Decolonising Fire Science: An Introduction

Workshop Report

5th April 2022, Imperial College London

Chairs: Abi Croker and Adriana Ford

Invited Speakers: Mireille Kouyo, Siskeo Kumalo, Jay Mistry, Cathy Smith and Kapil Yadav

[Workshop Recording](#)

An **introductory workshop for Decolonising Fire Science** took place at Imperial College London on April 5th, 2022, bringing together social, ecological, and physical fire scientists from across Leverhulme Wildfire's partnered institutions and wider networks. This event was the **first of a series of workshops** focusing on decolonising research, research methodologies, and knowledge communications, and was hosted by the Centre's Equality, Diversity, and Inclusivity (EDI) Working Group, which aims to embed principles of equity and social justice into both the culture of the centre, and research projects and published output.

This workshop introduced evolving conversations surrounding the decolonisation of scientific research and methodologies which, at its core, acknowledges that **research is a political act, and the way in which we exercise and communicate knowledge is deeply embedded in global power dynamics**. At Leverhulme Wildfires, we realise that fire can be a highly politicised resource, yet fire management frameworks have been widely depoliticised over the last century, meaning that the development of policy and legislation governing fire use has exited a democratic domain which encourages conflictual consensus and societal participation. Instead, a limited group of select and elitist authorities, namely policymakers, technocrats, and foreign interest groups, exercise a great deal of control and influence over fire governance and management frameworks.

Epistemological freedom and the **equal and unassumed incorporation of 'other' knowledges into scientific research** and decision-making processes lay at the core of a decolonising fire science approach. This workshop aimed to create a space for researchers at Leverhulme Wildfires to think about ways in which these values can be promoted in academic and research institutions, and how we can communicate our research and knowledge in such a way that transcends ontological assumptions and our received wisdoms and subjectivities.

This workshop was **guided by several principles and questions central to the decolonisation conversation (Box 1)**, including our positionalities as researchers, the purpose of our research enquiries, the theory and assumptions that frame our research questions and approaches, who we define as an 'expert', who we are researching for, who we are not reading or whose voices we cannot hear, how and where we communicate our research and the impacts this has on dominant power and knowledge hierarchies, the ways in which our research impacts the peoples and places we are researching—from whom and where we are often geographically and epistemologically divergent, and lastly, how we share knowledge systems across space, time, and cultures in scientific research.

> **Box 1: Questions that guide our decolonising conversation**
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> - What is our positionality as researchers?
> - What is the purpose of our enquiries?
> - What theories and assumptions frame our questions and approaches?
> - Who do we consider as experts?
> - We are we researching for?
> - Whose voices can we not hear?
> - How and where are we communicating our research?
> - What impact does our research have and on who?

Part 1: Introducing critical decolonial conversations and their importance in scientific research

"Let the field speak to you" (Mireille Kouyo, 2022)

The first section of the workshop welcomed guest speakers, **Mireille Kouyo**, a final-year PhD student in both the African Leadership Centre at King's College London and the Department of Political Science at the University of Pretoria, and **Siseko Kumalo**, a final-year PhD student at the University of Pretoria and a Lecturer in Philosophy at the University of Fort Hare.

Mireille Kouyo's research focuses on processes of peacebuilding in Cote d'Ivoire that are independent of international intervention, and Siskeo Kumalo is a reader in political theory, and his research looks at modelling an inclusive national identify in South Africa, using the work of two black intellectuals writing in isiXhosa. Together, Mireille Kouyo and Siseko Kumalo led an introductory conversation with the Centre members, broadly **introducing critical decolonial conversations and their importance in scientific research**. A summary of these conversations are outlined in the following paragraphs.

At the core of decolonising research is the understanding that **research is a political act** and global systemic power hierarchies have and continue to shape the domain in which research is developed, implemented, monitored, and communicated. Most research projects can be divided into three main phases: before, during, and after data collection, with each phase presenting a unique and heterogenous set of challenges and consequences on the research subject, whether that be peoples, places, and processes. Firstly**,** the adoption of an **inter-reflexive, relational ethical framework in our research design** invites researchers to see 'self' as a reflection of the researched 'other', accentuating the requirement to critically assess how we researchers see ourselves as producers or developers of knowledge.

Mireille Kouyo and Siskeo repeatedly stressed the importance of taking responsibility as researchers to transition from believing we are *knowledge producers* to *knowledge developers* to avoid reproducing colonial, extractive knowledge production systems and imparting expropriated received wisdoms**. To decolonise our research methodologies, we researchers must first see ourselves as knowledge developers, as "outsiders", rather than as "experts", knowledge producers, or congenital "insiders".** Whereas knowledge producers assume the position of an expert, leading researched subjects to the proverbial light or pursuing a path of enlightenment that mirrors the tenets of historical colonial administrations and missionaries**, knowledge developers shift the power dynamic to co-create knowledge through learning, experiences, and processes**. In this way, we **acknowledge diverse truths and ways of knowing**, fostering, or even celebrating their entry into scientific disciplines such as the fire sciences to develop our understanding of the projects we are pursuing and processes we are seeking to explain.

