- Mineração artesanal e as comunidades rurais;
- Integração na economia rural e nacional;
- Responsabilidade ambiental e social;
- Criar capacidade humana e institucional;
- Economia do conhecimento em todos os níveis da cadeia de valor mineral.

Estratégia da visão africana de mineração

- Estabelecer “win-win” situações para potenciar o sector mineiro e o futuro após mineração;
- Melhorar o conhecimento geológico e a qualidade dos dados;
- Melhorar a legislação e os regimes fiscais;
- Implementar sistemas de licenciamento inovativos;
- Melhorar a capacidade institucional (negociação de contratos);
- Capacitar e desenvolver as empresas africanas (estatais, privadas e mistas);
- Implementar os clusters minerais;
- Resolver os problemas infraestruturais.

Ameaças a visão africana

- Contínua falta de capacidade para competir com os demias “players”;
- Unidade para implementar a visão;
- Relevância do curto prazo sobre o longo prazo;
- Percepção da vantagem comparativa de África, o novo mundo e as oportunidades que ele oferece e como maximizar o poder de negociação do continente para maximização dos beneficios.

CONCLUINDO

CONCLUSÃO

- Existem estudos e opiniões divergentes sobre a vantagem/desvantagem dos recursos minerais para um determinado país;
- Existem efectivamente países com enorme potencial mineiro e desenvolvimento sócioeconómico pouco significante;
- Também existem exemplos contrários, pelo que não será errado, afirmar, que os recursos minerais, representam uma riqueza potencial, que quando bem gerida pode contribuir de forma positiva para um desenvolvimento sustentável mais acelerado das nações (Canadá, Austrália).

CONCLUSÃO

- Transformação na organização, gestão estratégica e financeira, investimentos em educação, investigação e desenvolvimento, formação do capital humano, infraestruturas, são aspectos chaves para que os recursos minerais sejam um factor de desenvolvimento sustentável de África.
- A Visão africana para a mineração (AMV) é um óptimo instrumento para este efeito.
- Angola, tem dado passos concretos para uma utilização sustentável dos seus recursos minerais (código mineiro, Planageo, SMC,PMSKK, mineração artesanal).

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OBRIGADO !

Balancing development and protection of the Okavango River system

Eben Chonguiça
Executive Secretary
Okavango River Basin Water Commission (OKACOM)

PAN-AFRICAN FORUM: Sources and Resources for Culture of Peace
Luanda/Angola March 26 – 28, 2013

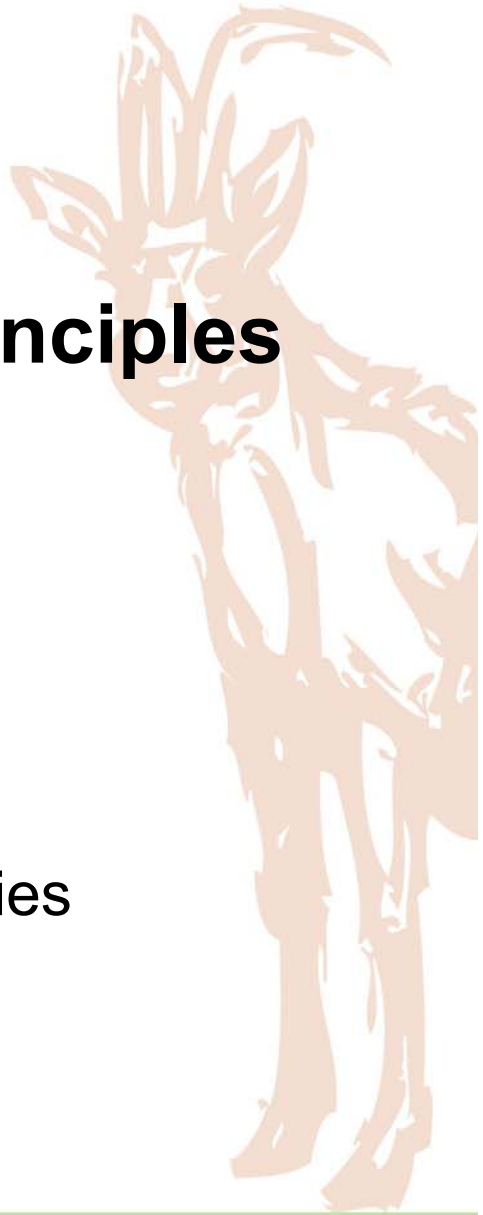
Okavango River Basin

Background

- **Motivation**
  - Need to maintain the tradition of good neighbourliness & cooperation
  - Emerging socio-economic development
  - Importance and relative paucity of water - need for sound transboundary mgt of OKAVANGO basin resources for the benefits to its people (Vision)
- **Process**
  - Guided by international laws & regional protocols
  - Reasonable and equitable sharing of beneficial uses - Helsinki Rules (1966) /article iv
  - Equitable and optimal utilisation – SADC Protocol on Shared Water Course Systems
- **Tri-country agreement, between Angola, Botswana & Nambia**
  - To establish The Permanent Okavango River Basin Water Commission (1994)
  - A collaborative body known as OKACOM to drive the operationalization of the vision

Why?

- **To practically embrace the principles of:**
  - Trans-national connectivity of:
    - Natural systems
    - Socio-cultural realities and
    - Economic dynamics
  - They do not recognize political boundaries



OKACOM

Operational Objectives

- ***Determine*** the long-term safe yield of water availabe from the river
- ***Estimate*** reasonable demand from consumers
- ***Prepare*** criteria for conservation, equitable allocation and sustainable utilisation of water
- ***Conduct*** investigations related to development of water resources through infrastructure investment
- ***Recommend*** pollution control measures
- ***Develop*** measures for the alleviation of short-term difficulties, such as temporary droughts

Organisational Structure

Commission (OKACOM)

- Development of policy and general strategic direction
- *Consisting of three delegations representing the member states*
- *Senior officials from government ministries related to water and natural resources management*

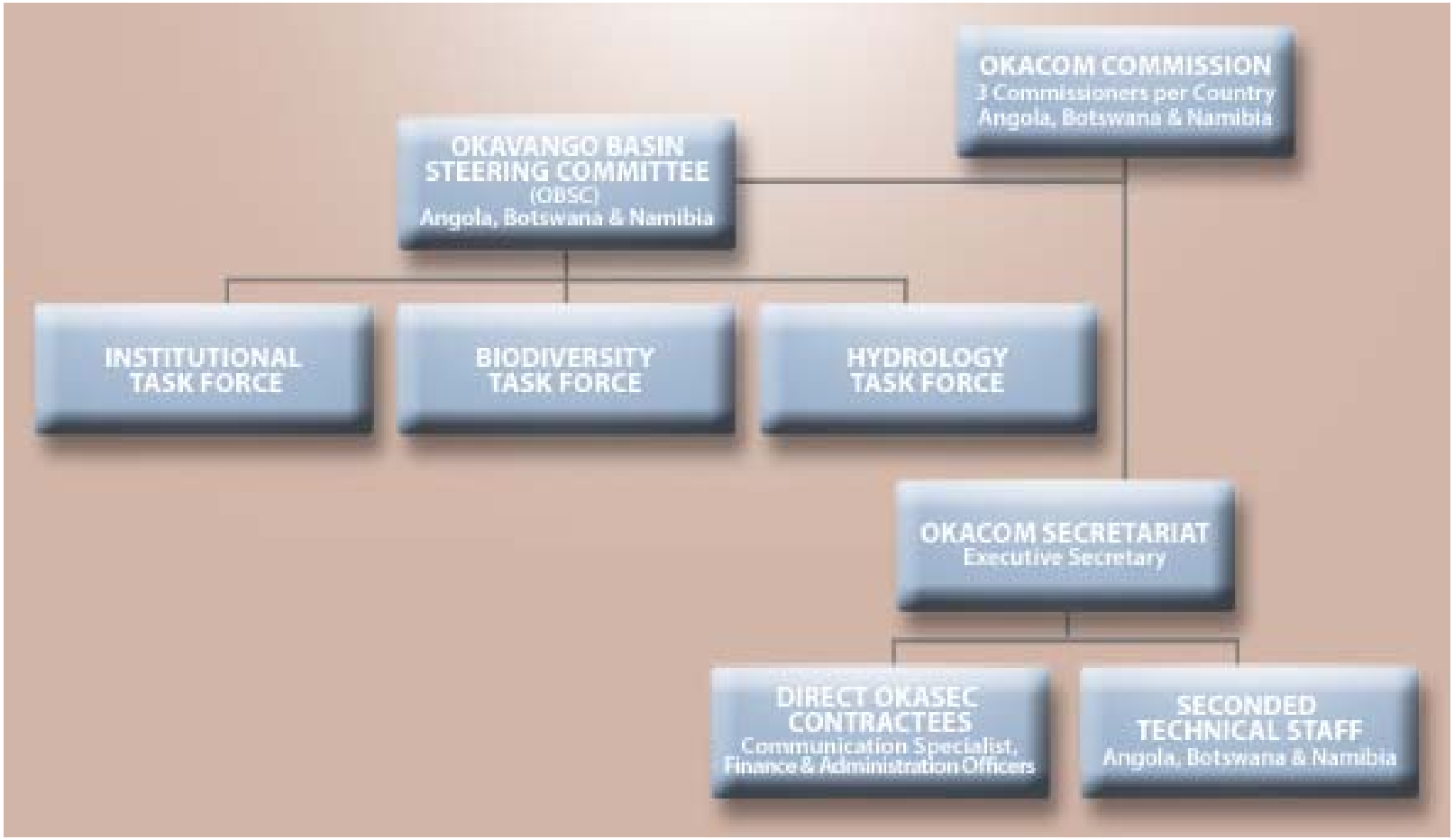
Okavango Basin Steering Committee (OBSC)

