

Linking Integrated Fire Management to People, Prosperity and the Planet. ¹

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Abstract

The theme of the Regional Session for sub-Saharan Africa, 'Implications of civil wars, poverty and AIDS on sustainable land use and fire management.' provides an opportunity to seek links between overarching sustainable development goals and the operational foci of Integrated Fire Management, agriculture and protected area conservation. Sustainable development is defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' [Brundland Commission 1987] Integrated Fire Management, a relatively new term, has been defined as 'a series of actions that includes fire awareness activities, fire prevention activities, prescribed burning, resource sharing and co-ordination, fire detection, fire suppression and fire damage rehabilitation at local, provincial and national levels in order to create a sustainable and well balanced environment, reduce unwanted wildfire damage and promote the beneficial use of fire.' [Working on Fire, 2003]

While the general practice of Integrated Fire Management and sustainable land use are well researched and documented, there is, perhaps, lesser understanding of the international communities' commitment to addressing poverty and AIDS. The paper provides an overview of the Millenium Development Goals [MDG's], an outline of progress – or lack of progress - in achieving the MDG's in sub- Saharan Africa and statistical information about conflict within the region.

The statistics illustrate that the hold on life is often fragile and tenuous. This is a region where poverty is at its worst and a large percentage of the population is disempowered.

The challenge to practitioners in Africa is that of adapting IFM best practice models to a poor, people-centred approach suitable for the African situation, linking to sustainable, acheivable outcomes that contribute to the MDG's and that are supported by the poor because it is in their self –interest to do so. Conveying this perspective and knowledge to decision-makers is equally important.

Partnership, capacity-building and knowledge sharing should be encouraged. The regional network, AfriFireNet, plays a critically important role by providing a forum and structure for collective and appropriate regional action.

Introduction: Cause and Effect

In 2002, South Africa hosted the World Summit on Sustainable Development [WSSD]. Government, private sector and civil society representatives from all over the world came together in Johannesburg to debate, discuss and share their experiences, attempting to create a future where there was a sustainable and

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equitable balance between people, prosperity and the planet. The WSSD put the spotlight on Africa, the cradle of humankind—and most especially sub-Saharan Africa; identified as one of the regions where a large percentage of the population live in poverty; unemployed, without access to sufficient food, fresh water, sanitation, education, technology and health care. Johannesburg, the city of gold, was itself an example of the sharp contrasts between rich and poor – at a superficial level bustling, busy and affluent, almost ostentatious in displaying wealth and excess, but, in turn, acting as a magnet to migrating rural poor hoping to improve their lives and escape the daily grind of poverty, and refugees from neighbouring countries, fleeing to escape war and famine, seeking peace, work and stability.

In the years prior to the WSSD a number of global conferences took place, defining the main objectives of the development agenda. The Millennium Development Goals [MDG's] were derived from the United Nations Millennium Declaration, adopted by 189 nations in 2000. Over six years ago, every country agreed upon a vision for the future. The vision took the shape of eight MDG's, providing countries around the world with a framework for development and time-bound targets by which progress could be measured. Most of the goals and targets were set to be achieved by the year 2015 on the basis of the global situation during the 1990's. In assessing the challenges pertinent to the sub-Saharan wildland fire situation and the theme of this Session, "Implications of civil wars, poverty and Aids on sustainable land use and fire management.", there is value in noting the current status of the MDG's and making use of these as entry points for innovative thinking about the way we address Integrated Fire Management [IFM] challenges at the regional and individual country level. IFM is defined as a series of actions that includes fire awareness activities, fire prevention activities, prescribed burning, resource sharing and co-ordination, fire detection, fire suppression and fire damage rehabilitation at local, provincial and national levels in order to create a sustainable and well balanced environment, reduce unwanted wildfire damage and promote the beneficial use of fire.³ IFM nests within sustainable development, which is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs⁴."