A recurring theme that emerged throughout the workshop was the challenges associated with taking a critical decolonial approach to our research when we are bounded by and operate within academic institutions or 'ivory towers'. As PhD students, post-doctorates, and fire science researchers, we are often constrained by the institution that enables us to carry out the very research we are striving to liberate from strict academic criterions, rules, and processes of 'expert' or peer-reviewed legitimization. Yet, institutions allow and support us to become and develop as researchers, creating a position and space for us to pursue our research inquiry. In this instance, **we need to interrogate our positionality as researchers and promote a paradigmatic shift in the questions we ask that underpin our research** to foster responsive decolonial approaches and knowledge development.

Questions such as asking: "What is the purpose of our research inquiry?", "why are we carrying out our research?", "who are we carrying out research for?" and "what are the impacts or intended results of our research?", can help us take these initial steps in all phases of our research. If we are responding to contemporary challenges and crises with complex and divergent historical path dependencies, we must realise **we do not and cannot hold a definitive universal solution**, instead we can facilitate problem solving journeys where solutions are iteratively constructed through multiple epistemologies. **A voice needs to be given to those who have been silenced and whose works exist beyond peer-review**.

Box 2: Key messages from Part 1

- Research is a political act, shaped by global systemic power hierarchies

- Complete objectivity does not exist in scientific research; some subjective knowledges, including numerical, are reproduced and deemed acceptable by institutions, intellectuals or publishers.

- Decolonising fire science involves acknowledging diverse ways of knowing and fostering their entry into scientific disciplines

- We cannot hold a definitive universal solution, instead we can facilitate problem-solving journeys, through multiple epistemologies, and through hearing voices who have been silenced or exist beyond peer-review

- Using reflective, relational ethnic frameworks, researchers should critically assess our positionality, and how we see ourselves as producers or developers of knowledge

- Knowledge developers see themselves as 'outsiders' rather than 'experts', and through doing so, help shift the power dynamic to co-create knowledge through learning, experiences, and processes.

- Community-owned solutions promote empowerment and facilitate inclusive internal dialogue, and as researchers it is our duty to support this process

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When we are planning our research and constructing our methodological frameworks, we are often academically required to use existing, technical, scientifically proven, and acceptable methodologies, supported by robust theories and widely cited peer-reviewed literary sources. We build these frameworks mostly prior to field experience, based off our scholarly readings and the teachings of the intellectuals we seek to engage with. Our very engagement with certain peoples, institutions, and literature, and with the real-life challenges we try to solve, are all based on our own predilections, biases, and subjectivities, shaped by our own life experiences. Siseko Kumalo reminded us that numerical data are also highly political, and that science is not a sacrosanct object, rather it is situated within heterogenous socio-cultural and socio-political systems made up of both empowered and disempowered individuals with particular biases. Thus, we can begin to decolonise our research methodologies by doing just this, by acknowledging that **every individual possesses subjective knowledge, and some subjective knowledges are reproduced and deemed acceptable by institutions, intellectuals or 'experts', and literary publishers**. It is only after recognising that complete objectivity does not exist in scientific research that we can allow ourselves to be guided by the field; *what is the human element? What does the field say?*

Many of us will have to face an 'insider-outsider' complex. We may be an insider in the sense we are considered to be knowledgeable of a subject, or that we are from a certain community, culture, or geography that we are researching. However, we are an 'outsider' in terms of our knowledge, since our knowledge is not the only knowledge and does not represent the diversity of knowledges present and the ontological pluriverse that constitutes any situation or research inquiry. We might have stepped away from or community context or culture for a period of time, and therefore are an 'outsider' to those who are currently existing within this social-ecological, cultural, and political system. We might find similarities between our previous learnings and

our field experiences, though we will also discover great differences and experience interactions we could have never previously learned. **We cannot assume to be an 'insider' and must approach our research as an 'outsider', flexibly developing knowledges through a journey of becoming or thinking as an 'insider'**; "*let the people speak to you and define the words you use*" (Mireille Kouyo, 2022).

