



## **GAPSYM14 - International conference**

### **Africa and its ecologies: people and nature in the age of climate change**

**10 December 2021 – Ghent University**

#### **Call for Papers**

Anthropogenic climate change is now accepted as a scientific fact. In the coming decades, its impacts on natural ecosystems and livelihoods at a global level will increase and be multi-faceted. For Africa, observations and projections indicate relatively modest warming but major changes in the amount and seasonality of rainfall. These rainfall trends are region-specific, with some parts of Africa expected to receive less rainfall than other regions on an annual basis, compared to current figures. However, all regions are expected to experience a greater incidence of extreme rainfall or drought. Therefore, it is likely that climate change will have an overall negative impact on water availability in Africa, which may lead to the severe disruption of ecosystems' natural functioning and increased stress on available land and water resources. Climate change will have an impact on biodiversity in various parts of Africa and result in more deforestation. The shifting seasonality of rainfall patterns will impact agricultural systems in many regions, adding to the already major challenges concerning food production and food security.

Consequently, climate change will most likely also negatively impact health, ranging from local food shortages to expanding urban heat islands and water-borne diseases. Vector-borne diseases and other neglected tropical diseases will add to malnutrition, especially among young children and women. In some regions, human security and vulnerable groups' livelihoods will be at risk, as the increased demands on scarce resources will spawn violent conflict, rapid urbanisation and forced migration.

Therefore, Africa needs competent and well-resourced local governments willing to implement a long-term and systemic societal transformation focused on environmental sustainability, resilience and adaptation. A new world order will also be required in which international organisations and multinational companies are genuinely willing to share power, decision-making, and resources. New coping strategies will have to be developed around new communication techniques, monitoring systems, agricultural practices and collaborative processes, involving multi-sector stakeholders such as government agencies, corporate sectors, and grassroots associations. It may also become necessary to optimise technologies to protect vulnerable groups in society better. Technological support, innovation, capacity development and financial resources will be essential to address the multi-faceted impacts of climate change in Africa robustly.



This 14<sup>th</sup> multi-disciplinary conference of the UGent Africa Platform hopes to showcase how scientists, policy makers, engineers, artists, writers, opinion makers and educators anticipate these challenges and reflect on alternative trajectories of societal transformation. Therefore its principal focus is on the impact of climate change on African cultures, landscapes and societies. In particular, we invite contributions elaborating on any of these identified subthemes:

### ***Climate projections for Africa***

The IPCC (Intergovernmental Panel on Climate Change) 5<sup>th</sup> assessment report (2014) states that the increase in mean annual temperature in Africa will be relatively modest by the end of this century. Based on current trends, temperatures in arid North Africa may rise faster than the global land average. Conversely, IPCC projections of a reduction in precipitation over North Africa, but down-scaled projections in regions of high or complex topography such as the Ethiopian Highlands, indicate a likely increase in annual rainfall and rainfall extremes by the end of the 21st century. We invite climatologists and climate modellers to present research findings allowing more robust region-specific climate projections.

### ***Land and ecosystem degradation, climate change mitigation***

The direct impact of climate change on landscapes includes desertification, land degradation, gully erosion or flooding. But could that simply be the consequence of direct human impact *in situ*? In mountainous regions, natural vegetation belts and agricultural systems are shifting to higher elevations. We call for presentations that explore such effects, as well as investigate measures to prevent land degradation. Simultaneously, even though Africa contributes only 5% to global greenhouse gas emissions, local efforts are being developed to decrease the carbon footprint through "Green Growth" and reforestation. Is this merely a token gesture, or can it have a real and lasting impact?

### ***Climate change & forestry***

Tropical forests are important for the global carbon and water cycle as well as for biodiversity conservation. The African rain forest is the second largest continuous area of tropical forest and accounts for 13% of the global deforestation. A key feature is that 92% of this deforestation is driven by low productive shifting cultivation. Moreover, a 4-fold population increase - largely relying on shifting agriculture - is increasing deforestation pressure. Therefore, the socio-ecological pressure of shifting cultivation and human induced climate change needs to be relieved to safeguard a globally crucial CO<sub>2</sub> sink to meet the 1.5°C climate goals and to feed a growing local population sustainably. We invite papers reflecting on how the Central African rain forest responds to climate change, on how secondary forest recovers along with its biodiversity on how to adapt agriculture in a sustainable food system landscape, thus supporting a growing local population while preserving other ecosystems services in the Congo basin.



### ***Climate change & agriculture***

African agriculture is vulnerable, with often a low quantity and quality of inputs used, poor soils, and sub-optimal farming practices. Unfortunately, this results in further land degradation and declining already low yields. Sub Saharan Africa (SSA) is a region where agriculture is often the engine of the economy, employing a large proportion of its population. An additional factor as climate change has a devastating impact on food production, food availability and many small hold farmers' livelihoods.