A second major area of concern that insidiously works its way down to practical implications at grassroot level is that of secure land tenure. Whether at a community level or a full scale war, land tenure and all it entails is an area that continues to create conflict between parties all across sub-Saharan Africa. Big or small, conflicts between people over land and the resources they provide regularly confound those that seek to practice wise land management. To deal with the symptoms we need to understand at least some of the implications of conflict, even though addressing the problem at the highest level may be completely beyond our control.

³ Heine, J. P. Working on Fire Programme, 2003

⁴ Bruntland Commission, 1987

The Millennium Development Goals

The United Nations Millennium Development Goals Report for 2006⁵ shows that sub-Saharan Africa is not performing well and is in fact one of the worst global performers for many of the targets.

Goal 1. Eradicate extreme poverty and hunger:

Target. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 per day.

Target: Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

Sub-Saharan Africa has only marginally reduced this percentage – in 2002, 44 percent of the population still lived on less than a dollar a day, and in fact the number of people living in extreme poverty has increased by 140 million.

In 2003, 31 percent of the sub-Saharan population continued to live with insufficient food, being one of the worst affected regions. Chronic hunger is measured by the proportion of people lacking the food to meet their daily needs.

Goal 2: Achieve universal primary education

Target: Ensure that, by 2015, children everywhere, boys and girls, alike, will be able to complete a full course of primary schooling.

Sub-Saharan Africa has achieved a modest growth, with 64 percent enrolled, however it still lags behind all other parts of the world. In Burkina Faso, Djibouti, Eritrea, Ethiopia, Mali and Niger fewer than half of primary school age children are enrolled in school. Rural children are less likely to attend school because the high rate of poverty in rural areas limits educational opportunities. An educational gender gap persists, with 42 percent of girls out of school, compared to 38 percent of boys.

Goal 3: Promote gender equality and empower women

Target: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.

Though some deep inequalities remain, women inch forward in labour markets.

Women's political participation has increased significantly since 1990. In sub-Saharan Africa the percentage of women seated in houses of parliament has increased from 7 percent to 16 percent, with some countries implementing mandatory or voluntary measures. Significantly, new constitutions in countries emerging from conflict have been especially effective in this regard.

⁵ The Millennium Development Goals Report 2006. Published by the United Nations Department of Economic and Social Affairs. DESA- June 2006. This abbreviated version contains a summary of the report findings pertaining to sub-Saharan Africa.

Goal 4: Reduce child mortality

Target: Reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate.

Sub-Saharan Africa has, by far, the worst child mortality rate in the world, with 168 mortalities per 1000 births. While the region has only 20 percent of the world's young children, it accounted for half of the total deaths. There is a direct correlation between low education level of mothers, low household income and high mortality rate.

Goal 5: Improve maternal health

Target: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

Most deaths occur within sub-Saharan Africa and SE Asia and little has changed. Only 46 percent of births in sub-Saharan Africa are assisted by skilled health care personnel with inequality between urban and rural care at delivery being particularly significant.

Goal 6: Combat HIV/Aids, malaria and other diseases.

Target: Have halted, by 2015 and begun to reverse the spread of HIV/Aids.

Target: Have halted, by 2015 and begun to reverse the incidence of malaria and other major diseases.

The HIV/Aids epidemic remains centred in sub-Saharan Africa. Although just over 10 percent of the world's people live here, the region is home to 64 percent of HIV positive people and to 90 percent of children [under 15] living with the virus. There are an estimated twelve million orphans in sub-Saharan Africa. Approximately 59 percent of HIV-positive adults – a total of 13.2 Million people – are women. HIV prevalence in the region appears to be leveling off, however at extremely high levels, reflecting that as new people acquire the virus, nearly the same number die from Aids.

Both Malaria and Tuberculosis continue to be a scourge. New TB cases, excluding those cases associated with HIV, have almost doubled since 1990, growing at approximately 1 percent per year, to 281 new cases per 100,000. This is the highest new incidence rate in the world.

Goal 7. Ensure environmental sustainability.