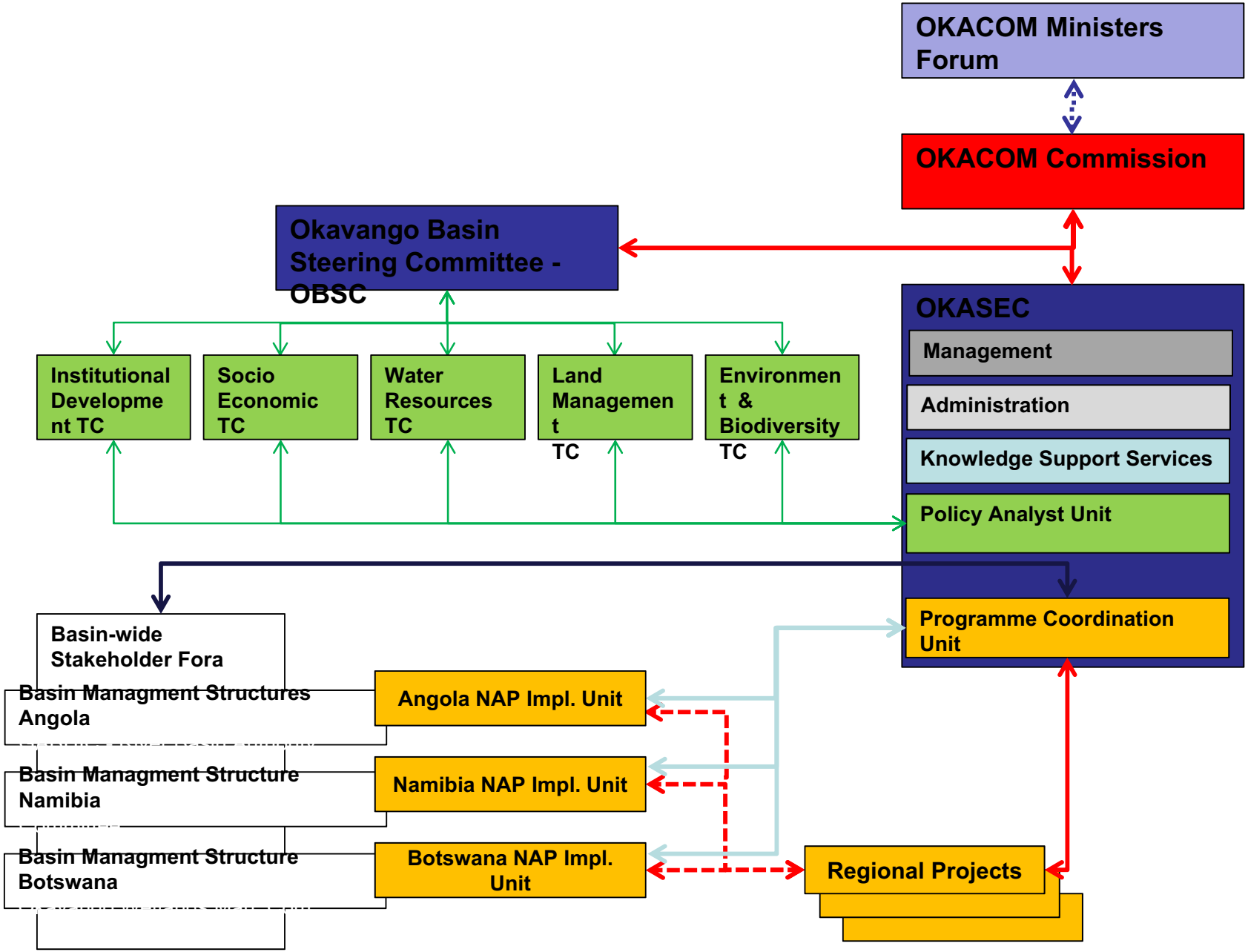
- Provide technical advice to the commission
- *Drawn from key technical staff from respective member states and (consultants)*
- *Task forces*
  - *Institutional*
  - *Hydrology*
  - *Biodiversity*

OKACOM Secretariat (OKASEC)

- Provider of adminsitrative, financial and coordinative services to OKACOM

Organizational Structure




OKACOM Ministers Forum
OKACOM Commission
Okavango Basin Steering Committee - OBSC
OKASEC
Management
Administration
Knowledge Support Services
Policy Analyst Unit
Programme Coordination Unit
Institutional Developme nt TC
Socio Economic TC
Water Resources TC
Land Managemen t TC
Environmen t & Biodiversity TC
Basin-wide Stakeholder Fora
Basin Managment Structures Angola
Basin Managment Structure Namibia
Basin Managment Structure Botswana
Angola NAP Impl. Unit
Namibia NAP Impl. Unit
Botswana NAP Impl. Unit
Regional Projects

The basin's people are mostly poor, rural and scattered with a high dependence on the river

The countries wish to develop the river in a way that benefits the people whilst protecting its unique natural attributes

What has been done?

- The Transboundary Diagnostic Analysis (TDA) of the Okavango river basin

Transboundary Diagnostic Analysis (TDA)

The very first **OKACOM commissioned** project

- ***Why?***
  - Objective understanding of status of basin resources
- Issues and trends
  - TDA was a scientific **joint fact finding study** identifying key challenges facing the ORB,
- ***For what?***
  - To assist framing of issue-responsive programmatic interventions to address challenges identified by TDA – Strategic Action Programme (SAP

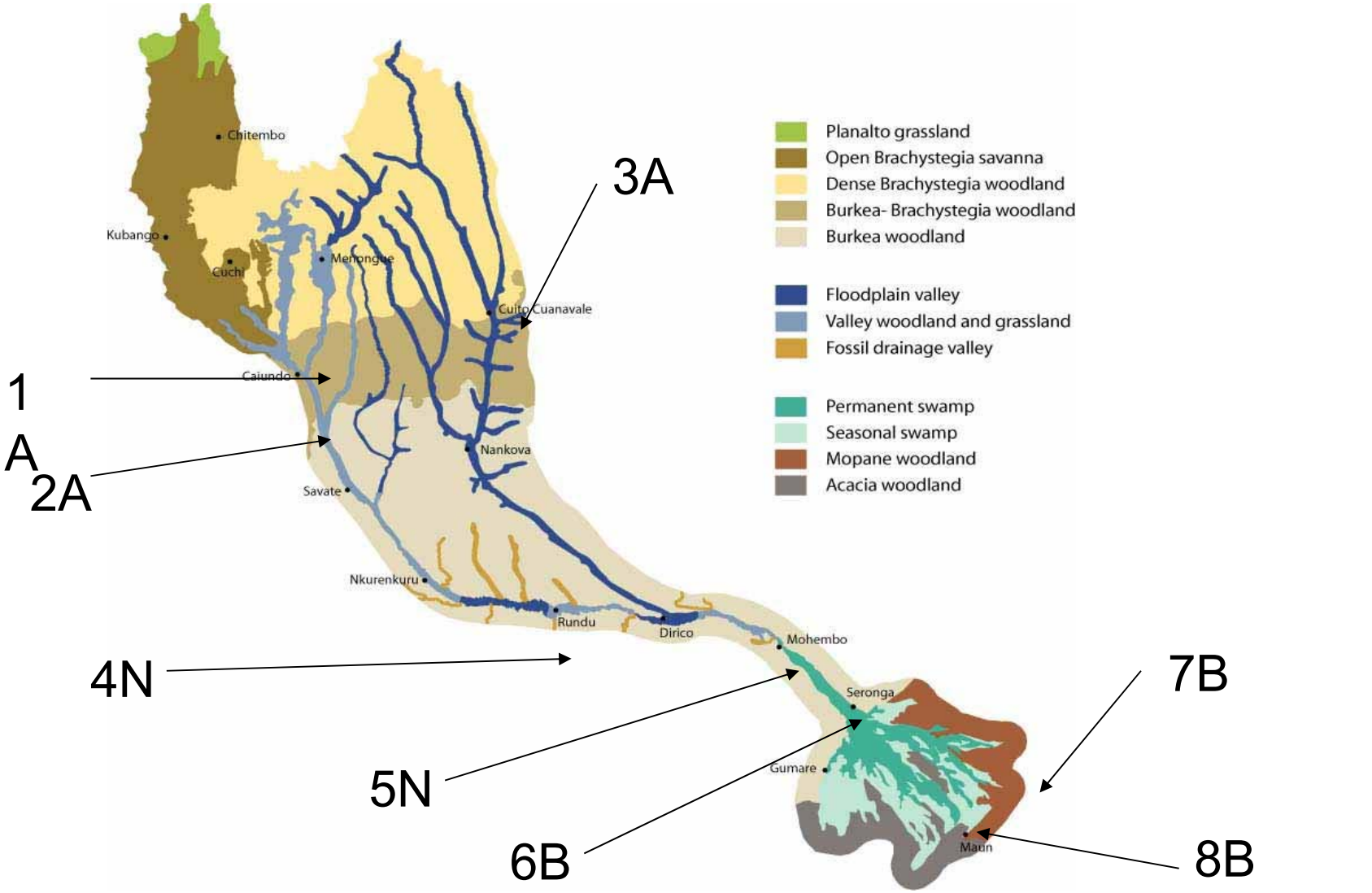
The Process : Transboundary Diagnostic Analysis

