

Institution: Durham University
Unit of Assessment: UoA 24 Anthropology and Development Studies
Title of case study: Indigenous Knowledge and Development
<p>1. Summary of the impact</p> <p>Following extensive ethnographic research in South Asia, Durham Anthropology highlighted the pressing need to include indigenous knowledge (IK) in development practice and sustainable resource management. As part of our research we helped establish an NGO-based network with an explicit remit to promote and implement our research insights in Bangladesh. This network has had far-reaching effects, empowering local people and helping to promote agricultural resilience and sustainable livelihoods (e.g. in preserving seed bio-diversity). Development practitioners in Bangladeshi universities are now trained using methods based on our research. IK-aware development based on Durham research is also internationally recognised and implemented by UNESCO.</p>
<p>2. Underpinning research</p> <p><i>Context</i></p> <p>By the mid 1990s, development practitioners were beginning to recognise that existing 'Transfer of Technology' models often failed, as local people had limited participation in development strategies and thus resisted the inappropriate interventions they were often presented with. In response, the ODA's (now DfID) 1994 Renewable Natural Resources Research Strategy funded Durham and Newcastle Universities for an 'Investigation of whole farm strategies and resource use patterns in floodplain production systems based on rice and fish in Bangladesh'. The ODA emphasised IK inclusion, but our research took IK understanding and practice to a significant, new level.</p> <p><i>Research narrative</i></p> <p>The IK component of the project was called 'Methodological research into the incorporation of indigenous knowledge into natural resources research on Bangladesh floodplain production systems' (Grant 1) and ran 1996-2000. The team, led by Paul Sillitoe, comprised local researchers (Alam, Ghosh, Zuberi and Naseem) and Durham staff (Dixon). Together they assembled a detailed ethnographic database documenting local livelihoods, subsistence practices and biodiversity. Collecting <i>and</i> disseminating IK was achieved through Durham Anthropology establishing a network in 1998 which centred on the nascent Bangladeshi Resource Centre for Indigenous Knowledge (BARCIK) as a pathway to impact (Output 3 is from the launch conference).</p> <p>In 1998, based on the Bangladeshi research, two influential papers laid out an innovative strategy for incorporating IK productively into development practice and sustainable resource management (Outputs 1, 2). They demonstrated that (a) unequal power relations between local peoples and experts in many development projects excluded and obscured the contribution of local environmental knowledge and expertise to sustainable livelihood strategies, (b) development practitioners were newly receptive to alternative approaches, and (c) if the interests, techniques, practices and worldviews of local people and development scientists were aligned, the likelihood of successful, sustainable interventions increased markedly.</p> <p>These papers helped shift the emphasis of previous IK research from documenting local ecological classifications to a more careful evaluation of the effects and importance of IK as it was practised and in context. Crucially, the papers drew attention to the need to identify, preserve and share viable local knowledge and practice (Outputs 4,5). While debates on the nature and role of IK continue, our interventions have been cited as kick-starting ongoing critiques of, and alternatives to techno-scientific and market-led approaches to resource management (Output 1)</p> <p>Rather than a dichotomous model of external technical approaches <i>or</i> IK, our research has provided vital underpinning evidence for an approach in which scientists (local and international) and indigenous communities share understandings and work together for more effective resource management (Outputs 2, 3). The focus on ethnoscience, or people's own ways of making sense of their environment and its capacities, shows the importance of creating a knowledge and practice continuum connecting local people and natural scientists (Output 1). Moreover, our research</p>

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shows that IK is continually evolving and adapting to meet the challenges of population growth, climate change, community dislocation and the impact of globalisation (Output 1). It demonstrates that in circumstances of environmental precariousness, development works best as an *exchange* between local communities, scientists and development workers and also between/within local practitioners and local communities (Output 2).

3. References to the research

Grants

Grant 1. Indigenous Knowledge & Natural Resources Research: Bangladesh Floodplains. DfID-NRSP SEM. *Final Technical Report. Project Number: R6744.* (PI Sillitoe) £172,719 (total project award £443,538).

