

# **ERC Starting Grant 2022**

## **The Politics of Wildfires: A Comparative Study of Norms, Power and Conflict in the Global South**

### **FIREPOL**

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Host: University of Turin  
Beneficiary: Collegio Carlo Alberto  
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Extreme wildfires have been on the rise across the globe due to climate change and other human actions. Despite the abundant literature on fire ecology and a recognition of the linkages of wildfires to global warming, a patchy understanding of the relationship between fire and anthropogenic actions and their political drivers persists. Social sciences scholarship has mostly focused on fire mitigation and management in the Global North, while complex relationships between societies and fires in the Global South remain broadly unexplored. These two gaps in the academic literature in terms of scope and geography are reflected in a narrow public understanding of wildfires as ‘risks’ and ‘natural disasters’.

FIREPOL goes beyond the state of the art by leading the most rigorous, cross-continental study of the political drivers of wildfires in the Global South. Through a radical mixed-methods approach and a comparative perspective, my team and I will combine and analyse newly compiled fire policy and remote sensing data with qualitative case studies and ethnographic research. The aim will be to understand and explain how a range of political factors linked to formal policies and institutions, actor-driven power dynamics, and social contention shape the geographical distribution and social impact of wildfires, and public narratives about them.

FIREPOL is an ambitious, high-risk/high-gain project that will deliver a new framework to understand and explain the connections between politics and wildfires, at a timely moment when wildfires have been identified as crucial socio-ecological challenges within the global climate change agenda. It will develop a new theoretical framework around the concept of ‘wildfire commons’ as a way of engaging the academic community, policy stakeholders and the general public in the co-production of alternative pathways for the sustainable, equitable and politically engaged management of wildfires.

## Extended Synopsis of the Scientific Proposal

Wildfires are worldwide phenomena that have been shaping the environment and life on earth for millions of years. However, the global increase in the magnitude and spread of wildfires in recent decades has inaugurated what experts have called a **'new era of fire'** (Kelly et al. 2020) or a 'pyric transition' (Pyne 2009). The relevance of wildfires in the framework of global climate action has recently been acknowledged by the Intergovernmental Panel on Climate Change (IPCC 2021) and by COP26 (2021). Despite the abundant literature on wildfire ecology and its connection with climate change (Keywood et al. 2013, Gatti et al. 2021), **a patchy understanding of the relationship between fire and anthropogenic actions persists** (Bowman et al. 2011, McLauchan 2020). This vacuum can at least in part be explained by the fact that the social sciences' engagement with the topic has been limited both from a geographical perspective (with most research concentrated in the Global North), and in terms of its scope (with a primary focus on fire management and regulation rather than on the broader relationship between societies and fire) (McCaffrey et al. 2013).

Existing social sciences scholarship has focused predominantly on applied and rather technical topics such as fire mitigation and management, community preparedness, public response and post-fire recovery (e.g. Davis 2001, Busenberg 2004, O'Laughlin 2005, Dale 2006, Jensen 2006, Moritz et al. 2014). These studies generally take a narrow definition of politics as formal policies and regulation. At the same time, pioneering research considering other political factors such as power dynamics and social contention (e.g. Varkkey 2013, Kull 2004), despite its richness, does not go beyond single case studies. **Comparative and cross-scale analyses of wildfire politics remain a pending task** (Jefferson et al. 2020), a circumstance that substantially hinders our understanding of the political drivers of wildfires, beyond formal norms and institutions and across scales.

Such a thematically circumscribed literature provides relatively **limited insights for an agenda focused on the Global South, where wildfires are embedded in complex political, economic and social dynamics**. While in the Global North the increase in areas affected by fire is mainly driven by the expansion of urban areas – with fires often ignited by accident and spread due to the accumulation of fuel material in fire-prone environments where fire has been suppressed (Moreno et al. 1998, Pausas et al. 2008, Scott 2018) – in the Global South, wildfires are mostly linked to livelihoods, economic activities and development pathways. Intentional setting of 'wild' fires is a key livelihood means for the rural poor, both as part of customary land management practices (to increase nutritive browse for livestock and game) or as a contentious strategy (to claim land or as an act of protest). Commodification of wildfires for agrobusiness expansion is also common within low- and middle-income countries' development strategies, at times enabled by collusion and corruption among political and economic elites (Cano-Crespo et al. 2015, Cammelli et al. 2020, Varkkey 2013).