- Multi-disciplinary and trans-country **teams :**

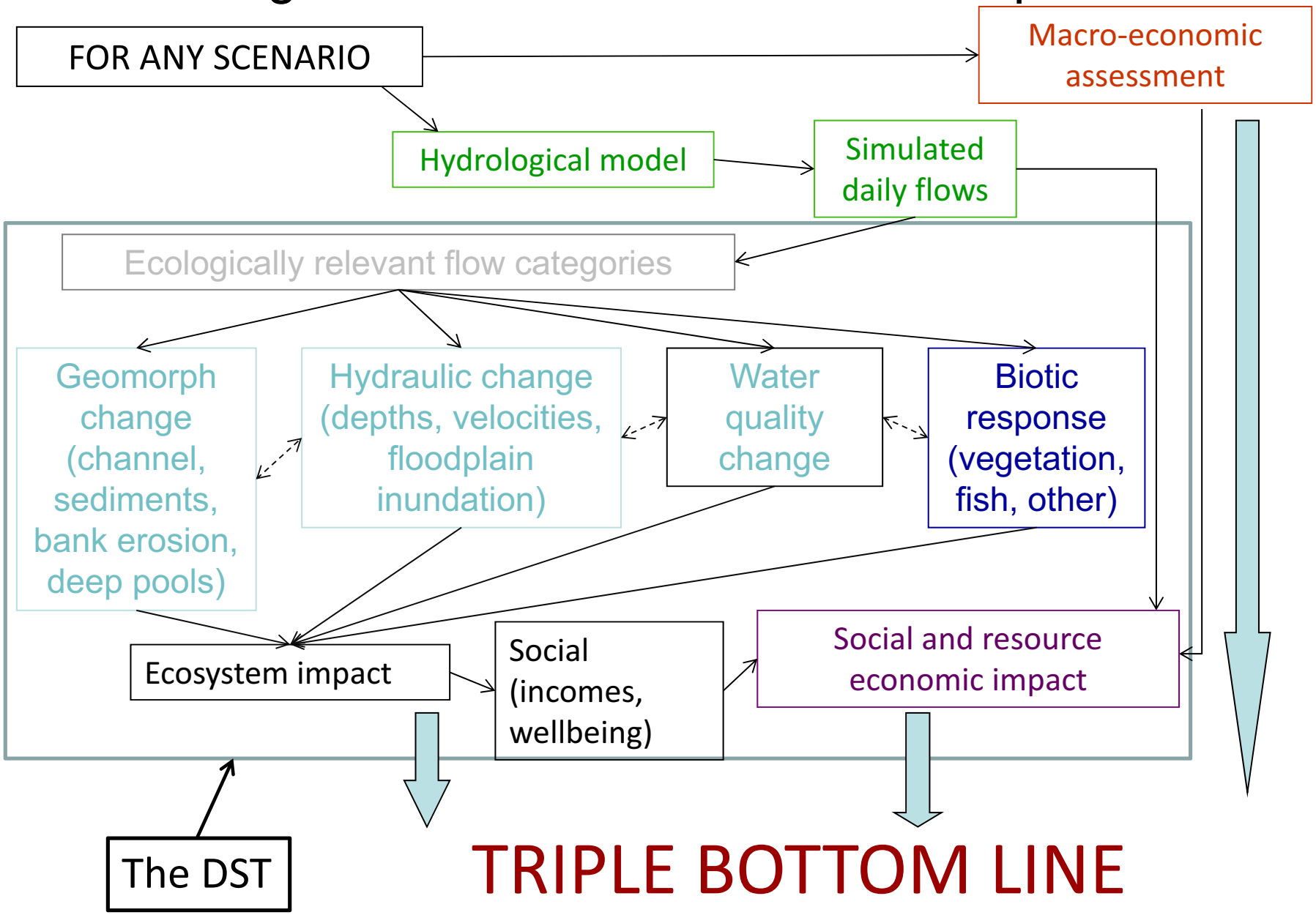
  Angola, Botswana, Namibia

- Assisted by regional and international **experts**
- **Consultation** with local communities and

  institutions


Chitembo
Kubango
Cuchi
Menongue
Cuito Cuanavale
Caiundo
Nankova
Savate
Nkurenkuru
Rundu
Dirico
Mohembo
Seronga
Gumare
Maun
Planalto grassland
Open Brachystegia savanna
Dense Brachystegia woodland
Burkea- Brachystegia woodland
Burkea woodland
Floodplain valley
Valley woodland and grassland
Fossil drainage valley
Permanent swamp
Seasonal swamp
Mopane woodland
Acacia woodland
3A
1
A
2A
4N
5N
6B
7B
8B

The Integrated Basin Flow Assessment process



The Okavango River system drains three countries

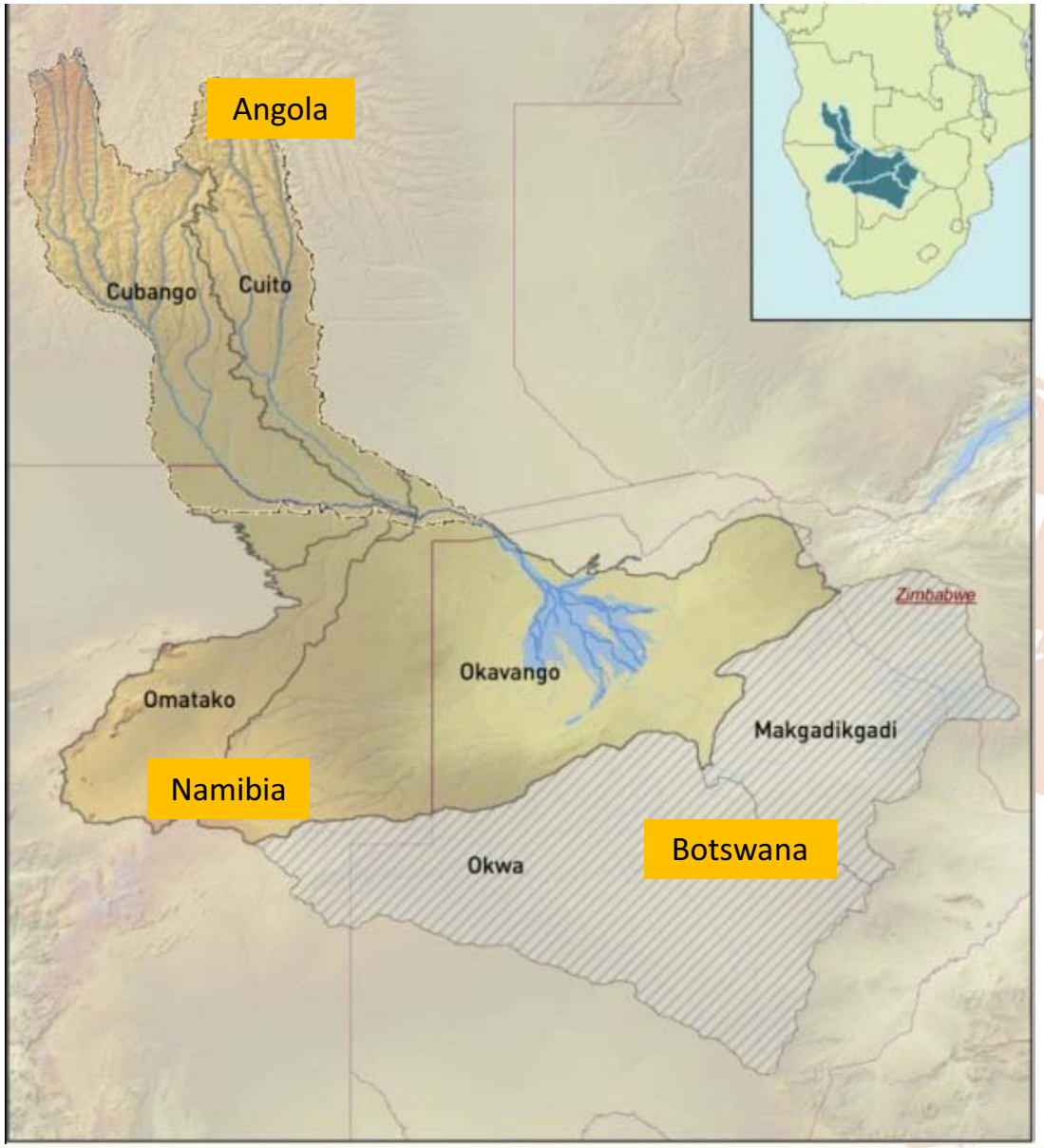
1,900 km long

Virtually pristine

Huge floodplains along much of the system

Drains into the globally iconic Okavango Delta in Botswana

Almost all flow into the Delta originates in the Cubango and Cuito headwaters in Angola



The Okavango Delta is the largest wetland in southern Africa

It is one of the world's largest Ramsar sites

It supports one of the world's largest concentrations of free-roaming large mammals

OKACOM

The Permanent Okavango River Basin Water Commission

Comissão Permanente das Águas da Bacia Hidrográfica do Rio Okavango

The plan

A situation assessment of the basin: *its people, natural environment, national and basin economies, governance, areas of concern*

An Integrated Flow Assessment: *predicting the ecological, social and economic consequences of three water-use development scenarios (Low, Medium, High)*

Three years of stakeholder consultations: *Government departments, academic and scientific institutions, civil society, private sector, community representatives*

Basin-wide, integrated, long-term planning and management framework: *livelihoods and economy; water resources management; land management; environment and diversity*

In all, more than 70 studies

Seek funding and initiate interventions: 2012 onwards

Transboundary Diagnostic Analysis (TDA): 2008-2010

Strategic Action Programme (SAP): 2010-2011

The team

Programme management and guidance:
OKACOM, Okavango Basin Steering Committee, FAO

Funders: *GEF, UNDP, basin governments*

A full multidisciplinary team in each country: *hydrology, hydraulics, geomorphology, geohydrology, water quality, vegetation, aquatic invertebrates, fish, birds, river-dependent mammals, resource economics and socio-cultural issues, irrigation*