Target: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

Target: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Target: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

The proportion of land covered by forests has decreased in sub-Saharan Africa from 29 percent in 1990 to 27 percent in 2005. Newly replanted lands do not have the ecological value of older, more biologically diverse forests and do not provide the same benefits and livelihoods for local communities.

Sanitation improved for only 5 percent of the sub-Saharan population between 1990 and 2004, to 37 percent of the total population. The largest urban-rural disparities for fresh drinking water are found in sub-Saharan Africa, where city dwellers are twice as likely to have access to safe water as rural dwellers.

Sub-Saharan Africa is the world's most rapidly urbanizing region. Almost all of this growth has been into slums, where residents face overcrowding, inadequate housing, lack of safe water and sanitation.

Goal 8. Develop a global partnership for development.

Target: Address the special needs of the least developed countries and small island developing States.

Target: Develop further an open, rule based, predictable, non-discriminatory trading and financial system.

Target: Deal comprehensively with developing countries' debt.

Target: In co-operation with developing countries, develop and implement strategies for decent and productive work for youth.

Target: In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

Target: In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.

Aid to developing countries has increased steadily since 1997, reaching US\$106 Billion in 2005. However a perversity exists in that emergency and disaster relief, although essential, does not address long term development needs, but diverts attention and funding from long term goals.

Donors have pledged to double aid to Africa, where the majority of the least developed countries are located, by 2010.

Developing countries have gained greater access to markets over the past decade; however goods that are strategically important to developing economies, such as clothing and farm products, are still heavily taxed.

For many poor countries, even the negotiated reduced debt service is too high. Countries that meet criteria for the Heavily Indebted Poor Countries [HIPC] Initiative can have their debt cancelled. Conflict, poor governance and arrears payments have kept some countries from receiving debt relief.

Youth unemployment rates in sub-Saharan Africa remained fairly constant between 1995 and 2005 at 18.3 percent of the population. Without sufficient employment opportunities, many young people grow discouraged and feel worthless. The integration of youth, especially those from under-privileged

households, into the labour market, is important for future growth and to stop the intergenerational transmission of poverty.

In 2004, Africa added some 15 million new mobile phone subscribers – the equivalent of the total number of fixed and mobile telephone subscribers on the continent in 1996. However the ‘digital divide’ remains high between developed and developing nations, with less than 1 percent of the population having access to internet in the least developed countries.

Regional Conflict

As a subject, Civil War in the region is worthy of its own conference and full discourse is well beyond the scope of this session or paper. However some generic information can be provided for discussion and consideration.

Sub-Saharan Africa stands out from other developing regions because of the number of conflicts and the massive impact on lives and livelihoods, with 18-20 Million internally displaced persons, mostly women and children, struggling for survival in 2001⁶. A blurring between criminal and political violence appears to be emerging, with the Institute for Development Studies arguing that war and poverty are in a dynamic and mutually reinforcing relationship.

No less than 28 sub-Saharan states have been at war since 1980. In the 1990’s 14 sub-Saharan countries experienced a major civil war, with an additional 7 having undergone at least one minor civil disturbance.⁷

Some wars were given substantial publicity, such as the Rwandan Genocide while others received relatively little attention, despite their seriousness. For example, the civil war in the Democratic Republic of Congo has been estimated at having 3.3 Million victims – more than any war since World War II.⁸

There appear to be a number of schools of thought around possible triggers for civil conflict: The leading analytic and econometric model [Collier and Hoeffler, 2000] puts forward the hypothesis that individuals and rebel movements are motivated to fight government by some combination of greed and grievance.⁹ while there is an emerging school of thought that, in sub-Saharan Africa, agricultural and nutritional crises are important but neglected triggers.¹⁰ A recent paper¹¹ proposes that

⁶ ID21 Global Issues. www.id21.org/society/s10br11g2.html

⁷ The Increasing Incidence of Civil Wars in Sub-Saharan Africa: Assessing the Role of Democratization and Age Structure. Sarah Staveteig, University of California – Berkeley. September 2006.

