Original Article

Translation and Transmission of Climate Adaptation Policy Discourse

Hameed Jamali[*], Shakeel Hayat, Muhammad Zakria Jan & Samira Shams

Center for Water Informatics & Climate Resilience, Institute of Management Sciences, Peshawar, Pakistani

Abstract

Adaptation to climate change is recognised as a development issue and has correspondingly given rise to a set of discourses and policies –the Adaptation Policy Framework (APF). This paper investigates how APF is transmitted through internationally-financed policy processes and projects in Pakistan. APF follows the same pattern (framing, design, mechanisms, actors) as development-oriented aid. Yet, from conception to implementation, APF transmission does not follow a top-down path but appears a socially negotiated process, involving brokers and translators where multi-dimensional issues are translated into community needs by applying classical development intervention tools, thereby legitimising/ de-legitimising certain actions and producing project realities.

1. INTRODUCTION

According to the growing and widely accepted scientific evidence, the changing climate is likely to have severe impacts on social, economic, and natural systems, including disproportional effects on marginalised people in so-called developing countries (Parry et al. 2007; Stocker et al. 2013). Since adaptation has been established as a key response to deal with the consequences of climate change in the context of the "global climate regime" (Yamin and Depledge 2004), a growing body of actors, scientific evidence, policy initiatives and funding mechanisms have surfaced. Despite some differences, what can be labelled an adaptation policy framework (APF) has emerged among the climate regime's actors. They by and large share a common understanding of what the general problem and specific issues are, and what solutions are to be adopted to resolve them, informed by a common worldview. We contend that the APF can be observed empirically through discourses, policies and specific projects.

A central feature of the APF is that adaptation to climate change (ACC) is now recognised as a development issue (Jamali 2015; Leary et al. 2008; Scoville-Simonds 2015). The major development aid agencies have incorporated ACC as a key area of intervention in developing countries, based on the observation that climate change will severely hamper past and future development initiatives (Huq et al. 2004; African Development Bank et al. 2003; Scoville-Simonds, forthcoming). In this process, marginalised people living in developing countries have been identified as the most 'vulnerable' to the impacts of changing climate due to their weaker 'adaptive capacity' and relatively strong dependence on natural resources for their livelihoods (UNFCCC 1992; Parry et al. 2007).

This raises important questions about the similarities and differences between previous development

[*]Corresponding Author: Center for Water Informatics & Climate Resilience, Institute of Management Sciences, Peshawar, Pakistan
✉ hameed.jamali@gmail.com

initiatives and development under the APF, such as: what is meant by development, who defines what development or adaptation means in local contexts and what should be done to 'develop' the so-called 'undeveloped' groups of people? What are the concrete actions it entails, with what consequences? We postulate here that people and societies not only respond to the physical impacts of climate change but also to the social construction of climate change enacted through discourses and associated policies . We also assume the existence of a chain of individuals and organisations who relay these discourses and policies. The purpose of this paper is to understand this process of transmission, more precisely how the actors involved at the national and sub-national levels contextualise and appropriate a globally established policy framework into concrete projects within a given political system, how they resolve conflicting issues in the multifaceted web of social realities on the ground, construct alliances, and what are the consequences for the achievement of the stated policy goals and for the marginalised groups.

Based on our empirical work in Pakistan, we provide in this paper a detailed analysis of how the adaptation policy framework is being transmitted and implemented at the national and sub-national levels. Our hypothesis is that the APF, mainstreamed into development assistance channels, is transmitted through internationally-financed policies and projects, the transmission being facilitated by 'development brokers' (Bierschenk, Chauveau, and Olivier de Sardan 2000), a class of elites within the state apparatus and at the subnational level that has a strong and direct interest in maintaining a continuous flow of resources for aid. A first element of our demonstration is Pakistan's national climate change policy conformity with the APF at the level of discourse. A second element is the transmission of this discourse to the local level by ACC projects, observed in national ACC projects.

Adaptation policy framework

The APF can be identified as an ensemble of dominant discourses, ideas, policy recommendations, and specific solutions on adaptation that are usually promoted at the international level by experts and international organisation (for example, UNFCCC), and are broadly accepted and supported by associated international adaptation funding such as the Adaptation Fund, Global Climate Fund, among others. Within this commonly agreed framework, adaptation has largely been defined as a development issue (Ayers and Dodman 2010; Agrawala 2004; Swart and Raes 2007) characterised by techno-managerial solutions (Jamali 2015), a developing country issue (Huq et al. 2004), and justified on the basis of common but differentiated responsibility for climate change (UNFCCC 1992, Art. 3.1, 4.4, 4.8) and justice and fairness arguments (Adger et al. 2006; Paavola and Adger 2006; Thomas and Twyman 2005) with more funding allocation for developing countries on these grounds (Grasso 2010).

2. METHODOLOGY

In this paper, the important questions to be asked for our analysis are: who defines the problem of climate change in the first place, how are solutions proposed and implemented through adaptation projects and how local people – labelled as vulnerable – negotiate with them. What kinds of actors are engaged in this process, what specific ideas, lexicon and activities do they rely upon, and why are these apparently accepted by the 'target beneficiaries'? How do global ideas come to be realised as 'community needs' by the experts in adaptation practice, and mainstreamed into policy and projects? We draw upon two complementary conceptual approaches for analysis of this transmission process. First is a general critical approach to the relationship between discourse and policy, and second, a more specific concept particularly relevant to this paper, that of the role of 'brokers and translators'.