International: *Process Management Team, basin economist, governance lawyer*

Angola

Namibia

Botswana

The scenarios

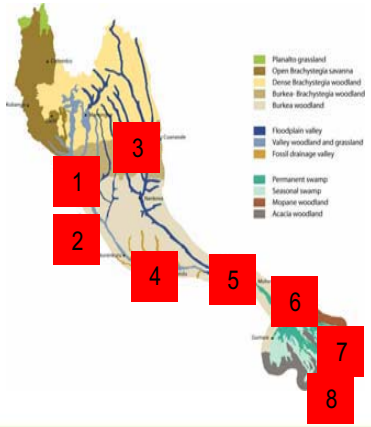
1. Low water use : 5-7 year national plans

2. Medium water use : 10-15 year planning horizon

3. High water use : all possible/considered developments, to complete the picture of how much development the system could absorb without catastrophic change

4. Climate change : (superimposed on Low and Medium scenarios)

Focused on eight sites along the river



October 2008: field trips began to understand the relationships between flow and chosen indicators

70 biophysical indicators used to describe the ecosystem

Vegetation community: river dry bank

Lower floodplain grazers

Extent of inundated floodplain

Nine socioeconomic indicators used to describe how people use the river ecosystem

Floodplain crops

Fishing

Tourism

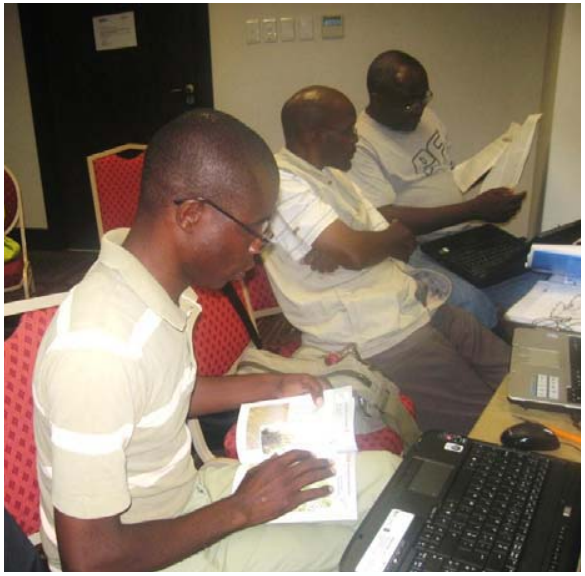
OKACOM

The Permanent Okavango River Basin Water Commission

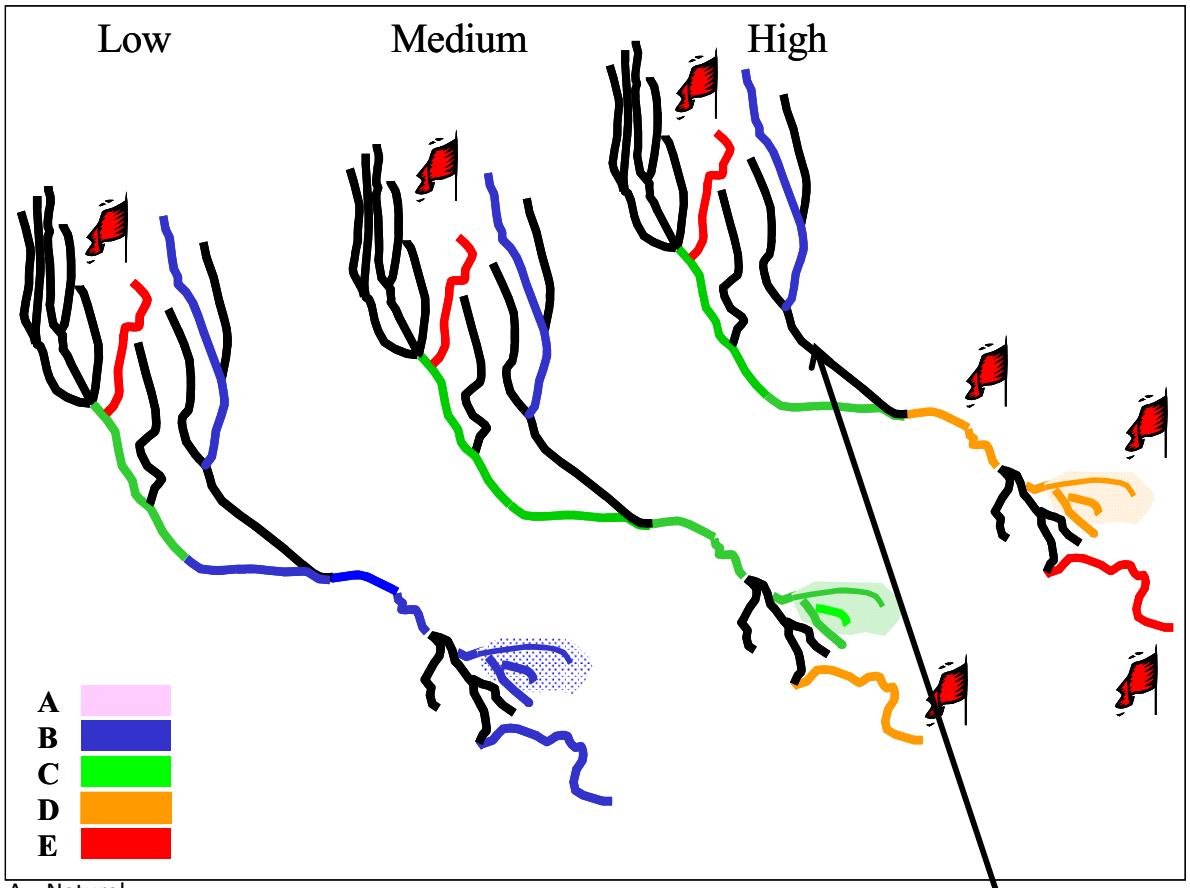
Comissão Permanente das Águas da Bacia Hidrográfica do Rio Okavango

April 2009: Knowledge Capture Workshop

About 1000 response curves drawn of relationships between indicators and flow, and captured in a custom-built Decision Support System (DRIFT)



Response curves and flow stats brought together in the DSS: summary of predicted changes in ecosystem condition with flow change



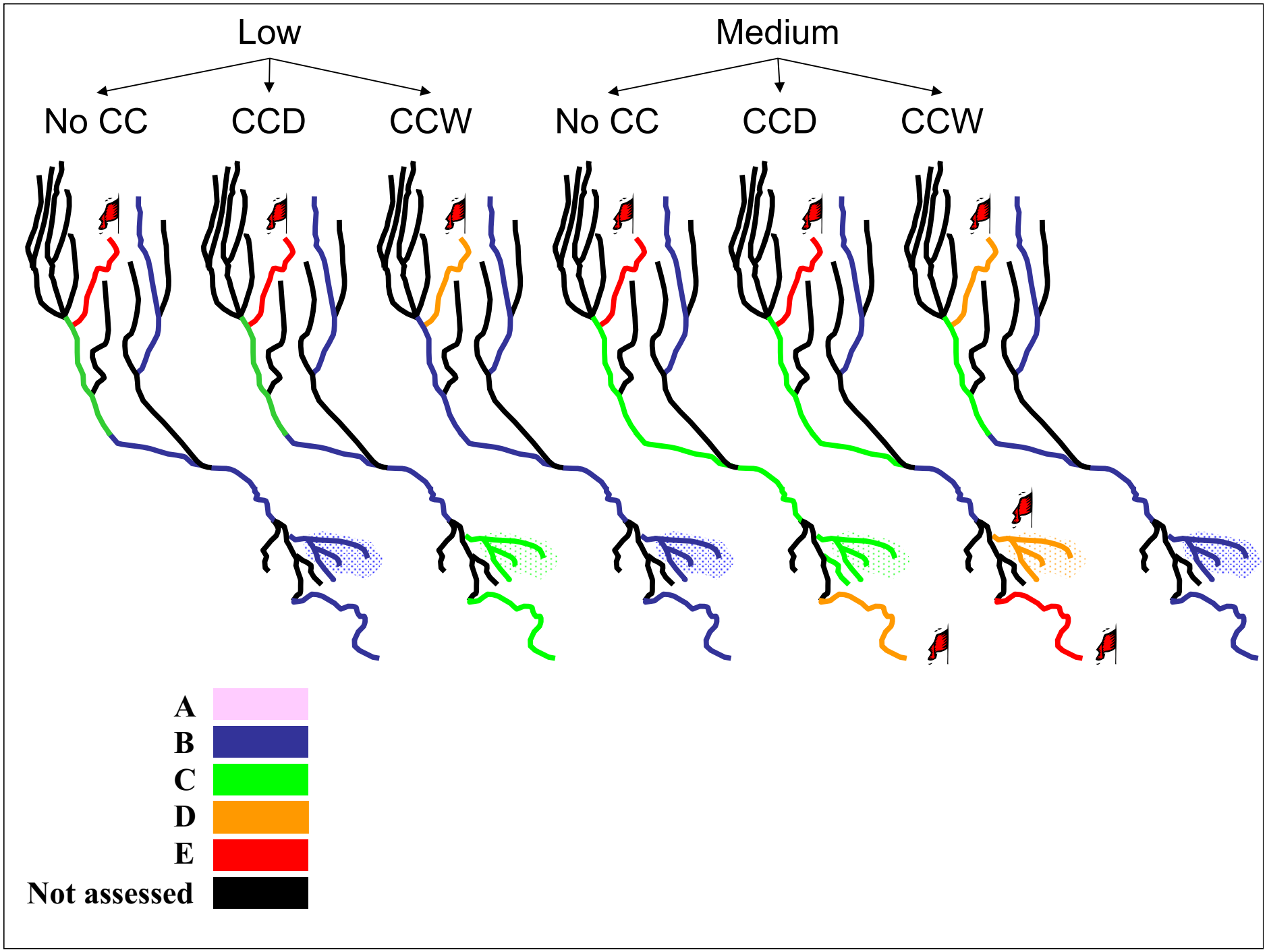
A Natural
B Largely natural
C Moderately modified
D Largely modified
E Critically modified