⁸ The Increasing Incidence of Civil Wars in Sub-Saharan Africa: Assessing the Role of Democratization and Age Structure. Sarah Staveteig, University of California – Berkeley. September 2006.

⁹ On the Incidence of Civil War in Africa. Paul Collier and Anke Hoeffler First Draft August 16, 2000. Published 2002.

Greed and Grievance in Civil War. Paul Collier and Anke Hoeffler, Washington, D.C. The World Bank Group.

¹⁰ Have Gun Give Food: Agriculture, Nutrition and Civil Wars in Sub-Saharan Africa. Alexander Moradi, Department of Economic History, University of Tuebingen, Germany. Working Paper presented at the UNU-WIDER Conference on “Making Peace Work” Helsinki, June 2004.

incomplete democratization and the youthful age of the population [specifically young men] might be factored into the Collier/ Hoeffler Model.

African Ministers, policy makers and researchers attending the Land in Africa Conference held in London, 2004,¹² concluded that secure land rights are now recognized by most African governments as critical for peace, stability and economic growth. It has been acknowledged that competition for land and natural resources plays a major role in generating wider conflict and insecurity; however despite the land issue's central role in contributing to economic growth, land and agricultural development have failed to receive adequate attention in the Poverty Reduction Strategy processes. Land issues are often a 'hot potato' – there has been an unwillingness to firmly [and creatively] address issues of political patronage, corruption, redistribution, expropriation, traditional ownership, disenfranchisement of women in landownership, etc. A welcome key finding of the conference was that land reform and security of tenure demand political support and long term commitment.

If one studies the human and environmental impacts of civil wars,¹³ one cannot help but notice the correlation between these and the inadequate delivery against MDG's reported above:

- The huge displacement of people, leading to high child mortality rates and chronic hunger, placing severe strain on the coping mechanisms of the refugees themselves as well as the resources of host countries.
- Huge and expensive efforts by aid organizations to avert starvation and deprivation by delivery of food and resource aid.
- Disruption to social services, resulting in closure of schools and clinics.
- Rape of women, and women forced into risky sexual behavior in order to survive, resulting in an increased risk of contracting HIV/Aids.
- Disruption to pastoral communities and small farmers, resulting in loss of stock and crop failures.
- Neglected agricultural lands and degradation of protected areas.
- The legacy left behind on the lands in the form of anti-personnel landmines.
- The need for demobilization and re-integration programmes during the transition period from war to peace, including the re-training of ex-combatants.

¹¹ The Increasing Incidence of Civil Wars in Sub-Saharan Africa: Assessing the Role of Democratization and Age Structure. Sarah Staveteig, University of California – Berkeley. September 2006.

¹² Land in Africa, Market asset or secure livelihood? Summary of conclusions from the Land in Africa Conference, London November 2004 under the auspices of the International Institute for Environment and Development, the Natural Resources Institute and the Royal Africa Society. Published in Sustainable Development Opinion, 2005

¹³ Findings from source documents: www. Id21.org [DFID], World Bank, FAO Websites and others.

Cities and Wildlands Depend Upon Each Other.

At first glance, the impact that increasing urbanisation might have for fire and land managers is that of dealing with the growth in the Wildland /Urban Interface zone [WUI] and to note that there are less people in rural areas, thus in theory, a reduced risk of unwanted fire ignitions in remote areas. It might be thought that the interaction with cities from an IFM perspective begins and ends with IFM strategies to address the WUI. Undoubtedly these will be needed and should be given increased attention, however, there is a far deeper level of interaction required that recognises the interdependence between those living in cities and the life support systems that natural and productive areas provide.

The separation of people and nature has been highlighted as a concern by many leading conservationists¹⁴. For example, a population that is increasingly disconnected from the land does not give much thought to where their water comes from. However neither are land managers inclined to give much thought to whether the majority of voters [who live in cities and mostly in slums] and constituency/political leaders [who also live in cities] would be likely to support the prescribed burning budget they are asking for, in preference to building a new clinic. Cities are where decision-makers make decisions about budgets: the need to provide leaders with appropriate, accurate and convincing data, as well as communicating the case to constituencies, cannot be emphasized enough.