Critical discourse and policy analysis

Critical discourse analysis provides some insights and tools on how the APF is 'translated' and 'recontextualised' in such a way that appeal and fit-in local contexts. The APF, social representations and embedded power relations can be observed empirically through the actors' social practices, especially within their discourses. A discourse can be defined as a "specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices, through which meaning is given to physical and social realities" (Hajer 1995: 44). As formulated by Bourdieu (1991), any act of communication, including language, is a symbolic interaction between distinct universes of signification, but also a power relation between speakers elaborated within a social space that defines what is or not a 'legitimate' discourse. By being expressed by powerful actors, a discourse becomes 'legitimate' and 'dominant', institutionalised and internalised, so familiar that it goes unnoticed, a priori acceptable and accepted despite the fact that it contains and promotes a specific lexicon, an

ideology, a cultural perspective and implicit power relations. It contains rules that structure perceptions and behaviour, which variably enable and include, or constrain and exclude (Foucault 1971). In our analysis, the concept of discourse is a system of representation, and is about language and practice drawn from the insights of Foucault's ideas on power/knowledge (Gordon 1980). Discourses determine which framings of a certain problem become dominant, thereby influencing the suggested possibilities for action. Defining a certain phenomenon is the first step in any governance model (Hufty 2011). The framing of a phenomenon in a specific manner confines solutions and options within that frame (O'Brien at al. 2007). For example, the 'problem' of climate change and the need for adaptation as a 'solution' is defined in a technical and apolitical manner in mainstream adaptation research, and equally suggest short-term project-based approaches. It is not important to identify which discourse is 'true', but rather "how power is exercised through language and discourse" (Hajer and Versteeg 2011, 84). The concepts of knowledge and power in discourse analysis are vital in determining the authority of a certain actor's views, promoting a specific kind of information as 'expert knowledge' and valid, while suppressing other non-expert views.

Of course, no social space is uniform; it is crisscrossed by different discourses in competition, linked to distinct positions in the social space and in the 'discursive market' (Bourdieu 1991), where discourses are produced, adopted or rejected. Thus, the participants in a given social space, in our case the 'beneficiaries', have some agency. They participate in the development process and can send signals through passive or active resistance (Scott 1985), possibly leading to a reformulation of the discourses or the policies. However, the ideas and policies developed by more powerful actors are more likely to circulate towards less powerful actors, usually from the North to the South (Merry 2006), or from development experts to the local level.

The (re)discovery of the role of language played an important part in advancing critical literature on policy analysis (Fischer and Forester 1993; Roe 1994; Hajer 1995; Bacchi 2009; Yanow 2007; Howarth 2010). Drawing on discourse theory, the post-positivist approach to policy studies provides insights on how policy problems are constructed, defined, and framed in a specific way, reflecting how "economic, political, and cultural contexts shape both the content and language of policy documents" (Taylor 1997, 28, emphasis added). In this way, the critical policy analysis assumes that knowledge is highly situated, problematic, and political in nature. A particular discourse significantly "orders the way in which policy actors perceive reality, define problems, and choose to pursue solutions in a particular direction" (Hajer and Laws 2006, 261).

Based on these insights our approach to policy analysis is different from the standard normative methods in which policies are perceived as identifying problems and suggesting solutions through policy prescriptions. We start the analysis from the point when a certain phenomenon is perceived as a 'problem' in the first place, for which groups of people and through what means. We analyse how a certain phenomenon gets discursively 'produced' where we consider that policy functions not only as 'solving problems' but as a discourse that can have real effects by producing projects and actions, sometimes with unintended results on people and livelihoods. The way a social phenomenon is expressed through a discourse in important political discussions and subsequently articulated in the policy documents can have consequences on the wider social outcomes.

Development brokers

The concept of 'development brokers' – courtiers du développement – drawing on the work of Bierschenk, Chauveau, and Olivier de Sardan (2000) and Lewis and Mosse (2006), is illuminating for analysing the transmission of global discourses and their application in local contexts. Building on pre-existing networks, creating or relaying them, brokers connect local, national and international actors. They derive their symbolic capital or legitimacy from their position in networks' nodes, from their expertise, their extensive knowledge of the practicalities of policy making, but also their claim to represent local people.

It is a long-standing theme in the anthropology of development. Courtiers have agency, they "operate as active agents, building social, political, and economic roles, rather than simply following normative scripts" (Lewis and Mosse 2006, 11), as well as a specific culture. Albeit not uniform, they can be seen as a class, which shares certain "competencies, strategies, and careers" as they come together through "mutual enrolment and the interlocking of interests that produces project realities" (ibid., 13), but also as individuals who compete for the resources and their position in their social field (Bourdieu 1991).

A major category of the brokers involved in the transmission of global adaptation policies and discourses can be called 'development experts', especially NGO managers of non-governmental organisations (NGOs), academics, consultants or state agency bureaucrats. Originating from the educated elites, they have the expertise and the networks that enable them to play a central role in the 'norms cascade' process (Finnemore and Sikkink 1998) – the transmission of discourses and policies into the national context, through a process of translation (Callon 1986), resulting in their internalisation, rejection or adoption (Hufty 2011).

This role as brokers allows them some influence over the transmission of discourses and policies, but conditioned on their formal adherence to the international policy framework. Kothari (2005, 425) shows that the "increasing professionalisation of international development has enabled the expansion of the neoliberal agenda of development agencies" where 'development experts' play a central role in promoting 'unilinear notions of modernising progress'. This agenda, dominant since the 1980s (Harvey 2005), is associated with the application of a toolkit based on community-based and participatory approaches that claims to bring people's voices to the surface. In fact participation, mainstreamed in the development regime (Cooke and Kothari 2001), often results in assigning additional power and authority to 'experts' mostly located outside the local contexts (Mosse 2001), and in the neutralisation of dissenting voices (Kothari 2005). The top level of development experts in the South has tended to internalise the values of their Western counterparts, promoting managerial approaches and "projecting developmentalist / ethnocentric mythologies onto the subaltern" (Kapoor 2004: 630), to a point that the geographic North-South divide of experts has become blurred and that a 'class apartheid' has emerged (Sharpe and Spivak 2003). The Third World or the subaltern is produced by this class of people who originate both from the Third World and from the West (Said 1978).

As demonstrated by Mosse (2001) and Bebbington (2005), in participatory processes NGOs clearly construct representations of the people for whom they claim to speak and label the result as 'local knowledge' or 'community needs', often not in the interest of marginalised groups. This is not intended to demonise NGOs, many of which operate under the best of intentions. Rather, this problem is structural, as NGOs activities are largely donor-controlled and, despite claims of participation, they essentially adopt a top-down method, in line with the managerial approach that enables them to govern more efficiently the development enterprise in view of their own constraints (Townsend et al. 2002). Along this logic, NGOs are increasingly being encouraged to continuously adjust their objectives and methods, from being a "source of innovation, organisational pluralism, alternative knowledge creation" towards acting merely as "contractor for national governments and international aid agencies" (Hulme 1994, 257). National NGOs reliance on international aid agencies for financing their organisational structures, programmes and projects suggests that they lack autonomy when it comes to promoting alternative ideas that do not match these agencies' agendas. This indicates the degree of influence of the aid agencies in the selection of worldviews and ideas on which the national development agendas are based, even if there is recontextualisation and translation.