These two gaps in the academic literature in terms of the scope and geography of wildfire research are reflected in a narrow public understanding of wildfires almost **exclusively as 'natural disasters'** to be mitigated or suppressed. This approach does not do justice to the complexity of wildfires as socio-ecological processes with important connections to communities' livelihoods and cultures, and to development strategies. There is also a risk of reproducing (neo-)colonial views and practices generally focused on suppression, which do not consider how wildfires respond to broader systems of norms, power and conflict that have deep political roots.

**FIREPOL goes beyond the state of the art by leading the most rigorous, cross-continental comparative study of the political drivers of wildfires across the Global South.** *Through a radical multi-methods approach and a comparative transcontinental perspective, my team and I will combine and analyse newly compiled fire policy and remote sensing data with qualitative case studies and ethnographic research. The aim will be to understand and explain how a range of political factors linked to formal norms and institutions, actor-driven power dynamics, and social contention shape the geographical distribution and social impact of wildfires, as well as public narratives about them.*

FIREPOL relies on a truly **transdisciplinary perspective** that brings together insights from comparative and contentious politics, environmental geography, political and fire ecology, and development studies. Building on my cutting-edge research and decade-long experience developing and leading multidisciplinary research projects, my team and I will implement a broad and ambitious research agenda that will offer evidence-based findings around **four interconnected questions** on the relationships between politics and wildfires:

- RQ1:** *To what extent can different fire policy and institutional regimes explain the variation in wildfire patterns across different national contexts and over time?*
- RQ2:** *How are wildfires influenced by power dynamics among political actors (e.g. patronage politics, corruption, elite interests, social activism)?*
- RQ3:** *When and how do wildfires become a contentious issue and what are the implications for local communities?*

**RQ4:** How can wildfires be more accurately and fairly imagined, conceptualised and acted upon in policy-making and public debates?

**OBJECTIVES**

These four questions are reflected in the project’s main objectives, which in turn underlie the work packages illustrated below. **First**, FIREPOL aims to identify different combinations of policy and institutional mechanisms (or a typology of *fire policy regimes*) that, alongside other institutional and governance arrangements (e.g. decentralization), explain variation in wildfire patterns (geographical distribution). It will do so through a large-N statistical approach involving 78 countries across the Global South. **Second**, it will document how ‘para-political factors’ (beyond the realm of formal norms and institutions), such as corruption, social activism, elite configurations and other actor-driven power dynamics, interfere in the political process and shape wildfire patterns and narratives. This will be achieved through a qualitative comparative analysis of three country clusters (12 countries in total) across three world regions (sub-Saharan Africa, South Asia and South America) and two in-depth country cases. **Third**, by analysing contentious dynamics around wildfires among local communities, the project will provide insights on poorly understood connections between wildfires and identities, cultures and inequalities. This objective will be tackled through close engagement with local communities, mostly of rural poor, using ethnographic and participatory methods in two selected localities. **Fourth**, and more transversally, I will develop a new theoretical framework around the concept of ‘wildfire commons’. This will promote new, empirically grounded, collective imageries of wildfires that will be instrumental in engaging policy stakeholders and the public in crafting alternative pathways for the sustainable and equitable management of wildfires, notably within the global climate debate and action plans.

**ANALYTICAL FRAMEWORK**

FIREPOL is motivated by the reality that studying wildfires as political phenomena requires a broad understanding of politics. It will start by considering the state and policy apparatus (**supra-politics**) (RQ1). How wildfires are managed through specific laws, policies and institutions has been a key research question (Varkkey 2013, Feng et al. 2021); however, how these are combined within complex policy and institutional arrangements remains unclear. Their interaction with other characteristics of state governance are also poorly understood. FIREPOL will take a new approach to fire-relevant norms and institutions through the identification of a typology of *fire policy regimes*. These are defined as ensembles of policies and institutional arrangements in policy areas with direct/indirect impact on wildfires, characterized by specific attitudes towards fires (e.g. suppression, mitigation). I will then consider how these interact with other factors to shape wildfire patterns, including: decentralization, deregulation, institutional effectiveness and colonial legacy.