From a communication and education perspective, future urbanization projections require that we re-think the way educational messages are conveyed. Urbanization presents an excellent opportunity to reach a large number of decision-makers, schoolchildren, voters and the media cost effectively. The mass-media messages will, however, need to be carefully crafted in order to achieve the desired result. Ultimately, messages of the future may not need to be geared specifically to wildland fire prevention and protection, but be simplified and people-centred messages about land resources, ecosystem services, sustainable use, the impacts unwanted fires can have on natural resources, the need for fire to renew fire –adapted ecosystems, the influence of climate change and the responsibilities associated with living on the urban edge. In order to influence the next generation of decision-makers, communication and outreach efforts should attempt to inculcate a love, respect and understanding of the land amongst a population which may not have experienced life outside of a city slum. Urban conservation and agriculture initiatives will become a crucial link in the difficult task of educating city dwellers about natural processes.

Climate Change.

At the time that the MDG's were resolved, the issue of Climate Change had not yet been worked through and agreed upon as thoroughly as other issues, however it should be mentioned as it will clearly be an issue affecting IFM and sustainable development in the future. Recent advances in Climate Change modeling and the

¹⁴ The Urban Imperative – urban outreach strategies for protected area agencies. Edited by Ted Trzyna. Published for the IUCN –The World Conservation Union. 2005. Proceedings of a workshop at the Vth IUCN World Parks Congress, Durban, South Africa September 2003.

preparation of Action Plans at the country level, under the United Nations Framework Convention on Climate Change [UNFCCC], are gradually influencing perceptions about and attitudes to Climate Change predictions. From a land management perspective, sub-Saharan Africa is not likely to escape the predicted changes in weather patterns, with some fairly scary potential scenarios ahead if one overlays climate change predictions on top of existing poverty, food security and civil unrest challenges. These potential scenarios reinforce the sound rationale for aligning IFM with Disaster Management frameworks.

Crisis Can Create Opportunity

The factors that influence progress in attaining the MDG's also influence the status quo of wildland fires and the strategic way forward in terms of addressing land management challenges. Our individual governments are answerable and accountable to the international community in terms of achieving country MDG's. The wildland fire "community of practice" can take advantage of the opportunities presented by the MDG's by interrogating current policy and practice to seek linkages that will contribute to attaining specific goals and targets for both IFM and the MDG's.

1. We should ask ourselves whether we are providing sufficient contextual information to our political leaders in a format that can link to MDG delivery. For example; are we helping decision-makers to make the connections between the knock on effects of unwanted wildland fires, the spiral into a slow-onset disaster, perhaps building up over years, but that will result in a crisis requiring donor food aid, diverting regular budgeting streams into disaster recovery, thus affecting development goals and ultimately drilling down into country non-achievement of MDG's?
2. Conversely, in sectors where Integrated Fire Management is practiced, 'non-catastrophe' is achieved and an indirect contribution is made towards the country MDG's, are we documenting and communicating this sufficiently? Do we collect the right data with vigour, share this information strategically with decision-makers and do we use media and community awareness channels to educate and influence the court of public opinion? For example, there may not be interest in how many kilometers of firebreaks have been prepared, but there would certainly be serious interest by leaders if we can provide data on how much employment was created and what this translated into, in terms of money in the pockets of the poor.
3. As IFM and Disaster Management practitioners, have we taken note of the overwhelming development challenges within our individual countries and used adaptive management skills to make the 'best fit' possible in achieving Integrated Fire Management in a pro-poor, developmental and people-centred fashion? For example, most sub-Saharan countries face capacity and funding constraints. This is constant across many disciplines, not only fire management. How do we best leverage the resources we have? How can we use Integrated Fire Management to contribute to the achievement of the MDG's and in doing so perhaps secure increased support for our organization's IFM goals?
4. Have we given sufficient attention and support to encouraging Community-based Fire Management as an achievable and sustainable long-term approach to addressing land and fire management problems in a poverty stricken, rural sub-Saharan Africa? How can we link this approach to MDG deliverables? For example, is it feasible to cross-train and share departmental extension capacities across silos in order to reach isolated communities, by forging partnerships outside of land management agencies?