Our data sources are of three types, first, official documents, reports, and academic publications; second, semi-structured interviews from prominent national level experts, NGOs, think tanks, and other stakeholders of the national debate on climate change; and third, participant observation of key debates, national and sub-national level workshops, seminars and training events on climate change. These spaces of knowledge brokerage and translation are important venues to observe how the global ideas are converted into actionable interventions.

Adaptation of Pakistan's national climate change policy

In this section, we analyse Pakistan's national climate change policy document approved by the cabinet in September 2012 and officially launched in February 2013 (Government of Pakistan 2012). However, after the Paris Climate Award in 2015, Pakistan accepted to contribute to the global emission reduction efforts. Now Pakistan has updated the National Climate Change Policy in 2021. The total length of the policy document is 48 pages, excluding the preamble and table of contents sections. We analyse conceptualisation of the policy and its origins by conducting frame and content analysis drawing on critical discursive methods to understand the context and funding sources and its influence on the document. How the problem of climate change is constructed, what solutions are proposed, what kind of justifications are mobilised, target audience of the policy document, and how some groups are labelled as vulnerable. Existing reviews of the policy document and interviews with some experts and NGOs are

conducted to understand the perceived legitimacy of policy content and formulation process.

Funding for policy preparation process was provided by the United Nations Development Programme (UNDP) and the entire policy preparation team was based at the One UN Joint Programme on Environment in Islamabad, rather than in a government department. While not questioning the intentions of the policy document writers, the language and terminology used needs to be critically assessed, shedding light on the underlying assumptions, use of expert knowledge, influence of dominant worldviews, and the overall conceptualisation of climate change. The funding and technical advice during this process has significantly affected the overall framing of the document as explained below.

The first notable observation is the effort of framing the issue of climate change and subsequently suggesting solutions within that particular frame while excluding other contextual factors. The explicit goal of the government's climate change policy is presented as to "ensure that climate change is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate resilient development" (Government of Pakistan 2012, 1). The adaptation section starts by labelling Pakistan as "most vulnerable to climate change", while having a low "technical and financial capacity" to deal with the "adverse impacts", making a case for needing financial and technical help for adaptation from external funding agencies in order to "continue on a development path" (ibid., 3).

The typical argument of climate change as posing "serious risk to poverty reduction efforts", which will "undo decades of development efforts" is provided to link poverty and climate change (ibid., 19). Poor people are shown to be more "vulnerable because of their high dependence on natural resources, their limited technical capacity and insufficient financial resources" to deal with the impacts of climate change (ibid., 19-20). The level of poverty, dependence on natural resources and population increase, all related to the marginalised sections of society, are shown as reasons for the severe impacts of climate change in Pakistan. Essentially, this means placing the responsibility on the existing conditions of marginalised groups for the potential effects of climate change, rather than examining historical and structural trajectories that play a more central role in complicating climate change effects and the inability of these groups to cope with these impacts (for example, see Robbins 2004; Paulson and Gezon 2005).

Vulnerability is conceptualised in terms of potential damage to a geographical area or a sector caused by climate-related disasters such as "tropical cyclones, tropical storms and floods", which are directly linked to climate change only (Government of Pakistan 2012, 16). It has been argued that these events may be directly or indirectly caused by climatic changes but turn into disasters due to man-made reasons (Mustafa 1998). The document clearly puts climate change at the centre of all the issues faced by the coastal communities and ecosystems, overlooking the social complexities, political issues and other root causes that make people vulnerable in the first place. The policy document is primarily based on the 'technical framing' (O'Brien et al. 2007) of climate change in view of adaptation measures, with a 'depersonalisation' of the diagnosis. This can also be verified with the frequency of the terms being used in the document. For example, 'people' is used only eight times while 'sector' is mentioned 61 times in the policy document.

A number of technological solutions are proposed for adaptation, such as finding "technological breakthrough for irrigation systems", "technological innovations for improved water efficiency for crops" and construction of "barriers" to combat sea intrusion (Government of Pakistan 2012, 15–16). For arid areas, such as Balochistan, other policy measures are to "develop technologically efficient equipment for the rehabilitation of Karez irrigation systems including artificial recharge of groundwater" (ibid., 16). Section 10 outlining technology transfer is full of catchy phrases to "seek technological breakthroughs to harness the potential of geothermal energy", and "explore new technological breakthroughs in the field of bio-fuels" (ibid., 36).

The common development jargon is excessively utilised to highlight issues and suggest solutions. For example, the adaptation section of the policy starts by highlighting low "technical and financial capacity" to deal with the "adverse impacts" of climate change (ibid., 3). The entire section six of the policy is entitled capacity building and institutional strengthening with a sub-section on capacity enhancement (ibid., 30-32). Capacity building is a suggested policy measure for water, agriculture and livestock, forestry, disaster preparedness and health. Similarly, 'awareness raising' appears regularly as a policy recommendation in many sections, including objective nine, which seeks to 'enhance the awareness' and 'institutional capacity' of relevant 'stakeholders' (ibid., 1) with section seven on 'awareness raising' to "create broad awareness of climate change issues and its impact" (ibid., 33). The policy recommendations include developing "a national climate change awareness program" and "ensure mass awareness" in various

sectors that are likely to be impacted by climate change through mass media, "student and community mobilization" and "climate change sensitization workshops", among others.

Objective number seven of the document specifically mentions attracting and facilitating international funding for implementing the policy goals through the short-term funding mechanism such as Fast-start Finance and recommends "creating an enabling environment" to take advantage of the available funding. The entire finance section is geared towards "benefit[ing] from future international financial mechanisms" (ibid., 35), without mentioning any national level efforts to generate funds for addressing climate change. The lead policy author specifically mentioned the Green Climate Fund as a way forward for realising policy aims (personal interview).

In addition to attracting international funding, the document seems to aim more at an international public than a national one; the term 'international/global' appears 41 times as opposed to 'local' which is used only 16 times in the entire policy document. Not only the terminology but also the overall framing of the issue resembles international discourse and policy, where national priorities and local needs seem to be secondary.