We open the discussion on how SSA Agriculture can develop and intensify sustainably under changing climatic conditions. Therefore, contributions elaborating on climate-smart farming systems, agronomic practices and crops are welcome to consolidate the debate.

### ***The burden of malnutrition in a changing environment***

Infectious diseases and under-nutrition remain prevalent in most countries in Africa, where non-communicable diseases (NCDs) occur. There is a concern that climate change will widen the gap in the population in terms of food access and safety, the distribution of infectious diseases and NCDs, and access to and uptake of health services. The question is how climate change will affect the underlying factors of malnutrition and poor health and what can be done to reduce its impact on the most vulnerable population groups. We want to initiate the debate and therefore keenly encourage contributions that elaborate on 1) the effect of climate change on food access, food security, nutrition and health and on the trend of infectious diseases and NCDs in Africa; 2) the levers to mitigate or address the syndemic of climate change, obesity and undernutrition at the level of the community, the civil society and the decision makers; and 3) cover the role of education in reducing social and health inequalities that can be exacerbated by climate change.

### ***Climate change & conflict***

Climate change has already increased the risk for violent conflict in Africa (around Lake Chad for instance). How this issue will develop over the coming decades is a highly debated question within conflict studies and political ecology. Environmental impacts cannot be analysed separately from political and socio-economic dynamics. Therefore we strongly invite papers elaborating on the political aspects and implications of climate change, as well as the local and international policy response to climate change in Africa. Topics might include: forced displacement, war over access to natural resources, and the militarisation of climate change ('green militarisation').



### ***Climate change & migration***

Millions of people flee their homes every year because of the sudden onset of climate hazards such as floods, storms, or tropical cyclones. Thousands of others are forcibly displaced by a slow onset of threats such as droughts, desertification or sea level rise. Climate change is likely to force even more people to move in the future. Yet, there is also evidence of climate change reducing migration opportunities, leaving people trapped in increasingly unviable circumstances. To address the needs of people affected and to inform policy, knowledge of the size, composition and distribution of environmental migration is crucial, but remains a challenge given the many different methodologies used and the lack of insight into the underlying transmission channels. The latter is particularly under-researched: most attention is given to the agricultural income channel, though climate change might also spur migration through its impact on health and health care, conflict, institutional quality, etc. We therefore welcome studies focusing on the indirect pathways through which climate change affects migration.

### ***Climate change & health***

Climate change affects human health directly through extreme weather events, for example in terms of injury, morbidity and mortality. It also has an indirect influence through reduced availability of (and-lower-quality of) fresh water and food production (note the effect of the swarms of desert locusts tearing through East-African farmland). This creates more severe patterns of disease and malnutrition, which may also lead to violence, deteriorating living conditions and hence migration in countries where people already face significant malnutrition and poverty. The resulting violence and migration may in turn have implications for the health of migrants and their access to health services, as well having adverse effects on their home communities and those they migrate to. The connections between health and violence and health and migration hence act as complicating factors in the well-studied climate-health dynamic. Papers exploring these intersections are therefore particularly welcome.

### ***Climate activism in Africa, ecocriticism & the post-human turn***

Across Africa as elsewhere, youngsters get involved in the global movement for climate justice, either as lone protesters or as climate strikers. Their activity became mediatised in Europe when in January 2020 an Associated Press journalist cropped the Ugandan climate activist Vanessa Nakate from a photo featuring Greta Thunberg and other activists after they attended the World Economic Forum in Davos. In line with emerging analyses of the multiple ways in which the youth express their political agency, we can explore the specific ways in which African youth challenge power relationships to promote climate-resilient futures and make their voice heard.



A set of related questions can guide us in the discussion of African literatures and popular culture in relation to nature, ecology and climate change: How can we analyse representations of nature and animals in African literatures and popular culture? How does the concept of ecocriticism – whereby literary criticism focuses on ecological aspects in literature – work in the African case? How can we move beyond anthropocentric interpretations without re-invoking (post)colonial stereotypes concerning the relations between Africans and nature? How can we meaningfully develop a new set of concepts for the present-day climate change and its future to discuss Africa's emerging climate fiction?

### **Scientific committee**

Souheila Abbeddou, Pascal Boeckx, Inge Brinkman, Karen Büscher, Laura Cortada-Gonzalez, Marc Heijde, Jan Nyssen, Ilse Ruysen, Patrick Van Damme, Annelies Verdoolaege, Dirk Verschuren

### **Abstract submission**

Abstracts should not exceed 500 words and should be written in English. Submissions should be sent by mail and before May 1<sup>st</sup>, 2021 to [Annelies.Verdoolaege@UGent.be](mailto:Annelies.Verdoolaege@UGent.be) mentioning "GAPSYM14 – abstract title".

The full programme of the symposium will be made available in the course of August 2021 in order to allow partners in Africa to make travel arrangements.

For more questions, please contact the coordinator of the Africa Platform ([Annelies.Verdoolaege@UGent.be](mailto:Annelies.Verdoolaege@UGent.be))