“Ex Africa semper aliquid novi”

There is always something new out of Africa. [Pliny the Elder 23AD – 79AD]

Despite challenges, conflicts and capacity constraints, there is a great willingness and eagerness amongst the land and fire management community of practice to work together and share knowledge across the region. With the added commitment and support from international role-players, Africa may yet surmount almost overwhelming odds and show what it can do.

There are certainly some outstanding pilot IFM projects across the region that, with support and encouragement, can gear up and expand, thus providing a significant contribution to regional implementation of IFM practice and sustainable development goals.

The establishment of the sub-Saharan Fire Network, AfriFireNet, has done much to bring cohesion and direction to informal knowledge sharing. This initiative deserves to be supported and strengthened, as it provides an important institutional platform to drive regional partnership initiatives forward, assisting States to create Afrocentric solutions for African challenges.

References

- Collier, Paul; and Hoeffler, Anke; 2000; **Greed and Grievance in Civil War**. Washington, D.C. The World Bank; Development Research Group.
- First Draft August 16 2000, Published 2002 “ **On the Incidence of Civil War in Africa**” The Journal of Conflict Resolution 46:13-28
- DFID, 2005, **Disaster risk reduction: a development concern., A scoping study on links between disaster risk reduction, poverty and development**. UK, ISBN1 86192 676 6, 65p
- FAO. 2006, **Fire Management: voluntary guidelines. Principles and strategic actions**. Fire Management Working Paper 17. Rome.
- FAO 2006, **Global Forest Resources Assessment 2005 – Report on Fires in the Sub-Saharan Africa Region, Fire Management Working Paper 9**.Germany, 24p.
- Goldammer, Johann & de Ronde, Cornelis, 2004, eds, **Wildland Fire Management Handbook for Sub Sahara Africa**. Germany, Global Fire Monitoring Centre, 431p.
- Heine, Johan; and Charlton, Val; 2003; **The Working on Fire Programme**; Published Booklet; 4p
- Luckham, Robin and others, 2001, **Conflict and poverty in sub-Saharan Africa: an assessment of the issues and evidence**, Working paper# 128, Institute of Development Studies, UK
- Moradi, Alexander, 2004, **Have Gun Give Food: Agriculture, Nutrition and Civil Wars in Sub-Saharan Africa**, Department of Economic History, University of Tuebingen, Germany, Working Paper presented at the UNU-WIDER Conference on “Making Peace Work” Helsinki, June 2004. 36p
- Trzyna, Ted, ed, 2005. **The Urban Imperative – urban outreach strategies for protected area agencies**. Published for the IUCN –The World Conservation Union; 168 p.; A collection of papers and proceedings of the workshop at the Vth IUCN World Parks Congress, Durban, South Africa September 2003.

- Staveteig, Sarah; 2006 **The Increasing Incidence of Civil Wars in Sub-Saharan Africa: Assessing the Role of Democratization and Age Structure**, University of California – Berkeley, USA, Ph D Dissertation. 26p.
- Toulmin, Camilla, ed, 2005; **Land in Africa, Market asset or secure livelihood?**; London; UK, Sustainable Development Opinion, 8p; Summary of conclusions from the Land in Africa Conference, November 2004 under the auspices of the International Institute for Environment and Development, the Natural Resources Institute and the Royal Africa Society.
- Teie, William, Pool, Christiaan, ed, **Fire Manager’s Handbook on Veld and Forest Fires. Strategy, Tactics and Safety: South African Edition**; Published by the South African Institute of Forestry and Deer Valley Press; First edition 2003, reprinted 2005.
- United Nations, Department of Economic and Social Affairs. DESA 2006, **The Millennium Development Goals Report 2006**, New York, USA, 27p