For long-term, sustainable, legitimate, and meaningful solutions, research must be "ontologically and epistemologically grounded in cultural understandings" and express how the established truth is perceived. **Community-owned solutions promote empowerment and facilitate inclusive internal dialogue**, and as researchers it is **our duty to support this process**, not to create contextual abstractions which do not devolve power to local peoples. We can foster this process through a diagnostic analysis of our research inquiry and the establishment of inter-epistemic dialogues between the Global North and Majority World, such as scoping the local environment, carrying out participatory contextual reviews, and asking people about their attitudes, behaviours, and perspectives towards the issue of inquiry. Once research has been carried out and data has been collected, it is of critical importance that we return to the field and **communicate the research to and with the knowledge co-creators** who helped you carry out your research and who the research is often for.

"If the fight is a non-winnable fight on the day, we might win the battle the next day. We must pick the battles that allow for us to grow. It requires a systematic and sustainable approach, where the things that we implement outlive us." (Siseko Kumalo, 2022).

Part 2: Decolonising fire science - experiences from the field

> ***"'If I have seen further, it is by standing on the shoulders of Giants'. But I told myself, rather than looking further, maybe I should look down at the giants on whose shoulders I am standing."*** (Kapil Yadav, 2022).

The second section of the workshop invited Centre members Professor Jay Mistry, Dr. Cathy Smith (Royal Holloway University of London), and Kapil Yadav (King's College London) to speak about their own experiences and approaches to fire-related scientific research and the importance of incorporating questions of decolonisation into research design, methodologies, and the production of fire knowledges.

Professor Jay Mistry presented on 'Ways of Listening", drawing upon her extensive local and community-based fieldwork in South America. Whilst carrying out her PhD in fire ecology, decolonising research and research methodologies were not discussed, yet Jay began to think about these conversations when she was carrying out field work within a nature reserve in Brazil. Reserve agencies broadly blamed local small-scale farmers outside of the reserve for starting and spreading fire, without any knowledge of these farmers nor their fire practices; "*I cannot just accept these attitudes, or 'blame comments'. I need to listen to the other peoples and their knowledges, particularly in terms of fire governance and management.*" Fire management is often a highly contested subject matter, and since it deeply rooted in historical and contemporary challenges associated with land politics, **a lot of fire research takes place in conflictual situations where shifting power dynamics arbitrate whose voices are heard**.

Recognising these challenges, Jay introduced four methodological approaches that we can use reciprocally when working with indigenous peoples and local communities to decolonise our research practices and create a process of learning over time: rich pictures, participatory videos, inter-cultural workshops, and participatory modelling or scenario analysis**. Rich pictures and participatory videos enable groups to express their diverse perspectives**, importance objectives, attitudes, and behaviours through visual means of representation. Where language and interpretation are likely barriers to communication, visual approaches provide an effective and collaborative way for indigenous peoples and local communities to express their worldviews on the specific research inquiry and its context, often highlighting system components that exist outside of our ontological assumptions and received wisdoms.

Photo: Indigenous Pemon from Gran Sabana, Venezuela exploring fire through rich picture. This approach helps to enable groups to express their diverse perspectives. Credit: Jay Mistry

To ensure that both rich pictures and participatory videos foster collaborative processes**, inter-cultural workshops and open discussions between participants must take place to discuss and identify importance values and discursive social constructions of fire**, though requires a contextually sensitive approach which accounts for established power hierarchies. This is an iterative, flexible, and adaptive process, engaging with different peoples' perspectives, developing knowledges, and sharing these knowledges with all participants; *"our research should be open to listening to new ways of expressing issues and words"* (Jay Mistry, 2022). It is important to note that **decolonising research takes time**, time that is at direct odds with academic cycles. However, as Jay emphasises, academic research is not simply about being regarded as "good" researchers in the traditional sense, but of being good facilitators, **and we can only facilitate knowledge-developing situations if we have taken an initial step to decolonise ourselves**. Have we thought deeply about decolonial challenges before holding these sessions? And are we open to adaptation when the field speaks to us?

Dr Cathy Smith provided an account of her time working in Belize on an international development project and the importance of "Understanding the Historical Context". Cathy carried out her PhD at the University of Edinburgh and was hired as a Project Officer for a UK Government funded Darwin Initiative project focusing on community-based fire management (CBFiM) in Belize, where the local population is comprised of peoples of African heritage who are descendants from the slave population, indigenous Mayan peoples, and Spanish-speaking peoples of mixed heritage, all of whom adopt different burning methods and use fire in different ways (e.g., savanna management, farming, hunting, disease and pest control). Hired as a Project Officer to report back to the UK funders about the progress and deliverables of the CBFiM project, Cathy quickly became aware of her positionality as a white British researcher and now, as an international development worker, and noticed parallels between the activities and tenets of the international development project and the previous colonial administration; *"I was in a position of power but felt inadequate in that position. I was not an expert in any of the things an expert supposedly is. This uncomfortable position drove my readings into post-colonial and decolonial literature"* (Cathy Smith, 2022).