Cuito River is VERY important

Progressive decline from Low to High scenarios

Impacts would become increasingly transboundary; felt most severely in lower basin

High scenario: large parts of the system would be unable to sustain present beneficial uses; significant terrestrialisation


Low
Medium
No CC
CCD
CCW
No CC
CCD
CCW
A
B
C
D
E
Not assessed

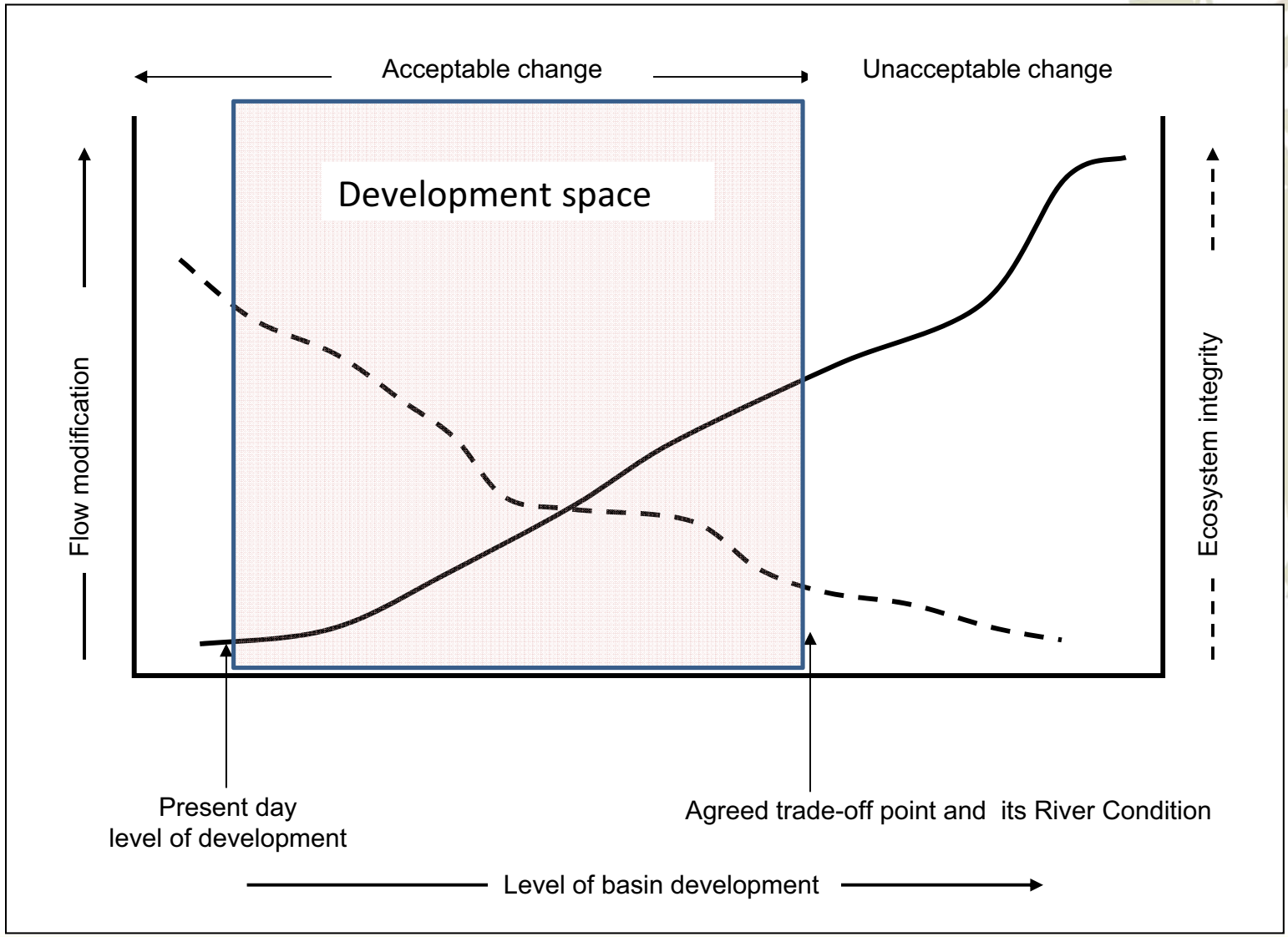
Summary of basin-wide economic implications

Ecosystem losses	US$ 700 million for Low Scenario US$ 1.4 billion for Medium and High water-use scenarios NB. NOT ALL ECOSYSTEM SERVICES COSTED
Medium and High Scenarios	Would generate such large economic losses that they would overwhelm all the benefits even under an optimistic economic projection.

<u>Recommendations</u>

Urban supply and sanitation	Move forward rapidly: requires small amounts of water and improves quality of life
Hydropower	Run-of-river: manage impacts through design and operation
Irrigation	Would incur the vast majority of economic losses – look for alternative low water use basin development options

Using the findings to negotiate a basin vision



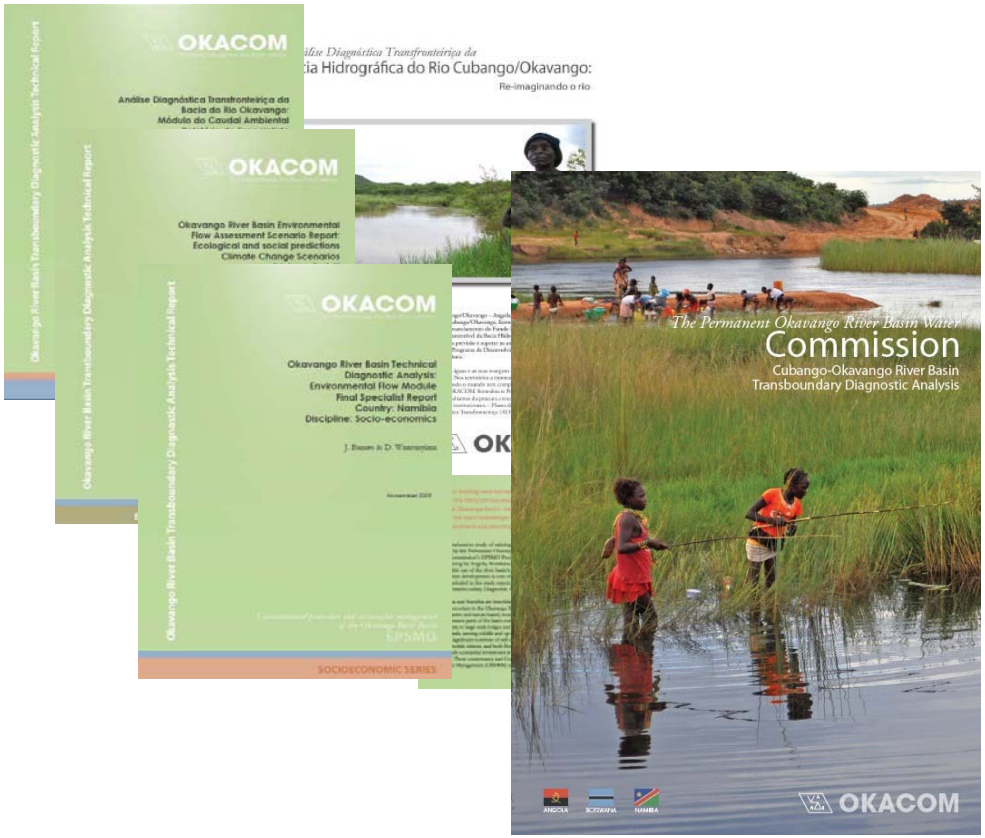
Vision and future goals – first steps of the SAP

Launch an awareness campaign across the basin and in the three governments on the added value of lateral thinking regarding transboundary water governance as opposed to country or sector-specific planning.

Set a 20-year vision for the river system through basin-wide discussion and negotiation, using the scenarios and the concept of development space.

Develop a brochure for potential international funders on the SAP outcomes and interventions for which funding will be sought, and begin interventions.

Key achievements



Strategic Action Programme – (e.g. a long-term integrated planning and management programme, with 4 thematic areas)

SAP:

- approved by OKACOM Commissioners May 2011
- Ministerial endorsement by Botswana in April 2012
- Cabinet Endorsement in Feb 2013
- Ministerial Endorsement Namibia and Angola
- Tri-country ministerial endorsement afterwards

Why engaging the stakeholders?

- Need to comply with principles of corporate governance
- To take into account the needs and aspirations of all segments of the social fabrique within and outside the basin
- All custodians of basin resources do matter
  - Who are the basin resources custodians?

Who defined and delivers the RBOs agenda?

Government Officials Only?

Basin resources custodians also include:

Local communities; reseachers; resource users, etc.

Profiling the Basin resources custodians

- Who is who?
  - Clustering groups/interest groups (e.g. fisherman; farmers, tour operators, etc.)
    - Core business
    - Aspirations
    - Values and operational principles
  - Delivering capacity
    - Technical
    - Financial
  - Level of engagement
    - Strategic level? (e.g. policy making)
    - Project implementation? (implementer)
    - Target group/Beneficiary
    - Facilitator/brooker?

Challenges to Stakeholder Engagement

- What institutional framework should be adopted for effective engagement?
- Who should be engaged?
- How the enegement process should take place?
- At what level and frequency?
- Who pays for the costs of the engagement process?

Benefits Sharing

- How do we defined it?
  - Is it about portioning equal parts of the cake to every body?
  - Percentage of water volume to be allcoated to each riparian state?
- Sharing of beneficial uses
  - Joint planning
  - Selection of the best return on investment
  - Joint investment initiative
- TDA product was a joint investment and finalproduct benefits all riparian states
  - Availability of information
  - Sound basis for planning / strategic Action Plan
  - Capacity Building – research capacity in all countries

Key Challenges

- **Programme development**
  - Ability to develop an action programme which is:
    - Relevant
    - Generates visible impacts (changes in conditions)
      - Ecosystems
      - Peoples livelihoods
    - Sustainable

Key Challenges (cont.)

