Institution: Royal Holloway, University of London

Unit of Assessment: 14 Geography and Environmental Studies

Title of case study: Amplifying Indigenous knowledge within environmental management and governance in South America

Period when the underpinning research was undertaken: 2009-2019

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
Jayalaxshmi Mistry	Professor of Environmental Geography	1998- 2020

Period when the claimed impact occurred: 2014-2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact

There is increasing evidence that Indigenous knowledge contributes to the sustainable management of their lands, thereby conserving biodiversity and reducing carbon emissions. Yet, Indigenous knowledge is still marginalised from decision-making and policy arenas. Research at Royal Holloway led by Professor Jay Mistry has responded to these challenges by investigating how participatory video can be a process of engagement that builds on Indigenous ways of knowing, while facilitating capacity building and agency, and exploring how intercultural spaces can bring Indigenous knowledge into environmental management and governance. With a focus on Guyana and Venezuela, research led by Mistry since 2014 enabled: increased capacity of Indigenous communities to use participatory films as powerful communication media to record and raise awareness about Indigenous knowledge; increased capacity of government and non-governmental professionals and organisations to understand the importance of Indigenous knowledge and using participatory video for working with Indigenous peoples, and; greater representation of Indigenous knowledge within policymaking processes and arenas.

2. Underpinning research

There are 370,000,000 people worldwide who self-identify as Indigenous. Indigenous peoples manage or have tenure rights over land that intersects about 40% of all terrestrial protected areas and ecologically intact landscapes. This high percentage highlights how the maintenance of a significant share of the planet depends on the institutions and actions of Indigenous peoples. Despite the growing recognition of the value of Indigenous knowledge for global biodiversity conservation, and climate change mitigation and adaptation, Indigenous knowledge continues to be marginalised from decision-making, and Indigenous peoples account for about 15% of the world's extreme poor. At the same time, Indigenous knowledge and its associated practices are eroding at alarming rates, and there are ongoing (violent) struggles for land and recognition of rights.

Led by Professor Jay Mistry at Royal Holloway, research collaboration with civil society organisations, Indigenous communities and other academics, most notably Dr Andrea Berardi of The Open University and Professor Bibiana Bilbao of the Universidad Simón Bolívar, Venezuela, has focused on advocating for Indigenous knowledge in environmental management and governance (R1). The research understands that only looking for the 'usefulness' of Indigenous knowledge is a colonising practice. Research with Indigenous peoples needs to focus on recording content or information / data derived from Indigenous knowledge using processes of engagement that build on Indigenous ways of knowing and make interventions more relevant to the communities they seek to support. Decolonising methods are relevant for greater inclusion and participation of Indigenous peoples in environmental governance.

There are two main strands of research. The first investigates how participatory video can be a process of engagement that builds on Indigenous ways of knowing. It has shown that: a) visual communication is not only better able to capture Indigenous knowledge, but it also gives voice and ownership to Indigenous people over self-representation, particularly to decision-makers; b) participatory video enables the relational nature of Indigenous knowledge to be captured, thereby allowing the identification of areas where the adaptive capacity and resilience of these social-ecological systems can be increased; and, c) peer-to-peer Indigenous knowledge exchange through visual stories can revive established practices and inspire communities into new forms of action (R2, R3, R4).

The second, related, area of research explores how intercultural spaces can bring Indigenous knowledge into national-level decision-making on environmental management and governance (R5, R6). Participatory videos of Indigenous knowledge and associated practices created opportunities for screening films and activated discussions between relevant government institutions, academics and Indigenous communities. The research has demonstrated that: a) despite best intentions and greater acceptance of Indigenous knowledge by decision-makers, it is being simplified and appropriated to fit into Western concepts of environmental management; and, b) supporting processes and providing spaces for integrating multiple perspectives through an 'intercultural interface' of institutions and knowledge systems can result in more participatory forms of environmental management and governance.

3. References to the research

The following articles are all published in highly regarded journals, all have been peer reviewed, and supported by grant funding from the European Commission (FP7), the British Academy, the Foreign and Commonwealth Office and the Darwin Initiative (DEFRA, UK government).

R1. **Mistry, J.** and Berardi, A. (2016). Bridging Indigenous and scientific knowledge. *Science*, 352(6291): 1274-1275 (DOI: 10.1126/science.aaf1160).

R2. **Mistry, J.**, Berardi, A., Tschirhart, C., Bignante, E., Haynes, L., Benjamin, R., Albert, G., Xavier, Jafferally, D. and de Ville, G. (2014). Indigenous identity and environmental governance in Guyana, South America. *Cultural Geographies*, 22(4): 689-712 (DOI: 10.1177/1474474014560998).