In countries characterized by relatively weak governance, what happens outside the formal political arena is often as or more important than what happens within it. This ‘politics beyond the state’ (Wapner 1995) – or ‘**para-politics**’ – is the focus of RQ2. Taking inspiration from the literature on the South Asia haze crisis in

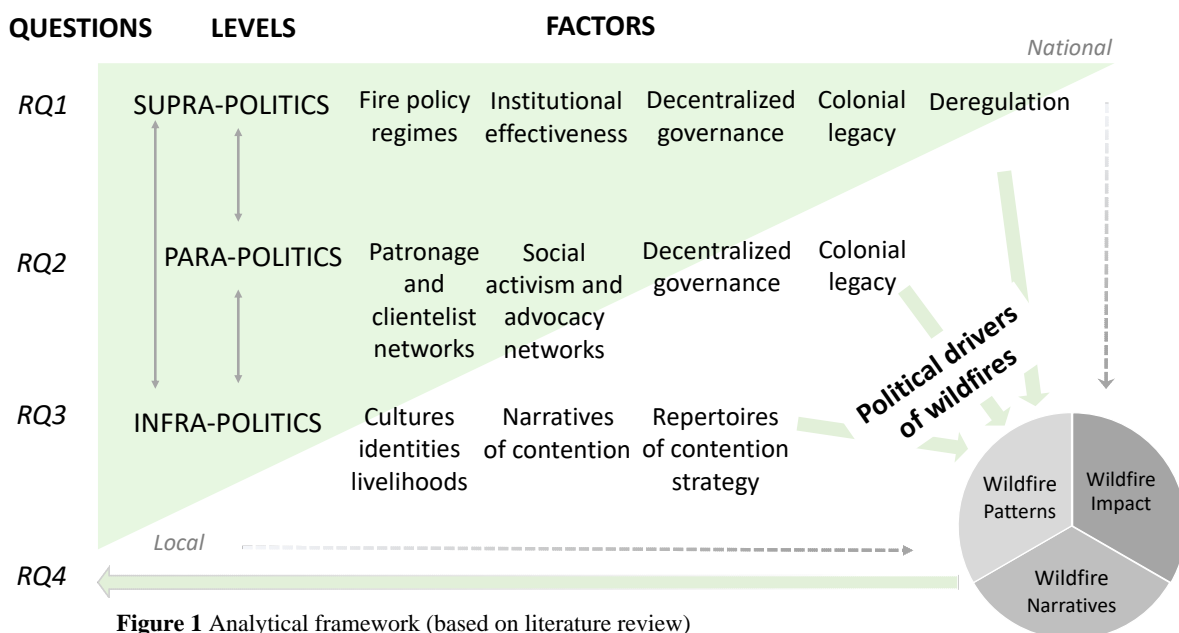


Figure 1 Analytical framework (based on literature review)

the 1990s and its transnational political economy implications (Varkkey 2013, Larson & Soto 2008), and from pioneering literature on how elites determine wildfire practices in Madagascar (Kull 2004), FIREPOL will consider cross-national effects of para-political factors including: the role of clientelist networks, the alignment between political and technocratic visions of fires, and the role of social activism and advocacy networks.

Finally, a focus on the localized dynamics of community interactions (**'infra-politics'**, Marche 2012) will offer insights into the distributive and identity politics of wildfires (RQ3). Wildfire conflicts can be the expression of conflicts among communities with different livelihood strategies and ethno-cultural ties, or they can be acts of protest against state policies and institutions (Kuhlken 1999, Cammelli et al. 2019, Úbeda 2016, Fontana 2014). Building on this and on classic contentious politics scholarship (McAdam et al. 2003), FIREPOL will study key aspects of wildfire contention: conflicting livelihoods and identities, narratives of contention, and repertoires of contention and strategy.

These three fields/levels of politics (supra-, para-, infra-) are at the core of **the project's analytical framework (Fig. 1)**. They will offer a comprehensive account of the political drivers of wildfires and their effects on: i) **wildfire patterns**, or the actual occurrence and distribution of fires in physical space; ii) **wildfire impacts**, or the material implications for communities and the broader society; and iii) **wildfire narratives**, or how societies conceptualise and discuss wildfires in the public sphere. This in turn will feed into the development of a new policy-relevant framework which conceptualises **wildfires as common resources ('commons')**.