- **Funding model**
  - Secure financial sustainability
  - Managed in a business approach

Key Challenges (cont.)

- **Institutional arragements**
  - Operational at a trans-national level
  - What is the appropriate make up of a transboundary institution?
    - Equiped with appropriate skills mix
    - Necessary physical/material resources
    - Required lateral thinking

Opportunities

- Manifested **political will** – OKACOM treaty

- **Global interest** over:
  - Uniqueness of the river basin system - ***endorheic***
  - The most pristine river basin in the world
  - Third largest Ramsar site in the planet

- Outcomes of the TDA study
  - **Knowledge base** for informed plannning, management and decision making

- Framework of the SAP
  - Oportunity to plan a **careful development pathway**
  - Address the true meaning of sustainable development
  - Provide an example of transboundary cooperation in river basin management that could be a standard for the rest of the world

Acknowledgements

Initiation and guidance: OKACOM and the Okavango Basin Steering Committee

Funding: GEF/FAO; UNDP and the governments of Angola, Botswana and Namibia

Specialist inputs:

Angola

Agostinho Neto University; Associaçáo de Conservaçáo do Ambeinte e Desenvolvimento Integrado Rural

Botswana

University of Botswana; Okavango Research Centre; HOORC; Biokavango Project

Namibia

Namibia Nature Foundation; Polythechnic; Nam Water

International Process Management Team

Water Matters; Southern Waters; Beuster Clarke and Associates

Working together …

- *We can make the most of this unique resource*

- For additional details Log on:
- www.okacom.org

- Thank You!

RE-ORIENTING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AND EDUCATION FOR SUSTAINABLE DEVELOPMENT AND ITS IMPACT ON GREEN AND BLUE ECONOMY

By: John Simiyu PhD.
University of Eldoret UNEVOC Centre,
Kenya Email: jwsi54@yahoo.com
Paper Presented at the Pan African Forum – Sources and Resources for Culture and Peace
26-28, 2013, Luanda, Angola

Introduction

Among the greatest challenges faced in the world today are those of:

- Delivering and securing affordable supplies of clean water, food, shelter, energy and air to meet the needs and expectations of ever expanding population .

Introduction Contd.

- Water, for example, is a foundation of economy, society and environment and is an essential and cross-cutting theme for sustainability
- Water is reflected as a priority by the UNESCO Member States, among other emerging and recurrent issues.
- The exploitation of natural resources remains a major concern for all.

Introduction Contd.

- Green and Blue economy are initiatives meant to build a global civil society and stakeholder movement .
- Green and blue economy promote alternative models of economy that can deliver sustainable development that build on the three pillars of sustainable development: **social, environmental and economic**

Introduction Contd.

- Sustainable development is one of the central challenges faced by the world today.
- While achieving SD requires a global change of mindset and behaviours ducation is crucial for achieving sustainable development (ESD)

Introduction Contd

- In the light of persisting global patterns of poverty and inequality, it is no exaggeration to say that, at the start of the 21st century, the world is at a major turning point.

Introduction Contd.

- Because TVET is the largest producer and consumer of natural resources that have multiple concerns about sustainability the inclusion of the principles of sustainable development in TVET can be built upon the traditional practices in which skills taught match the materials, and components.

Introduction Contd.

- My presentation looks at how education can be re-oriented to include TVET; TVET that incorporates the aspects of ESD and STI and how this strategy can impact on green and blue economies that ultimately generate skills highly needed for employment both gainful and self. An idle mind is a potential for destruction

Re-orientating Technical and Vocational Education and Training

- TVET is the largest producer and consumer of natural resources that have multiple concerns about sustainability. The inclusion of the principles of sustainable development in TVET can be built upon the traditional practices in which skills taught match the materials, and components.

- Furthermore, there is a fresh awareness among policy makers in many African countries and the international donor community of the increasing importance and critical role that TVET can play in national development.

Re-orienting TVET

- Since education is considered the key to effective development strategies TVET must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and achieve sustainable development.

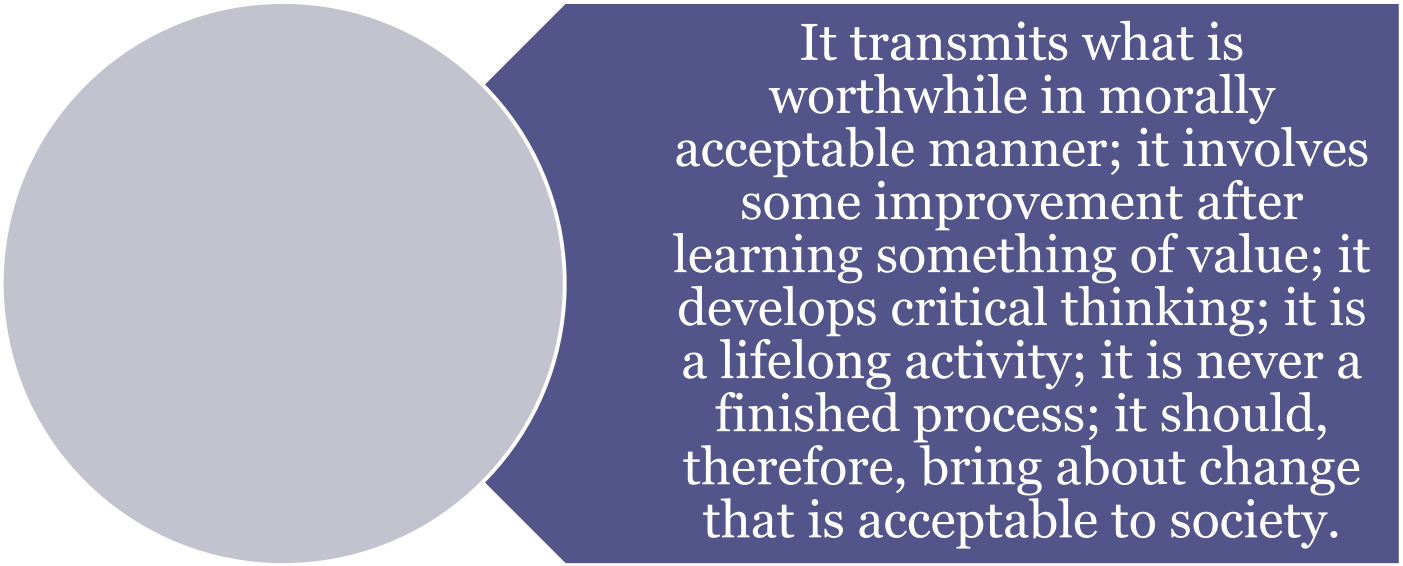
Re-orienting TVET

- TVET, by its nature, can be connected with other sectors of society in order to educate and train the technical personnel and skilled workers needed for socio-economic development
- One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills

Re-orienting TVET

- TVET delivery systems are well placed to train the skilled and entrepreneurial workforce that a country needs to create wealth and emerge out of poverty
- TVET institutions can respond to the different training needs of learners from various socio-economic and academic backgrounds and prepare them for gainful employment and sustainable livelihoods.

Purpose of Education (from some School of thought)



Education

Education sector must ensure that all workers are equipped with the knowledge, skills, attitudes and values that can contribute to sustainable development

Re-orienting education is a sure way to successfully confront issues such as water and climate change, among many other facets of environment

Re-orienting TVET

- While TVET opens a window to the world and vice versa, institutions should explore and exchange information about innovative teaching and learning methods that are interactive in nature, for example, experiential learning
- Re-orientation of TVET curricula and sustainable campus management allows for incorporation of Green Campus, Green Curriculum, Green Research……..

Re-orienting TVET

- TVET systems can prepare learners to be responsible and well informed producers and consumers, and for being able to act competently, creatively and as agents for sustainability in their workplaces and in society at large.

Re-orienting TVET

- TVET and skills development initiatives needed for green transition enhances environmental awareness, competency, innovation and entrepreneurship, and thus opens up new market opportunities for environmental goods and services, promotion of green innovation and green growth and puts the world on a more sustainable development path.

ESD and TVET

- **Sustainability** is the capacity to endure.
- In ecology the word describes how biological systems remain diverse and productive over time.
- For humans, sustainability is the potential for long-term maintenance of well being, which has environmental, economic, and social dimensions.

Re-orienting TVET

- Sustainability interfaces with economics through the social and ecological consequences of economic activity
- Sustainability economics involves ecological economics where social, cultural, health-related and monetary/financial aspects are integrated

Re-orienting TVET Contd.