R3. **Mistry, J.**, Berardi, A., Tschirhart, C., Bignante, E., Haynes, L., Benjamin, R., Albert, G., Xavier, R., Robertson, B., Davis, O., Jafferally, D. and de Ville, G. (2016). Community owned solutions: identifying local best practices for social-ecological sustainability. *Ecology and Society*, 21(2): 42 (DOI: http://dx.doi.org/10.5751/ES-08496-210242).

R4. **Mistry, J.**, Bilbao, B. and Berardi, A. (2016). Community owned solutions for fire management in tropical ecosystems: case studies from Indigenous communities of South America. *Philosophical Transactions of the Royal Society B*, 371: 20150174 (DOI: http://dx.doi.org/10.1098/rstb.2015.0174).

R5. **Mistry, J.**, Schmidt, I., Eloy, L. and Bilbao, B. (2018). New perspectives in fire management in South American savannas: the importance of intercultural governance. *AMBIO: A Journal of the Human Environment*, 48(2): 172-179 (DOI: 10.1007/s13280-018-1054-7).

R6. Bilbao, B., **Mistry, J.**, Millán, A. and Berardi, A. (2019). Sharing multiple perspectives on burning: towards a participatory and intercultural fire management policy in Venezuela, Brazil, and Guyana. *Fire*, 2, 39 (DOI:10.3390/fire2030039)

4. Details of the impact

The research depends on strong and long-lasting collaborations with Indigenous communities, NGOs and other academics. Building relationships of over twenty years, particularly with

organisations such as the Indigenous North Rupununi District Development Board (Guyana), Universidad Simón Bolívar (Venezuela), Iwokrama International Centre (Guyana), and The Open University (UK) has fostered collaborative research leading to capacity building, amplifying voices and increased representation. The beneficiaries include Indigenous communities, government agencies and non-governmental organisations.

1) Increased capacity of Indigenous communities to use participatory films as powerful communication media to record and raise awareness about Indigenous knowledge.
In Guyana, approximately 100 Indigenous researchers have been trained in participatory video since 2014 (E1). These local researchers have documented and shared their communities' views on how their knowledge, and associated livelihood practices, such as farming, fishing and craft making, maintain both culture and biodiversity. From 2017, over 50% of the communities, approximately 4000 people, living in and around protected areas in Guyana have participated through participatory video making, screening and discussions to show how their Indigenous knowledge contributes to biodiversity conservation and climate mitigation (E2). Participatory video has played a strong role in maintaining and enhancing Indigenous knowledge and highlighting solutions arising from within communities, while communicating its importance to the wider world (E3): "*The video can be a great use to influence people like the policy makers, because sometimes when we write proposal or letters and this proposal go out, they will not reach. Sometimes when I write I know what I am thinking, but then people sometimes will not understand because they are more educated. Putting in a video, people will understand perfectly what I am talking about and what I am trying to present to them*" (Edghill Bowen, Community Leader).

In Venezuela, participatory videos have been fundamental to raise awareness within younger community members and government agencies of how the use of fire by the Indigenous Pemón contributes to both environmental and cultural sustainability (E4). [text removed for publication]. In particular, the participatory films have brought ancestral fire knowledge on savanna burning to the forefront of fire management discussions, both at a local and national level, helping to develop a sense of pride in Indigenous knowledge and motivation for the intergenerational transmission of this knowledge.

2) Increased capacity of government and non-governmental professionals and organisations to understand importance of Indigenous knowledge
In Guyana, Indigenous associations, government agencies and NGOs have been involved in the research and the development of training courses on participatory video and community owned solutions. This led to increased skills and knowledge, and changed mindsets, on how projects involving Indigenous people should be approached (E3): "*Promoting community owned solutions is the only way to go in terms of development that is genuine, that would have ongoing impact. I think that COBRA did a very good job with empowering and encouraging these sorts of things to happen*" (Vanda Radzik, NGO activist). "*The use of community owned solutions is very important for WWF. We involved a community called Chenapau next to Kaieteur National park. We used the COBRA community owned solutions approach to train this community. They … still use this approach to express what they feel about the national park and how they want to participate in the management of the national park*" (Aeisha Williams, Head of WWF-Guyana).