Decolonising our research requires us to understand the **historical context** of the place we are working, both practically and theoretically, and we can begin to do this through **archival research** to identify the **dominant voices which have governed and shaped local systems**, power hierarchies, and social-ecological relationships. Cathy's archival research revealed that information regarding local peoples' fire uses, knowledges, and burning practices were not documented or discussed and, therefore, current CBFiM initiatives often reflect top-down

interventions aiming to erase local human signals through prescribed fire regimes. This is further reinforced through global fire models where data is collected, and information abstracted from specific case-studies to make sweeping generalisations for fire science knowledge production. Yet, if we are to decolonialize our research, we seek to be developers of knowledge and co-create understandings. Thus, we must ask, what is lost in the process of generalizing? What and who are we representing when we analyse "fire dots" on a map? What are we talking about when we talk about fire? Who sets fires and who is affected by fires; are these people visible?

Photo: Belizean forestry worker with British forester in a pine plantation. Decolonising our research requires us to understand the historical context of the place we are working. Credit: Belize Archives and Records Service

Kapil Yadav joined the workshop from the field in northern India where he is currently carrying out his research, sharing his journey and ideas towards "Reflexivity and Positionality as Gateways to Decolonising Research Design" when working in exploratory research or "exotic" situations. Rather than seeing further "by standing on the shoulders of giants" (Newton, 1676), Kapil wants to understand the "right sciences" and knowledge systems that we have inherited by looking down at the giants on whose shoulders we are standing. As researchers, do we join a community of scientific racism made up of perceived experts? What are the similarities between us, our research, and colonial anthropologists and scientists? To decolonise our research, **we must transcend inherited wisdoms of progress and how we measure progress**, such as progressing from savages to moderns. We speak of progress, but we do not ask what is lost in this process. We cannot know what is lost in this process. So, are we really progressing**? A decolonial research approach acknowledges that we live in a world of many worlds,** where divergent knowledges and practices continuously create new worlds, and it is through an inter-reflexive approach that we can begin to share this process of knowledge development and co-creation with and throughout these worlds. In this way, our works can *"decolonise the world around us, which will then come around and shape us. As everyone else before, we share this process of decolonisation, and we must start with ourselves"* (Kapil Yadav, 2022).

Looking Towards the Future

We are planning a second workshop to follow on from these critical conversations and to start developing a strategic, flexible, and inter-disciplinary decolonial research framework at the Centre. The group in attendance were asked *"if we are to decolonise ourselves and our research, how do we approach this in our fire-related scientific inquiries? And as a Centre, how can we support this process?"*

Leverhulme Wildfire's diversity of research encompasses fire in the tropics, north, wildland-urban interface, and global systems, and supports multiple working groups, such as the Fire Governance, Earth Observation of Fire, Fire in the Earth Systems, and DiverseK. The discussion following this question highlighted both an enthusiasm and imperative to address critical decolonial conversations across these broader, and often siloed areas of research and working groups, such as between those working on governance in local community settings and those working on earth observations in high-resolution global fire models. For instance, how can human agents in global or regional fire models be represented through a participatory and knowledge co-creating approach? How can local understandings of fire and burning practices be incorporated into, and inform the development of models? And how can we better understand the local environment we are analysing or modelling by listening to the field?

The group called attention to the historical and persisting lack of decolonial conversations within the natural or physical sciences and their complicity within the colonial project. Some initial discussions ensued, focusing on how we could start addressing these challenges, such as an interrogation of data sources and model inputs. This includes explicitly investigating the prescribed categories and definitions that systematically organise places, peoples, and processes for database development, the impacts of Northern Hemisphere biases in technologies and processes pertaining to satellite data used in model programming and simulations, and the implicit theories and assumptions that structure the datasets we readily use in our research.

The next workshop will focus on how we, as a fire science centre, can foster decolonial principles and take practical steps to iteratively develop and adopt meaningful and effective decolonisation strategies in our research. We aim to develop a formal allyship-based training programme across the centre to encourage self-introspection and inter-reflexivity when carrying out research, and to practically address questions related to 'how to' or 'how do we' decolonise fire sciences. In the long-term, cross-centre outputs will be developed that transcends traditionally accepted academic publication requirements.

Reading list

Decolonising Methodologies. Linda Tuhiawi Smith (2013, 2021)

Decolonisation as Democratisation: Global Insights into the South African Experience. Siseko Kumalo (editor) (2021)

Covid-19 and research in conflict-affected contexts: distanced methods and the digitalisation of suffering. Mwambari, Purdekova, and Bisoka (2021)

Race, Positionality and the Researcher. Njeri (2020)

First Contact with the Field: Experiences of an Early Career Researcher in the Context of National and International Politics in Kenya. Wamai (2014)

This report has been produced by the [Leverhulme Wildfires EDI Working Group](#)