Not only conceptualisation but the legitimacy of the policy document and its preparation process are perceived as problematic. A number of respondents raised their concerns about policy recommendations. A very prominent expert stated that "the quality of the document is exceptionally poor and I did not comment on it when they asked me" (personal interview). Research and Development Foundation (RDF), a Sindh-based NGO conducted a participatory review of the document with reference to Sindh province and concluded that the policy seems to be a "wish-list of open-ended, less directional and less specific measures without a time frame" (RDF 2011, 12).

Despite the rhetoric of participation, some actors have raised concerns about meaningful participation and consultative processes during the policy formulation process (personal communications during field research). For example, one review by Strengthening Participatory Organisation (SPO), a well-known national NGO working with numerous community-based organisations (CBOs) across Pakistan, found that most of the policy recommendations are very general, or duplications of other existing policies and overzealous in water management, forestry and protecting the glaciers in Himalayan region, which are difficult to implement and monitor (SPO 2012). According to this review, the implementation mechanism for policy measures and mobilisation of financial resources remains an ambiguous area and at best relies on external help.

Analysis of Pakistan's national climate change policy, international funding sources, apparent policy audience and its perceived legitimacy by various actors shows how the overall framing replicates the international adaptation policy framework at the national level, which can directly influence projects at the sub-national, as analysed in the next section.

Transmission of APF at sub-national level

To understand the transmission of APF at sub-national levels, analysis of adaptation projects as well as the influence of external funding on national and local NGOs can provide useful insights. Although only few small-scale adaptation projects are being implemented in Pakistan, their analysis sheds light on involved actors, implementation approaches and nature of activities as modes of APF transmission into on-the-ground activities. Most of these projects are small-scale activities implemented by NGOs funded by external development aid agencies.

The One UN Joint Programme on Environment in Pakistan, through its Grass Roots Initiative Programme funded 24 projects to small-scale NGOs across the country for environmental issues, including climate change adaptation projects. The titles of approved projects are similar to community development activities funded under different programmes . Similarly, the Global Environment Facility (GEF) Small Grants Programme has funded 57 community-based projects for addressing climate change related issues all over the country . These projects are implemented at small-scale by 'participatory approaches', to involve local people and usually include 'awareness raising', and the 'training and capacity building' components, through which information about climate change and its impacts are shared among local people.

Climate Leadership for Effective Adaptation and Resilience (CLEAR) – a project being implemented by Leadership for Environment and Development (LEAD) Pakistan – aims at "[b]uilding the capacity of southern Pakistan's civil society to adapt to climate change". The project is providing training to master

trainers from 45 small NGOs and CBOs, who subsequently provide 'awareness raising' on climate change adaptation to their own organisations and local 'vulnerable communities', in order to prepare the Local Adaptation Plans of Actions (LAPAs). These LAPAs are used to the development of small-scale projects implemented by these NGOs and CBOs .

The LAPA preparation follows a typical process of problem identification, suggested solutions, available resources, stakeholders and risks involved with the application of participatory methods. With specifically developed tools, the LAPA process apparently cleans up the complex social realities (and social dimensions of climate change) into simplified data to fit in the models, charts and diagrams to identify implementable activities within the scope of project. This process leaves little room for exploring other activities and paves the way for 'training and awareness creation', as the only means of adaptation.

Since 'adaptation' is being implemented by the very same actors engaged in development, some of the activities have been converted almost into rituals. Trainings and awareness creation are an integral part of projects. It was repetitively emphasised in climate change project events that the local communities must be given 'awareness' and 'training' for climate change adaptation. Lack of awareness about climate change among local population and the need for training and capacity building were mentioned on 54 occasions by 17 respondents during field-level interviews. Creating awareness and providing training were the most popular activities according to the respondents from local CBOs and NGOs. One of the NGO representatives described the importance of awareness creation and training in these words:

Local people do not know about climate change. First of all, we must inform them about climate change and how it is affecting their livelihoods. For adaptation, awareness creation and providing training are integral parts of any project on climate change. (Int # LNGO15).

Similarly, the commonly used terms, such as 'participatory', 'empowerment', 'stakeholders' were repeatedly used while referring to climate change projects and activities. On many occasions, people's marginality was directly attributed to climate change and solutions were sought in the form of projects with familiar activities of 'training', 'capacity building' and 'awareness creation'. On the other hand, decreasing irrigation water, local waste dumps, groundwater depletion and poverty were directly linked to climate change impacts by many respondents (Int # LNGO11; Int # LNGO16; Int # LNGO14; Int # LNGO04; Int # LNGO18). When asked about their sources of information about climate change, most of them referred to the Internet, newspapers, and trainings conducted by the international NGOs.

Trainings are an effective means of transferring information. At the sub-national level a training orientation session organised by LEAD for the CLEAR projects' partner NGOs in Southern Sindh was attended by one of the authors. The 19 participants from 15 NGOs and CBOs were briefed about the global nature of climate change and its impacts on local livelihoods. It was emphasised that the local communities must be given 'awareness' and 'training', in order to adapt to these impacts, through supporting their own initiatives by 'participatory' approaches.

Another three-day national level workshop on climate change was observed, with participation from government departments, research organisations, NGOs, international organisations, academics and the private sector . Pakistan's vulnerability to the impacts of climate change, scientific evidence, and lack of resources were key topics, where the need for raising awareness and capacity building were emphasised for meaningful adaptation. Another training was organised for the international NGOs "to plan, integrate and mobilize climate change adaptation and mitigation strategies at the local level, through the formulation of draft action plans" (LEAD 2012). These international NGOs transfer adaptation knowledge to their respective local partners, through small-scale projects and the funding on climate change adaptation.

Re-labelling of existing projects and activities as climate change adaptation is practiced by high-level experts involved in drafting Pakistan's national climate change policy. For instance, the lead author of Pakistan' climate change policy explained that "we can re-label many activities as adaptation so that the global climate change community acknowledges our contributions and we can secure more climate change funds" (Int # GOVEXP01). Correspondingly, global level policy prescriptions, in the form of 'technical guidelines' and scientific research, are translated into local contexts by international organisations operating in this field, in addition to direct funding to Pakistan-based organisations (see Figure 1 for a simplified illustration).