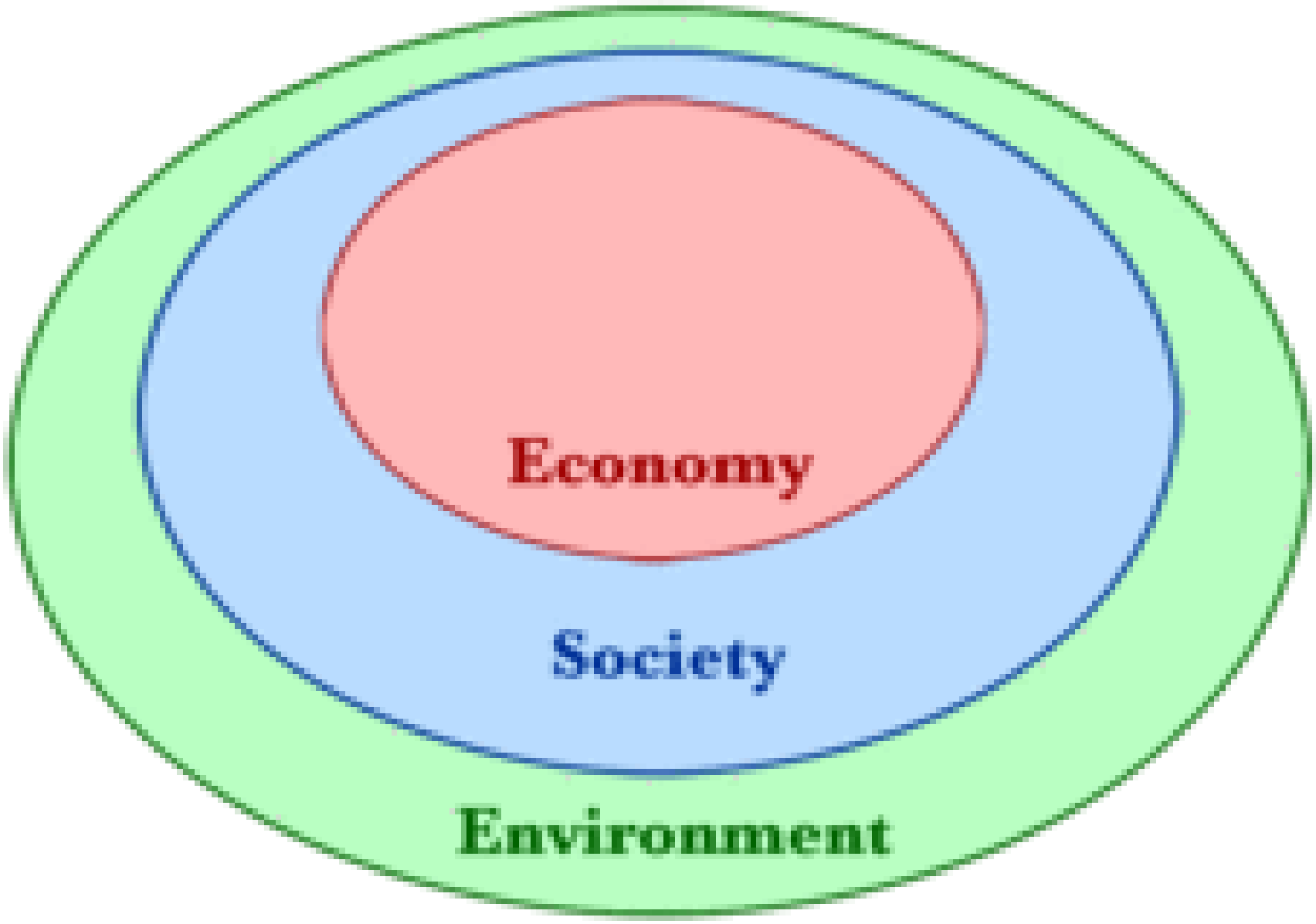
- It is a known fact that education is crucial for achieving Education for Sustainable Development (ESD)
- However, the crisis of un-sustainability canot be solved by the kind of education that helped create the problem.
- There is need for a new way of thinking, new methodologies of teaching (Teacher Preparation) and new content to create new TVET and lifestyles.

ESD and TVET Contd.

- To integrate ESD in TVET, there are environment-friendly practices that can be considered such as re-orientation of TVET curriculum and teacher education to integrate ESD at all levels of education,

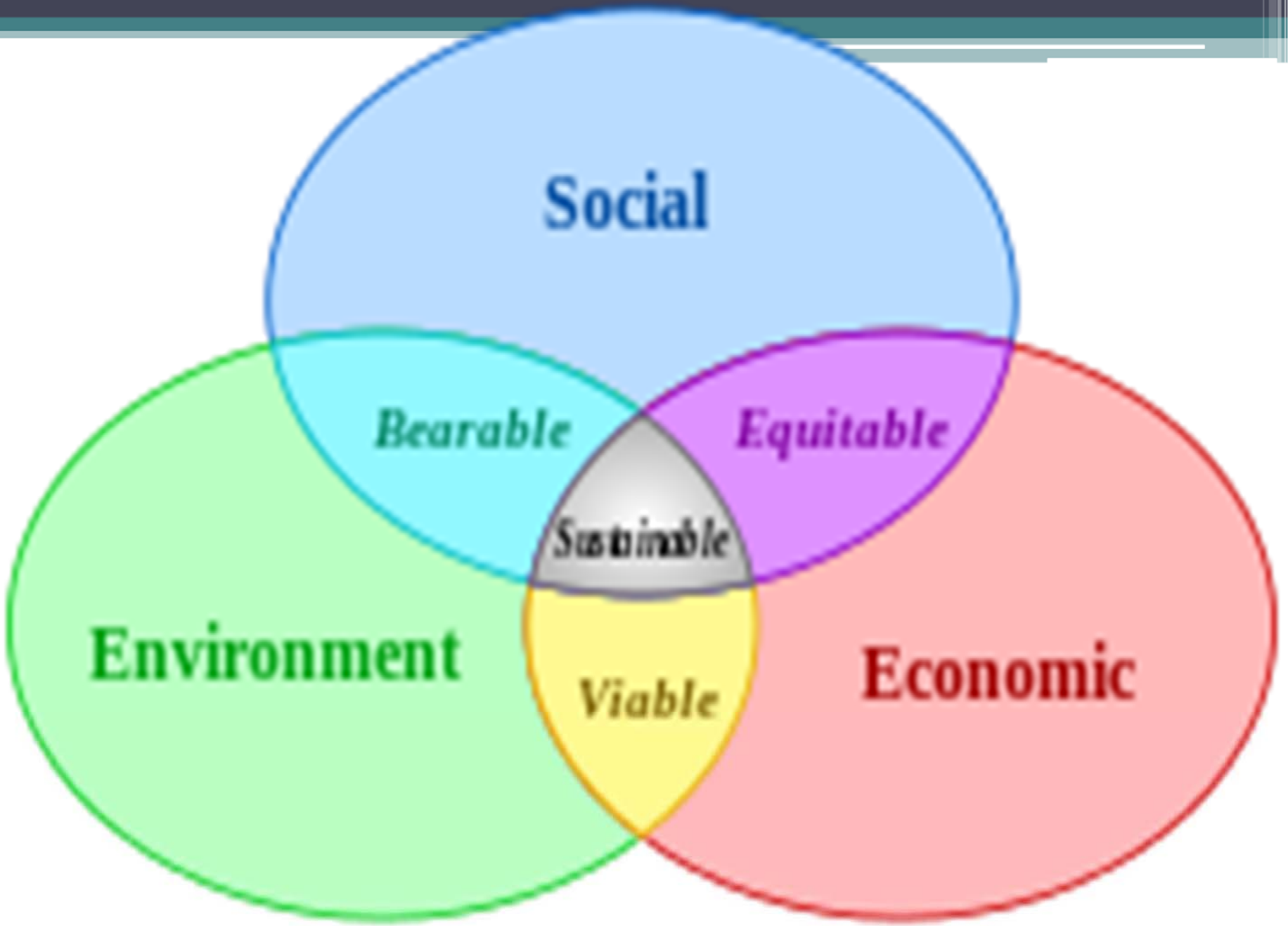
ESD and TVET

Economy and society are constrained by environmental limits


Economy
Society
Environment

ESD and TVET

Sustainable development is at the confluence of three constituent parts


Social
Bearable
Equitable
Sustainable
Environment
Viable
Economic

How about? Green economy

- **The purpose of green and blue economy:**

  To promote alternative models of economy that can deliver sustainable development to people, countries and generations that build on the three pillars of sustainable development: social, environmental and economic

Green Economy

- Green Economy Initiative is a project designed to communicate that the greening of economies is not a burden on growth but rather a new engine for growth, employment, and the reduction of persistent global poverty
- Green economies are sustainable societies formulated to create a balance between environmental, societal, cultural and economic consideration in the pursuit of enhanced quality life. **Let's embrace it.**

Blue economy

- The **Blue** Economy began as a project to find 100 of the best nature-inspired technologies that could affect the economies of the world, while sustainably providing basic human needs - potable water, food, jobs, and habitable shelter
- It investigates an aspect of the world's economies so as to offer a series of innovations capable of making aspects of those economies sustainable

Blue Economy

- The power of the Blue Economy is that it injects money back into the local economy
- It reinjects cash into the local economy, hence use of locally available resources : **Approtech, Small is bueautiful**
- Amounts to massive savings in material and costs, while reducing the ecological footprint on the environment and the health risks to the citizens of the world.

Blue Economy Contd.

- The Blue Economy inspires the young and the entrepreneurial minds and offers a broad platform of innovative ideas that have been implemented somewhere (Promising Practices) in the world to demonstrate that the future is bright, provided we go beyond the known and the obvious.

Conclusion

- Nations should re-examine the economic costs of biodiversity decline and the costs and benefits of actions to reduce the losses
- 'Toolkits' for education planners and policy makers at international, regional and local levels to foster sustainable development and better conservation of ecosystems and biodiversity need to be developed.

Conclusion Contd.

- Nations should raise public awareness of the individual's impact on biodiversity and ecosystems, and areas where individual action can make a positive difference

Conclusion Contd.

- Education can be re-oriented to include TVET; TVET that incorporates the aspects of Education for Sustainable Development and Science Technology and Innovation and how these can impact on green and blue economies to ultimately generate employment.

THE END

Obricado

Thank you for your attention!