Capacity building in traditional knowledge integration for conservation and development amongst Guyanese government agencies and NGOs influenced work practices. For example, "*Prior to the workshop I was not aware of the importance of participatory video nor* [the] *community owned solutions* [approach]. *These are tools I will consider as I continue to work in the interior locations*" (Guyana Wildlife Conservation and Management Commission participant). It also enabled participants to reflect on wider institutional policies, "[I aim to] *change the way in which the Community Development Unit at the Guyana Forestry Commission engage with Indigenous stakeholders, so that traditional knowledge of managing their forest can be reflective in the Forest Management Plan over the next 5 years*". (E5)

In Venezuela, participatory approaches included scenario analysis and participatory video. These were used in workshop settings in 2017 (80 participants from 34 organisations) and 2018 (53 participants from 26 organisations) to explore how different knowledge systems can contribute to climate change policy. This work has led to: capacity building for using Indigenous knowledge together with scientific research in government climate change plans. This approach has reached 115 Indigenous leaders, senior scientists and government authorities, such as the National Institute of Parks and Venezuela IPCC Committee; behavioural change in government agencies and climate change scientists towards positive perceptions of the value of Indigenous knowledge; and has motivated public servants to seek inter-institutional alliances that value the intercultural and participatory integration of local communities in the design, application and control of climate change strategies, such the development of integrated fire management based on Indigenous practices (E6).

3) Greater representation of Indigenous knowledge in policymaking processes.
Bringing Indigenous knowledge on par with scientific knowledge in policymaking processes means providing safe spaces for dialogue that help shift power relations to build solidarity and collective agencies. Participants have been invited to intercultural workshops and video-mediated dialogue. In terms of fire management, two workshops in the Gran Sabana, Venezuela and in Brasilia, Brazil, attended by 96 participants representing 30 organisations including Indigenous leaders, government agencies and academics, has been critical for breaking down historical tensions, developing a common language that enabled empathy, and constructing mutual trust and respect (E6): "*What is happening in this workshop is a historical fact. After many long efforts to demonstrate the ecological and cultural value of our traditional fire knowledge, we were able to advance [our cause] through new rules of the game for the three actors living in the Gran Sabana in Canaima National Park* [Indigenous communities, government institutions, and scientists] *with respect to fire management... We must all work equitably, in common wealth for the good of our society*" (Pemón Indigenous Leader).

Government ministers in Venezuela have a greater awareness and acceptance of Indigenous fire management as a valid, legitimate and useful practice to manage fires, a move away from a policy of 'zero-fire' that has contributed to regular large wildfires (E7, E8). "*[text removed for publication]"* ([text removed for publication] Ministry of Environment, Venezuela). In addition, the National Institute of Parks in Venezuela (INPARQUES) has included Indigenous fire management in its management plans for national parks, and as part of capacity building for forest firefighters (E8): "*[text removed for publication]* Forest Fire-Fighters Body).

The research team introduced video-mediated dialogue in Guyana to facilitate constructive conversations and trust between Indigenous communities and protected areas managers. Through cycles of participatory film-making, screenings and discussions, protected areas managers have appreciated the need for greater outreach within Indigenous communities, and recognised that participatory video can be used as an ongoing process of communication (E9, E10). This enabled greater inclusion of Indigenous perspectives, concerns and knowledge in conservation, and strengthened relationships between Indigenous people and decision makers. This has led to the development of a new policy, the Traditional Knowledge National Action Plan (TKNAP). This evidence-based policy raises awareness nationally of the critical role of Indigenous peoples and their knowledge, strengthens local laws, governance and mechanisms for maintaining and using Indigenous knowledge. It also empowers Indigenous communities to document and address matters pertaining to their knowledge. The TKNAP is currently in consultation phase, and prior to Covid-19, was due to be ratified by the Guyanese Cabinet by December 2020 (E1).

5. Sources to corroborate the impact

E1. Letter from North Rupununi District Development Board, Guyana (Indigenous association).

E2. Records of participation in participatory video activities within Indigenous communities living in and around protected areas in Guyana, as part of Darwin Initiative project.

E3. Videos of the impact of Project Cobra, three years after the end of the project, May 2018. Available from: https://communityownedsolutions.org/library

E4. Interviews carried out with Indigenous community members from Kavanayén and workshop facilitator in Venezuela on impact of intercultural workshops.

E5. Report on the pilot of the training course '*Traditional knowledge integration for conservation and development'* which took place in Georgetown, Guyana in February 2020.

E6. Report on evaluation from Venezuelan fire management and climate change workshops and training and testimonial of [text removed for publication] IPCC South America Working Group 2.

E7. Testimonial from [text removed for publication], [text removed for publication] Venezuela.

E8. Testimonials from the National Institute of Parks (INPARQUES, acronym in Spanish), Ministry of Popular Power for Ecosocialism, Venezuela, including [text removed for publication] National Parks, [text removed for publication] Forest Fire-Fighters Body, and quotes from [text removed for publication] INPARQUES 20th Anniversary Webinar in 2020.

E9. Testimonial from Iwokrama International Centre, Guyana on impact of video-mediated dialogue.

E10. Video that documents the response of the Iwokrama Internal Centre and Ministry of Indigenous Peoples' Affairs, Guyana to the community videos made through participatory video on protected areas. Available from: https://communityownedsolutions.org/video-post/iwokrama-response-video-to-north-rupununi-communities/