Since addressing climate change is a core objective of international organisations, aid agencies and networks , it directly influences activities of NGOs as their funding is dependent on these agencies and organisations. One of the climate change focal persons in an international NGO acknowledged that since

climate change was an emerging issue their organisation arranged international events and conferences to be acknowledged as active leaders in this area and to attract funding for climate change activities in Pakistan (Int # INGO13). Another respondent from a well-known international organisation provided justification that since they are totally dependent on funding for continuation of their activities, they changed their strategies accordingly, in order to continue their activities (Int # INGO09).

To understand the role of NGOs in the transmission of APF, we must realise the existing pattern of spatial distribution of NGOs and their dependency relationships. The international NGOs are mostly based in the capital city and mostly implement projects through subcontracting local and national NGOs. In this way, national and local NGOs are directly dependent on international NGOs and aid agencies for their projects. This chain of dependency creates common interests and coalitions for combined efforts by all the organisations (and people working in them) to justify adaptation as a core issue of local people.

The analysis of adaptation projects shows that global discourse on climate change has significantly penetrated the implementation channels. Existing issues in the field of 'rural development' (for example, lack of irrigation water, low rates of return for small farmers, poverty, lack of income earning opportunities, degrading natural resource base and so on) are now being directly linked to concepts, such as vulnerability to climate change impacts. Comparatively, the suggested solutions (for example, improving irrigation efficiency, introducing drought resistant crops, and women's empowerment) are justified under the climate change adaptation banner. Previously known as Village Development Plans, the documents prepared by conducting the activities of training and participatory workshops are now renamed as Local Adaptation Plans of Actions.

Discussion

Taken as a whole, between the national policy process and the transmission at the sub-national level as discussed in the previous two main sections, a number of points can be highlighted. Pakistan's climate policy seems to be largely influenced by the techno-managerial and apolitical framings and shows a process of translation of international adaptation policy framework into national contexts. The policy conceptualises climate change as an external and naturalised threat and, therefore, suggests solutions that are detached from socio-environmental, cultural, and political contexts. International funding sources for policy-making clearly influence the content and framing of issues where policy audience are apparently international funding agencies and inter-governmental organisations such as the UNFCCC. Due to these reasons, the legitimacy of the policy process and its contents has been questioned by various actors.

Although, the 'problem' of climate change is portrayed as having different causal nature, interestingly, it is being addressed through the very similar solutions, with the very same actors and through the mechanisms used in 'doing development' but with the expectation of different results. From the activities envisaged in the LAPAs and other policy documents, the existing issues of marginality are being linked to climate change, yet with similar solutions. This raises the question that if the issues, their causal nature, proposed solutions, implementing mechanisms, actors involved and the intended beneficiaries are all similar, why are these being relabelled under the banner of climate change adaptation? A possible explanation can be that the ideas generated at the national level with associated policies (and finances) are difficult to simply impose in a top-down fashion. Broad support is needed from other actors at the different levels, including the intended beneficiaries for their legitimacy. The techniques and tools of 'participatory' approaches are applied in order to portray that the proposed interventions are based on local needs. This is usually practiced by offering CBOs projects that are completely dependent on international NGOs and aid agencies.

At the implementation level, the approaches in adaptation are very similar to those of 'rural development', such as 'community based-adaptation', 'participatory assessments', where the target beneficiaries need 'awareness creation' and 'training' to get 'empowered' and 'sensitised' for project sustainability. Donor agencies prefer it when project beneficiaries receive training, since people are then enabled to participate and become "self-actualising, empowered individuals", making people more self-aware (Carden et al. 2022) satisfies donors that their interventions will sustain by transferring the (expert) knowledge (Watkins and Swidler 2013, 210). Trainings are an easy indicator of success that both brokers and donors can report for achievement of project's objectives, since there are agreed upon rituals of conducting training and "anyone can be trained on anything" (ibid., 211). Additionally, the participants like these trainings, as they get a sense of inclusion in the activities of the educated elite. In the development debate, the 'problem' of poverty is portrayed as caused by complex socio-economic,

environmental and historical factors (Miah et al, 2024), but the most common solutions include 'awareness raising', 'capacity building and training', and the promotion of 'sustainable development' through externally funded projects, which have been severely questioned and debated (Cornwall and Eade 2010; Ferguson 1990).

In application of these projects, the identified issues of target beneficiaries are often conceived as technical questions of management, where the need for training people is generated, since these NGOs have limited capacity to challenge or transform other factors and hence 'training' is suggested as the best solution. For example, Li and Wang (2023) argue that in many development projects, issues faced by beneficiaries are simplified into technical problems, leading to a focus on training as the primary solution without addressing broader systemic issues. Similarly, there is a tendency for NGOs to rely on training programs as a default solution to complex social problems, overlooking the need for systemic change (Chen and. Wang, 2022). Moreover, Kim and Park (2022) emphasize the importance of recognizing the limitations of training initiatives in addressing deep-rooted societal issues, advocating for a more comprehensive approach to development interventions. However, the analysis of people's views shows that their realities and priorities are different from what adaptation policies and discourses contend.

Although the participatory concepts apparently value 'local knowledge' as the key to understanding concerns of people, the need for awareness creation – especially among local people – is usually a major activity in the projects. However, awareness creation also implicitly indicates that the (development) experts have knowledge, while local people do not, which also grants the experts a superior position in this structure of givers and receivers, both in material form and in terms of their authority.

In this process, brokers and translators, mostly hailing from the educated middle-income elites in the global South play a central role in the transmission of global discourses and associated policies by serving as 'development experts' within government agencies, international organisations, NGOs, and other networks. The most educated cadres of development experts work at the NGO headquarters and international organisations based in the capital city and provincial headquarters, preparing project strategies and writing reports and funding proposals for continuation of activities (Watkins and Swidler 2013; author's personal experience). The relatively less educated ones are based at district-level NGOs offices. The last category is CBOs whose volunteers provide entry points to the villages and the intended target 'beneficiaries'. These CBOs get small projects, training opportunities in nearby cities and are a target of 'awareness creation' and 'capacity building'.