- The sub-regional meeting about the role of UNEVOC Centres in furthering the second decade of education for Africa TVET Plan of Action was held in Nairobi Nairobi from 13 -16 December 2011. The meeting discussed the UNEVOC network and country case studies and gave recommendations and way forward for TVET and the UNEVOC network. Participants were drawn from Botswana, Benin, Cameroon, The meeting was mainly about the Second

- Cote d'Ivoire, Egypt, Kenya, Liberia, Malawi, Mali, Mauritius, Mozambique, Norway, Sierra Leone, Sudan, Swaziland, and Uganda. The participants were high level policy makers based in respective Ministries of Education or National TVET bodies responsible for policy coordination and implementation and responsible UNEVOC Centres, Filed Officers or their representatives. The UNESCO Regional Office (BREDA) and other UNESCO Field Offices in Africa and representatives of SADC and ECOWAS

Forum Pana Africain

« Sources et ressources pour une culture de paix »

La Cosmogonie traditionnelle et les connaissances des Autochtones (relation entre l'homme et la nature , la médicine traditionnelle et l'adaptation aux changements climatiques).

Par Bambanze Vital

Sénateur Burundais

Ancien Président du Mécanisme d'Experts sur les Droits des Peuples Autochtones.

1. Situation des Droits des PA en Afrique .

- Marginalisation et discrimination
- Restriction de la liberté de circulation,
- Mécanisme d'octroi des documents d'état civil et administratifs non adapté au contexte des PA
- Système d'éduction non accessible et non adapté au mode de vie et à la culture des peuples autochtones
- Asservissement,
- Spoliation et accaparement des terres, sans CLIP et compensation équitable
- Victimes innocentes des conflits armés et des guerres
- Assassinats, Viol et violences sexuelles
- Non reconnaissance de l'indentité des PA par certains Etats
- Restriction d'accès aux ressources naturelles dans les zones d'exploitation forestières et dans les aires protégées

1.1. Situation des Droits des PA en l'Afrique (suite).

- Non accès et non partage équitable des avantages découlant de l'exploitation et l'utilisation des ressources naturelles et génétiques
- Non prise en compte de la spécificité des peuples dans les programmes de développement .
- Non représentativité des autochtones dans les institutions politiques
- Non accès aux services sociaux de base (santé, l'éduction, etc…)
- Non accès à l'information
- Ignorance des droits et obligations

La Cosmogonie traditionnelle

- Il est question d'exploiter ce concept en mettant en relief la relation entre l'humain et son environnement (animaux, plantes, roches, eaux, et l'inter- relation avec eux) afin d'aboutir à la pérennisation et la durabilité de la biodiversité.
- Connaissances autochtones : les acquis issus de l'empirisme, de la connaissance non écrite, des dons transmis de génération en génération, socle d'une culture qui fonde même l'existence de la tradition :

La cosmogonie traditionnelle

- Homme et environnement : adaptation tant bien que mal au milieu ambiant : compréhension des phénomènes naturels et leurs explications en tenant compte de sa vision du monde : les tabous, les règles sociales, le code social etc.
- la médecine traditionnelle centré sur les plantes médicinales et les croyances : résistance à la mort (les noms défiant la mort, le port des amulettes, les paroles magiques (guhamura umuti))
- incidence du changement climatique : la rareté des pluies avec des explications liés au courroux des dieu, les espèces médicinale en voies de disparition, la surexploitation des terres et le recul des forêts et des fonds de vallées qui malheureusement étaient des milieux x favorables aux espèces médicinales.

L’Homme et la nature

- **L'homme ne peut pas se passer de la nature. Mais concrètement, en quoi l'homme est-il lié à la nature ? En est-il vraiment dépendant ?**

L'homme est lié à la nature. La nature assure la survie de l'homme. Elle est aussi pour lui une source d'enseignement et de richesse. Et elle lui apporte bien-être et plaisir. L'homme a donc intérêt à respecter et préserver la nature.

L’Homme et la nature.

- **La nature est une création de DIEU**

Comme l'homme, la nature est création de DIEU.
L'homme est donc lié à la nature.

Déjà à ce seul titre, la nature mérite le respect e
l'amour. C'est DIEU qui a conçu et créé tout
qui existe. Il a créé l'univers, la Terre, ses continents, ses mers et ses êtres vivants. Chaque créature vivante, chaque fleuve, chaque montagne a été voulu par DIEU. Nou devons respecter la création de DIEU, car no sommes nous-mêmes une création de DIEU.

L’Homme et la nature (Suite).

- **La nature est source de vie**
- L'homme a besoin d'air. S'il s'arrête de respirer pendant plus de quelques minutes, l'homme meurt. Or l'air vient de la nature.
- L'homme a besoin d'eau. S'il est privé d'eau pendant quelques jours, l'homme meurt. O r l'eau provient de la nature.
- L'homme a besoin de manger. S'il est privé de nourriture pendant quelques semaines, l'homme meurt. Or toute nourriture provient de la nature.
- La survie de l'homme dépend donc de la nature.
- **La nature est une source de nourriture**

La médecine traditionnelle

- L'expression médecine traditionnelle se rapporte aux pratiques, méthodes, savoirs et croyances en matière de santé qui impliquent l'usage à des fins médicales de plantes, de parties d'animaux et de minéraux, de thérapies spirituelles, de techniques et d'exercices manuels – séparément ou en association – pour soigner, diagnostiquer et prévenir les maladies ou préserver la santé.

Un usage répandu qui ne cesse de croître

La médecine traditionnelle reste très répandue dans toutes les régions du monde en développement et son usage ne cesse de croître dans les pays industrialisés.

En Chine, les préparations traditionnelles à base de plantes représentent entre 30 et 50 % de la consommation totale de médicaments. Au Ghana, au Mali, au Nigéria et en Zambie, le traitement de première intention pour 60 % des enfants atteints de forte fièvre due au paludisme fait appel aux plantes médicinales administrées à domicile. L'OMS estime que, dans plusieurs pays d'Afrique, la plupart des accouchements sont pratiqués par des accoucheuses traditionnelles.

Médicine traditionnelle et PA.

La médecine autochtone comprend un grand nombre de remèdes traditionnels, dont beaucoup forment la base même de traitements pharmaceutiques qui font partie intégrante de la médecine conventionnelle.

Les approches traditionnelles à la guérison sont holistiques et tiennent compte des aspects physique, mental et spirituel de la personne. La *médecine* se distingue de la *guérison*, qui ne se limite pas au simple traitement de la maladie. Comme le souligne Donald Warne, il est plutôt ironique que les médecins modernes prétendent fournir des soins de santé quand en réalité ils traitent les maladies

La relation de guérison repose sur une série de vertus : respect, humilité, compassion, honnêteté, vérité, partage, accueil et amour divin.

Les soins de santé autochtones traditionnels reconnaissent beaucoup plus de voies à la guérison que la médecine conventionnelle. On mentionne généralement sept voies : parler, pleurer, rire, danser, transpirer, bâiller et crier (pour ventiler ses émotions, plutôt que pour crier après quelqu'un).

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Médicine traditionnelle et connaissances traditionnelles.

- La médicine traditionnelle chez les Peuples autochtones relève des connaissances traditionnelles et se transmet de génération en génération. Les enfants des guérisseurs traditionnels le sont souvent.

Ces connaissances tendent à disparaître suite aux différents facteurs.

Facteurs influençant la disparution de la médecine traditionnelle chez les Autochtones.

- La déforestation,
- Développement de la médecine moderne,
- Les religions,
- Education non adaptée aux cultures autochtones ,
- Changements climatiques,
- Urbanisation,

Changements climatiques.

les changements climatiques, et notre réaction, seront ce qui nous définira nous, définira notre ère, et définira finalement ce que nous laisserons aux générations futures. Aujourd'hui, l'heure des doutes

est passée.

Ceci est une interpellation de tout un chacun pour agir maintenant face aux changements climatiques.

- Les difficultés que rencontrent les peuples autochtones et le rôle qu'ils peuvent jouer dans la lutte contre le changement
- climatique étant rarement abordés dans les débats publics sur le sujet est un des défis à relever pour impliquer tout le monde dans cette lutte qui concerne tout le monde.

L’impact des changements climatiques sur les peuples autochtones.

- Les peuples autochtones sont parmi les premiers à subir directement les conséquences des changements climatiques, étant donné qu’ils dépendent de l’environnement et de ses ressources et entretiennent une relation étroite avec celui-ci. Le changement climatique exacerbe les difficultés que rencontrent déjà les communautés autochtones vulnérables, telles que la marginalisation politique et économique, la perte de terres et de ressources, les violations des droits de l’homme, la discrimination et le chômage.
- Malgré toutes ces difficultés les peuples autochtones gardent leurs utilisations traditionnelles des ressources naturelles ce qui leur permettent de s’adapter mieux aux changements des climats.

Adaptation aux changements climatiques par les PA

Respect de la biodiversité : d'où la protection des espèces qui ne devraient pas l'être (espèces en voie de disparition) dans le cas où le milieu naturel est exploité à outrance par les sociétés capitalistes ex l'Amazonie, le Groenland etc.

- Consommation des produits non souillés (produits dits BIOLOGIQUES) : on est à l'abri de certaines maladies conséquentes à des consommations de graisses animales, des produits génétiquement modifiés, et leurs conséquences.
- Respect de humain dans son être, son identité, sa culture
- Vie en harmonie avec le naturel, ses semblables en tant qu'êtres dans leur différence.

Conclusion

- Dans toutes les régions du monde, chaque peuple, à travers le temps et l'espace, a appris à apprivoiser son milieu ambiant. Les techniques et les méthodes utilisées variaient selon les besoins en présence et les moyens qui s'offraient aux uns et aux autres.
- Les pratiques traditionnelles ont vite cédé aux innovations technologiques mais pour certaines populations dont les populations autochtones restent toujours d'actualité. Il ya lieu de parler de la médecine traditionnelle qui fait référence à des pratiques jugées obscurantistes pour certains, païennes pour les autres, mais qui somme toute sauvent une frange de population pauvre, vulnérable et sans ressources.
- Le lien entre l'homme et son milieu, la façon dont il le transforme et l'habite, en gardant un œil attentif au respect de la biodiversité avec comme corollaire le respect de l'œkoumène (espace où l'homme est appellé à s'épanouir)

Merçi beaucoup