## RESEARCH DESIGN, METHODS AND LOCATIONS

FIREPOL will leverage **four work packages (WPs)** to deliver the four main objectives and answer four core research questions (**Table 1**). The project's 'nested analysis approach' (Lieberman 2005, Rohlfing 2008) will move from large-N statistical analysis to qualitative comparative analysis of selected country cases to ethnographic studies of sub-national locations. Cases will span three regions: South Asia, South America and sub-Saharan Africa. Methodological designs for WPs 1, 2 and 3 rely on pilot studies, research findings from ongoing projects, and my expertise in multi-methods design, including combining statistical and ethnographic analysis (Fontana & Dyngeland 2022 [in review]), process tracing and comparative qualitative research (Fontana & Grugel 2016, Fontana 2019), and participatory methods including theatre-based research (Fontana 2022[in press], Fontana et al. 2022 [in prep.]). The project will rely on an **appropriate management structure and inclusive and equitable collaborations**. I will lead a **core team** formed by three post-doctoral research assistants (PDRAs) and one PhD student, supported by **four regional experts** for data collection and fieldwork preparation. We will work in close collaboration with **three regional partners**, who are leading wildfire scholars in the three regions and an **Advisory Board** formed by seven eight scholars in relevant disciplines who will offer advice on project management, research methods, publication strategy and policy engagement.

**WP 1 – Politics of Norms: Fire Policy Regimes and Institutions (Supra-politics):** The first WP is a large-N study of the relationship between different fire policy regimes and wildfire patterns [RQ1]. The first step will be to produce a detailed compendium of policies and institutions relevant to wildfires over a 20-year period in 78 countries across South America (12), sub-Saharan Africa (46) and South Asia (20). This will require gathering information from online legal repositories and through a review of policy documents and reports issued by governmental and non-governmental agencies (e.g. environmental/agriculture ministries, land commissions, forestry agencies, environmental NGOs). Each policy, legal or institutional measure will be coded according to: i) time frame; ii) type of measure (e.g. policy, law, decree); iii) norm category (e.g. forest, environmental); iv) a range of parameters capturing the policy aim (e.g. regulation, decentralization, participation); v) approach/expected effect on fire (e.g. suppression, mitigation). This longitudinal dataset has been tested on two countries (Brazil and Bolivia) in a pilot study. It will result in the first original, open-access dataset of fire-relevant policies and institutions available to date. Based on the dataset, a typology of fire policy regimes will be produced and their changes over two decades will be coded (2002–2022). This time frame coincides with the temporal window for which high-resolution remote sensing fire data are available. The second step in this WP will be to assemble a dataset of wildfire patterns at the country level, using open-access Earth Observation data (MODIS active fire and burned area products). To test how fire information could be used in the framework of this project, I executed a pilot study with remote sensing data of burnt areas to estimate cross-country differences in average fire patterns since 2001 along border polygons (50km wide) in 138 countries (G77 group). Border-matching allows me to control for ecological and climatic confounders, highlighting variation in cross-border fire patterns that could reasonably be caused by differences in fire policy regimes. Alongside existing literature, this exercise identified the following key variables for statistical inquiry: i) *institutional effectiveness*; ii) *colonial legacies*; iii) *decentralization*; iv) *deregulation*; v) *fire policy regimes*. Hypotheses will be consolidated and control measures identified at the project onset, and multivariate

regression and time series analysis will be performed in the R Statistical Software with packages such as FactoMineR (Lê et al. 2008) and approaches developed by Cryer & Chan (2008).

**WP 2 – Politics of Power: Elite Networks and Social Activism (Para-politics):** Drawing on the tools of qualitative comparative analysis (QCA) (Ragin 1987, Rihoux et al. 2021), the second WP will use a small-N comparative design to look at how para-political factors, within different configurations of formal norms and institutions, influence wildfires [RQ2]. Based on existing literature and case-based knowledge from the pilot study, three main factors related to the politics of power have been identified for the QCA (i, ii, iii), while two of the variables identified and tested in WP1 (iv and v), which might play a role in shaping power dynamics, will also be subject to further qualitative analysis: *i) role of clientelist networks; ii) (dis)alignment between political, technocratic and social visions on fires; iii) role of socio-environmental activism and advocacy networks; iv) colonial legacies; v) levels of decentralization.* Country cases for QCA will be selected with the aim of maximizing both variation in wildfire patterns (which suggests variation in politics) and in political conditions. This has led to the preliminary selection of three country clusters: 1) Argentina, Bolivia, Brazil, Paraguay; 2) Cambodia, Laos, Thailand, Vietnam; 3) Angola, Botswana, Namibia, Zambia. Case-based evidence on the identified factors will be collected for each of the 12 countries through literature and policy review. These data will be used to identify core combinations of conditions associated with a given outcome (for both narratives and fire patterns). Two country cases will be selected (one ‘theory-congruent’ and one ‘puzzling’) for in-depth empirical analysis. Researchers will conduct two to three months’ fieldwork in both countries to gather qualitative data through elite interviews (Grugel 2017, Semenova 2018) and deeper exploitation of primary sources (e.g. legal and policy documents). This rich and context-informed data will be processed using content analysis software (e.g. NVivo) and used for process tracing to unpack the para-political mechanisms behind given configurations of wildfire patterns and narratives (Beach & Rohlfing 2018).