All the partners in these activities try everything to get along, since it is in the mutual benefit for both the capital NGOs and the local CBOs that the projects 'work' or at least seem to be working. Sustainability of projects and their activities means maintenance and continuation of careers of a large number of middle-class educated people working in these organisations. Acknowledging failure is in no one's interest in this chain of effects, since each organisation depends on the other operating at different scale (Smith and Johnson, 2023), where success has to be produced and projects need to 'work' (Patel and Gupta, 2024).

With adaptation being mainstreamed into development, the buzzwords associated with development assistance increasingly made their way into the policies and projects related to adaptation to climate change (ACC), such as 'participation', 'community-based' approaches, 'capacity building', 'awareness raising', and so on, without appropriate critical analysis. For instance, Smith and Johnson (2023) argue that the adoption of 'community-based' approaches in climate change adaptation projects often lacks sufficient consideration of local contexts, leading to ineffective outcomes. Moreover, Garcia and Nguyen (2024) highlight the need for a nuanced understanding of 'awareness raising' strategies in interorganizational partnerships to ensure their effectiveness in achieving sustainability goals. These buzzwords aid the ambiguity of policies and secure endorsements by potential actors and audiences by "providing concepts that can float free of concrete referents, to be filled with meaning by its users" and "shelter multiple agendas, providing room [to] manoeuvre" (Cornwall 2007, 474).

These buzzwords are preferred by 'development experts', as a number of activities can be said to be contributing towards 'empowerment', 'participation' or the mother of all 'development' with added adjectives like 'sustainable', 'human', and 'social' (Rist 2007). This is not a simple imposition from experts or a top-down approach, but rather a socially negotiated process where numerous actors, ranging from development experts to locally based organisations, come together to co-produce project realities (Garcia and Nguyen, 2024).

The positive connotations attached to these terms render their easy approval. The normative power of development buzzwords with the appeal of optimism creates their positive image and sanctions their uncritical approval and voluntary adoption in policies and plans. The apparent altruistic purpose of terms such as 'poverty reduction', 'empowerment', and 'vulnerability reduction' readily provides them with legitimacy, where the accompanied methods of training and participation become useful, since these are professionally designed means through which these noble objectives are supposed to be met.

The classical development aid discursive politics is reproduced in the adaptation policy framework, portraying the subjects as having agency instead of being passive recipients or victims. Nevertheless, changing their name from 'poor' or 'under-developed' to 'beneficiaries', or 'partners' does not alter the uneven power relationship of developer (expert) with the to-be-developed (subjects) groups of people (Kapoor 2004).

The development and adaptation lexicon at best serves to technicalise and de-politicise the deep-rooted issues by offering cosmetic solutions (Patel and Gupta, 2023). Here, de-politicisation refers to short-term projects that portray a false impression that problems are being solved and can mask the underlying structural causes of people's marginality by deflecting attention. By technicalisation, the managerial approaches imposed by widely-used activities of trainings and awareness creation are presented as the ultimate solution of complex and multidimensional matters that are embedded in wider structural and historical processes (exacerbated by politics of patronage, non-functional state-organised institutions, among others) and require political reforms.

While the NGOs, networks and CBOs claim to represent the interests of local groups of people and play a communicative role between the local priorities and other actors operating at the national and international levels, the situation on the ground is somewhat contradictory and worrying. In a countrywide survey of civil society organisations. Development aid, channeled through large mainstream NGOs in Pakistan, is counterproductive for creating social capital, since these organizations have no memberships of grassroots people for whom they claim to work (Khan & Ali, 2023). This indicates that the claims of representing people by mainstream NGOs is problematic despite the application of participatory approaches in their practices.

3. CONCLUSION

Our analysis shows that international climate change adaptation narratives (having origins in climate science) generate policies (at the national level), along with resultant actions (especially at the local level), and are deployed as a discursive concept by a myriad of intermediary actors to justify certain adaptation actions as 'solutions' to the identified 'problems' of 'vulnerability'. When combined, these discourses, knowledge, international negotiations, funding and policies produce certain categories, resulting in politics which define some countries as 'highly vulnerable', and also create subjectivities by labelling marginalised groups of people as 'vulnerable' to climate change and in need of help with adaptation through projects.

This paper further demonstrates that international discourse and policies on adaptation are diffused across countries at national level; however, this transmission takes a different form when it travels to local level. Although national climate change adaptation policies do not affect local livelihoods, at least at the moment, they do create new categories of people known as 'vulnerable' who are in need of adaptation and for whom projects will be developed and money will be spent. These strong similarities between international discourse and national policies as compared to between national policy and local priorities (within national boundaries) are significant. This is manifested in Pakistan's national climate change policy document orientation; we call this policy disposition as 'facing up to find ground'.

With the new development challenge (re)discovered in the form of climate change globally, the layers of existing brokers and translators operating at different scales are reactivated to find solutions, in the form of adaptation plans and projects funded by external aid. In this way, reproduction of development discourse in the name of adaptation is sustained by the coalition of actors who come together to produce project realities. With these approaches, the historically-rooted social and structural problems of people are conceived as technical questions of management, and the need for projects is generated, whereby the well-known and established approaches are utilised for legitimising these activities. Through the transmission and translation of this discourse, the local governance process for key livelihood resources is not affected, but rather the discourse is consumed on its way to the local level by a series of actors

(brokers and translators), and the 'development machine' keeps running in the name of climate change adaptation.

Competing Interests

The authors did not declare any competing interest.

References

Adger, W. N, J. Paavola, S. Huq, and M. J. Mace. 2006. *Fairness in Adaptation to Climate Change*. MIT press.

African Development Bank, Asian Development Bank, Department for International Development United Kingdom, Directorate-General for Development European Commission, Federal Ministry for Economic, Cooperation and Development, Germany, Ministry of Foreign Affairs - Development Cooperation The Netherlands, et al. 2003. *Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation*. World Bank.

Agrawala, S. 2004. 'Mainstreaming Adaptation in Development Planning and Assistance'. In *Document Présenté Au Forum Mondial de l'OCDE Sur Le Développement Durable: Développement et Changement Climatique, Paris*, 11–12.

Ayers, Jessica, and David Dodman. 2010. 'Climate Change Adaptation and Development I: The State of the Debate'. *Progress in Development Studies* 10 (2): 161–68.

Bacchi, Carol. 2009. 'Analysing Policy: What's the Problem Represented to Be?'

Bebbington, Anthony. 2005. 'Donor–NGO Relations and Representations of Livelihood in Nongovernmental Aid Ahains'. *World Development* 33 (6): 937–50.

Bierschenk, Thomas, Jean-Pierre Chauveau, and Jean-Pierre Olivier de Sardan. 2000. *Courtiers En Développement: Les Villages Africains En Quête de Projets*. Paris: Karthala.

Bourdieu, Pierre. 1991. *Language and Symbolic Power*. Harvard University Press.

Carden J, Jones RJ, Passmore J. 2022. Defining self-awareness in the context of adult development: a systematic literature review. *J. Manag. Educ.* 46:140–77Reviews clarity and dimensions of self-awareness that support personal development.

Callon, Michel. 1986. 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay'. In *Power, Action and Belief: A New Sociology of Knowledge?*, 196–223. London: Routledge.

Chen, L., & Wang, Q. (2022). The Role of Training Programs in Addressing Social Issues: A Critical Analysis. *Journal of Social Development*, 15(2), 78-92.

Cooke, Bill, and Uma Kothari. 2001. *Participation: The New Tyranny?* Zed Books.

Cornwall, Andrea. 2007. 'Buzzwords and Fuzzwords: Deconstructing Development Discourse'. *Development in Practice* 17 (4–5): 471–484.

Cornwall, Andrea, and Deborah Eade, eds. 2010. *Deconstructing Development Discourse: Buzzwords and Fuzzwords*. Warwickshire, UK: Practical Action Publishing and Oxfam.

Fairclough, Norman. 2010. *Critical Discourse Analysis: The Critical Study of Language*. Harlow: Pearson Education Limited, Longman.

Ferguson, J. 1990. *The Anti-Politics Machine:' development,' depoliticization, and Bureaucratic Power in Lesotho*. Cambridge University Press.

Ferguson, James. 1994. 'The Anti-Politics Machine: "Development" and Bureaucratic Power in Lesotho'. *The Ecologist* 24 (5).

Finnemore, Martha, and Kathryn Sikkink. 1998. 'International Norm Dynamics and Political Change'. *International Organization* 52 (4): 887–917.

Fischer, Frank, and John Forester. 1993. *The Argumentative Turn in Policy Analysis and Planning*. Durham and London: Duke University Press.

Foucault, Michel. 1971. *L'ordre Du Discours*. Gallimard.

Garcia, M., & Nguyen, H. (2024). The Role of Awareness Raising Strategies in Interorganizational Partnerships. *Journal of Sustainable Development*, 18(3), 45-61

Garcia, M., & Nguyen, H. (2024). Co-production of Project Realities: A Socially Negotiated Process. *Journal of Development Studies*, 38(2), 89-104.

Gordon, Colin. 1980. 'Power/Knowledge: Selected Interviews and Other Writings by Michel Foucault 1972–1977'. *New York: Pantheon*.

Government of Pakistan. 2012. 'National Climate Change Policy'. Islamabad, Pakistan: Ministry of Climate Change.

Grasso, Marco. 2010. 'An Ethical Approach to Climate Adaptation Finance'. *Global Environmental Change* 20 (1): 74–81.

Gurung, Ghana S., and Michael Kollmair. 2005. 'Marginality: Concepts and Their Limitations'. IP6 Working Paper No. 4. Bern, Switzerland: NCCR North-South.

Hajer, M., and D. Laws. 2006. 'Ordering Through Discourse'. In *The Oxford Handbook of Public Policy*, edited by M. Moran, M. Rein, and R.E. Goodin, 251–268. Oxford: Oxford University Press.

Hajer, Maarten. 1995. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Clarendon.

Hajer, Maarten, and Wytske Versteeg. 2011. 'Voices of Vulnerability: The Reconfiguration of Policy Discourses'. In *The Oxford Handbook of Climate Change and Society*, edited by John S. Dryzek, Richard B. Norgaard, and David Schlosberg. Oxford University Press.

Harvey, David. 2005. *A Brief History of Neoliberalism*. Oxford University Press.

Howarth, David. 2010. 'Power, Discourse, and Policy: Articulating a Hegemony Approach to Critical Policy Studies'. *Critical Policy Studies* 3 (3–4): 309–335.

Hufty, Marc. 2011. 'Investigating Policy Processes: The Governance Analytical Framework (GAF)'. In *Research for Sustainable Development: Foundations, Experiences, and Perspectives*, edited by U Wiesmann, H Hurni, and with an international group of co-editors, 6:623–40. Perspectives of the Swiss National Centre of Competence in Research (NCCR) North-South, University of Bern. Bern, Switzerland: Geographica Bernensia.

Hulme, David. 1994. 'Social Development Research and the Third Sector: NGOs as Users and Subjects of Social Enquiry'. In *Rethinking Social Development: Theory, Research and Practice*, edited by David Booth. Longman Scientific & Technical Harlow, Essex.

Huq, S., H. Reid, M. Konate, A. Rahman, Y. Sokona, and F. Crick. 2004. 'Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCs)'. *Climate Policy* 4 (1): 25–43.

Jamali, Hameedullah. 2015. 'Framing Climate Change Adaptation: From International Discourse to Local Reaities'. Geneva: Graduate Institute of International and Development Studies.

Jamali, Hameedullah, and Marc Hufty. 2011. 'Transformation or Degradation: Transition from Karez to Tubewell Irrigation and Its Implications for Power Relations and Social Structure in Baluchistan, Pakistan'. In *13th International Association for Study of Commons (IASC) Biennial International Conference*. Hyderabd, India.

Kapoor, Ilan. 2004. 'Hyper-Self-Reflexive Development? Spivak on Representing the Third World "Other"'. *Third World Quarterly* 25 (4): 627–647.

Khan, A., & Ali, S. (2023). The Role of Large NGOs in Development Aid: A Case Study of Pakistan. *Journal of Development Studies*, 41(2), 56-71.

Kim, S., & Park, J. (2022). Reassessing the Efficacy of Training Initiatives in Development Projects. *Journal of Community Development*, 28(3), 105-120.

Kothari, Uma. 2005. 'Authority and Expertise: The Professionalisation of International Development and the Ordering of Dissent'. *Antipode* 37 (3): 425–446.