**WP 3 – Politics of Contention (Infra-politics):** The third WP will focus on social contention around wildfires at the local level [RQ3] through ethnographic and participatory methods. It will consist of in-depth research on two case studies of wildfire conflicts, considering: *i) links to livelihoods, cultures and identities; ii) narratives of contention; iii) repertoires of contention and strategy.* A preliminary selection of cases of wildfire conflicts includes the Caprivi Strip region in north-east Namibia (Humphrey 2018, Lenggenhager 2015, Rousset 2003) and the Tonle Sap region in north-west Cambodia (Flynn & Vantha 2021, IUCN 2016, Lohani et al. 2020). Considering the multiple vulnerabilities of communities in conflict (Fontana 2017), the methodological approach will entail stakeholders’ engagement and participation. Researchers will spend a total of four to six months in each location. Information on the conflicts will be collected using the following methods: *i) semi-structured interviews with key informants (~20 per location) on the motives, characteristics and timeframes of wildfire conflicts; ii) ethnographic observation of interactions between groups, daily activities, community meetings, and other social and political events; iii) participatory workshops with different groups in conflict (separately), using techniques such as actor maps and conflict timelines to gather information on the conflicts; iv) community theatre activities bringing together members from different groups in conflict with each other.* Inspired by the Theatre of the Oppressed (TO) (Boal 1979) and following a model already tested for an ongoing project (see Appendix), these activities will consist of theatre workshops resulting in a play that will tour four localities. Performances and post-performance discussions will be video-recorded. The research team will interview participants and audience members. Taken together, these activities will offer insights on the nature and dynamics of wildfire conflicts and their connections to livelihoods, identities and cultures; they will also aim to generate positive interventions with the potential to help communities discuss conflictual issues and identify possible solutions. All the material collected will be analysed using qualitative content analysis software in order to identify key discursive frames and recurrent themes.

**WP 4 – Policy Pathways: From Local to Global:** This WP will bring WPs 1, 2 and 3 in close conversation in order to generate a transregional comparison of wildfire politics across the Global South and a new theoretical framework to more accurately and fairly imagine, conceptualise and act upon wildfires in policy and public debate [RQ4]. It will synthesize accumulated knowledge across multiple countries, scales and methodological approaches. Taking inspiration from the well-known literature on ‘common pool resources’ (Ostrom 1990, Agrawal 2003, Harvey 2011), I will put forward the ground-breaking idea of ‘wildfire commons’. I propose a move away from the mainstream view of wildfires as inherently ‘bad’ or destructive and from conceptualizations of fires as ‘risks’ or ‘natural disasters’, towards a more nuanced understanding of wildfires as common resources. This epistemological shift, grounded on an analytical, contextualized, historicised approach, will open up new perspectives for discussion of wildfires both in policy and public opinion. This WP will be mostly desk-based and will involve innovative theoretical elaboration based on the empirical findings as well as dissemination efforts targeted particularly at the international policy-making and

media communities. To that end, two events will be organized: i) building on my experience publishing my first monograph with Cambridge University Press, an academic workshop will be organized to improve the quality of a book manuscript and foster intellectual discussion, condensing the project results and refining the theoretical argument, with the participation of AB members and other leading academics; ii) drawing from my experience facilitating knowledge co-production events (Oldekop et al. 2016), an event targeted at policy and media stakeholders will be organized, possibly in the framework of COP, with the aim of promoting a wide-ranging discussion on wildfires, which considers the complexities embedded in wildfire politics and attempts to steer the global agenda away from a narrow understanding of wildfires exclusively as natural hazards.

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