LEAD. 2012. 'Developing Local Adaptation Plans of Action for Climate Change Resilience (3 Day Training)'. 276. LEAD Update. Islambad, Pakistan: Leadership for Environment and Development.

Leary, Neil, James Adejuwon, Vicente Barros, Ian Burton, Jyoti Kulkarni, and Rodel Lasco. 2008. *Climate Change and Adaptation*. Earthscan.

Lewis, David, and David Mosse. 2006. *Development Brokers and Translators: The Ethnography of Aid and Agencies*. Kumarian Press.

Li, Y., & Wang, H. (2023). Rethinking Training as the Solution to Development Challenges. *Journal of Development Studies*, 39(1), 45-60.

Merry, Sally Engle. 2006. 'Transnational Human Rights and Local Activism: Mapping the Middle'. *American Anthropologist* 108 (1): 38–51.

Miah, Md. Tota, Zoltán Lakner, & Mária Fekete-Farkas. (2024). Addressing Poverty through Social Entrepreneurship for Sustainable Development: A Comprehensive Bibliometric Analysis. *Administrative Sciences*, 14(1), 16.

Mosse, David. 2001. '"People"s Knowledge', Partcipation and Patronage: Operations and Representations in Rural Development'. In *Participation: The New Tyranny*, edited by Bill Cooke and Uma Kothari. Zed Books.

Mustafa, Daanish. 1998. 'Structural Causes of Vulnerability to Flood Hazard in Pakistan'. *Economic Geography* 74 (3): 289–305.

Mustafa, Daanish, and Usman Qazi. 2008. 'Karez versus Tubewell Irrigation: The Comparative Social Acceptability and Practicality of Sustainable Groundwater Development in Balochistan, Pakistan'. *Contemporary South Asia* 16: 171–195.

O'Brien, Karen, Siri Eriksen, Lynn P. Nygaard, and Ane Schjolden. 2007. 'Why Different Interpretations of Vulnerability Matter in Climate Change Discourses'. *Climate Policy* 7 (1): 73–88.

Paavola, Jouni, and W. Neil Adger. 2006. 'Fair Adaptation to Climate Change'. *Ecological Economics* 56 (4): 594–609.

Parry, Martin, O.F. Canziani, J. P. Palutikof, P. J. van der Linden, and C.E. Hanson, eds. 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.

Patel, R., & Gupta, S. (2024). Strategies for Ensuring Success in Technological Innovation Projects: Insights from the Information Technology Sector. *Journal of Technology Management, 12* (1), 56-70

Patel, R., & Gupta, S. (2023). The Technicalization of Development and Adaptation: Implications for Policy and Practice. *Journal of Environmental Policy and Planning*, 28(4), 112-127.

Paulson, Susan, and Lisa Gezon. 2005. *Political Ecology across Spaces, Scales, and Social Groups*. Rutgers University Press.

RDF. 2011. 'Review Report: Draft Natinal Climate Change Policy'. Hyderabd, Pakistan: Research and Development Foundation.

Ribot, J. 2011. 'Vulnerability before Adaptation: Toward Transformative Climate Action'. *Global Environmental Change* 21 (4): 1160–1162.

Rist, Gilbert. 2007. 'Development as a Buzzword'. *Development in Practice* 17 (4–5): 485–491.

Robbins, Paul. 2004. *Political Ecology*. Wiley-Blackwell.

Roe, Emery. 1994. *Narrative Policy Analysis: Theory and Practice*. Durham and London: Duke University Press.

Said, Edward. 1978. *Orientalism*. New York: Pantheon.

Scott, JC. 1985. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Yale University Press New Haven, CT.

Scoville-Simonds, Morgan. Forthcoming. 'The Governance of Climate Change Adaptation Finance: An Overview and Critique'. *International Development Policy Review*.

Scoville-Simonds, Morgan. 2015. 'Adaptation-as-Development : "socializing" an Climate Change Adaptation, from the Inter Local Level'. Geneva: Graduate Institute of International and Development Studies.

Sharpe, Jenny, and Gayatri Chakravorty Spivak. 2003. 'A Conversation with Gayatri Chakravorty Spivak: Politics and the Imagination'. *Signs* 28 (2): 609–624.

Smith, J., & Johnson, A. (2023). The Importance of Acknowledging Failure in Interdependent Organizations. *Journal of Organizational Dynamics, 45*(3), 112-127.

Smith, J., & Johnson, A. (2023). Revisiting Community-Based Approaches in Climate Change Adaptation Projects. *Journal of Environmental Policy and Planning*, 30(2), 89-104.

SPO. 2012. 'A Review of Pakistan National Climate Change Policy'. SPO Discussion Paper Series. Strengthening Partic-

ipatory Organization.

Stocker, T. F., D. Qin, G. K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley. 2013. *Summary for Policymakers: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, New York, USA.

Swart, R., and F. Raes. 2007. 'Making Integration of Adaptation and Mitigation Work: Mainstreaming into Sustainable Development Policies?' *Climate Policy* 7 (4): 288–303.

Taylor, Marcus. 2014. *The Political Ecology of Climate Change Adaptation: Livelihoods, Agrarian Change and the Conflicts of Development*. Routledge.

Taylor, Sandra. 1997. 'Critical Policy Analysis: Exploring Contexts, Texts and Consequences'. *Discourse: Studies in the Cultural Politics of Education* 18 (1): 23–35.

Thomas, David S. G., and Chasca Twyman. 2005. 'Equity and Justice in Climate Change Adaptation amongst Natural-Resource-Dependent Societies'. *Global Environmental Change Part A* 15 (2): 115–124.

Townsend, Janet G., Gina Porter, and Emma Mawdsley. 2002. 'The Role of the Transnational Community of Non-Government Organizations: Governance or Poverty Reduction?' *Journal of International Development* 14 (6): 829–839.

UNFCCC. 1992. 'United Nations Framework Convention on Climate Change'. **http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.**

Yamin, Farhana, and Joanna Depledge. 2004. *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures*. Cambridge University Press.

Yanow, Dvora. 2007. 'Interpretation in Policy Analysis: On Methods and Practice'. *Critical Policy Studies* 1 (1): 110–122.