Underpinning peer-reviewed research articles (outputs)

The following research outputs are frequently cited by academic research papers, international, national NGO policy documents and practice recommendations:

Output 1. Sillitoe, P. (1998a) The development of indigenous knowledge: a new applied-anthropology. *Current Anthropology* 39(2): 223-252. Impact Factor (IF) 2.93467. 515 citations, 823 downloads from Durham Research Online. The issue contained commentary on this article by pre-eminent scholars of IK. For example, David Brokensha commented: 'Sillitoe's thoughtful, comprehensive and insightful article belongs firmly in the ranks of the 'Anthropology, Whither Now?' pieces that are regularly published, and it is one of the best of these.' (pp236-7). DOI: 10.1086/204722

Output 2. Sillitoe, P. (1998b) What, know natives? Local knowledge in development. *Social Anthropology* 6(2): 203-220. 76 citations, translated into Bangla. DOI: 10.1111/j.1469-8676.1998.tb00356.x

Output 3. Sillitoe, P. (ed.) (2000a). *Indigenous knowledge development in Bangladesh: present and future*. London: Intermediate Technology Publications & Dhaka University Press. Sections authored by Sillitoe: pp3-20, pp145-60, and Sillitoe et al: pp161-177, pp179-195. 33 citations ISBN: 9781853395185

Output 4. Sillitoe, P. (2000b) Let them eat cake: indigenous knowledge, science and the poorest of the poor. *Anthropology Today* 16(6): 3-7. 42 citations, translated into Bangla. DOI: 10.1111/1467-8322.00031

Output 5. Sillitoe, P., (ed.) (2007). *Local science vs, global science: approaches to indigenous knowledge*. Oxford: Berghahn Books. 51 citations. ISBN 978-1-84545-648-1

4. Details of the impact

Implementation of our research through BARCIK

Since the conference launch of the BARCIK network in 1998, Sillitoe has continued to advise and support BARCIK on policy and strategy (Sources 1 and 2) throughout the REF period. Using our research insights and methods, BARCIK moved from IK advocacy to direct interventions using IK in agriculture and fishing to improve food security for the poor (Source 3 and 4). In addition to using Outputs 1-5, many of BARCIK's IK interventions have relied on a key impact to pathway: Sillitoe, P., Dixon P. & Barr J. (2005) *Indigenous Knowledge Inquiries: A Methodologies Manual For Development*, London: Intermediate Technology Publications. This rendered Durham's IK research into a usable tool set for practitioners. BARCIK's Director noted that "BARCIK staff regularly draw on the principles and methods outlined in ... [Sillitoe's] research and publications, notably his *IK Inquiries handbook* which many of us find inspirational. His approach has been fundamental to our success in promoting and applying indigenous knowledge...[and in] our action research projects on 'climate change adaptation by traditional means', 'Local biodiversity based farmer-led research for sustainable agriculture', and 'Applied research on saline tolerant, deep water and drought tolerant local rice varieties'". Referring to Output 3, he added that "The book [Durham researchers] edited ... from that meeting continue[s] to motivate IK work in Bangladesh" (Sources 1 & 2). The manual

and Outputs 3 and 4, were all translated into Bangla. This has contributed hugely to their enthusiastic and extensive uptake. As an organisation, BARCIK thrives. It now has 125 full-time and 20 part-time volunteers.

An extensive field audit of BARCIK's work in 2011 (Source 5) provides strong independent evidence for the effectiveness of BARCIK's impact during the REF period. The report was commissioned by MISEREOR, the German Catholic charity, who donated £666k in the period to BARCIK for 7 projects including conservation, climate change and green village initiatives and carried out by FAKT (www.fakt.consult.de). The report examined impacts from interventions in 4 villages before 2008 and in 5 villages after 2009 (Source 5 p8), noting that "*BARCIK is ... active in 14 ... agro-ecological zones of Bangladesh*" reaching "*a great variety of different farmers, fishers, forest dwellers and landless people*" (p6). The audit states that 14 villages (14,800 people) had taken up IK knowledge exchange practices promoted by BARCIK in 2011 (p11) and that '*(A)n alternative way of doing agricultural development combining modern technology and the indigenous knowledge and practices of ... people has been found to be effective in increasing farmers' productivity.*' (Source 5: p4), demonstrating the influence of our innovative call to merge IK and scientific technology (Output 1).

For example, farmers' knowledge about local rice varieties and their cultivation was effective in mounting resistance to the promotion of monocrop, high yield cultivars which are expensive, rely on fertilisers and weedicides, and rapidly exhaust soil productivity (Source 5). As one BARCIK-supported farmer put it: '*Earlier we had only 3 or 4 types of seeds, but now we have 60 or 70 ... Officers from the Agricultural Department of the Government appreciated the works of BARCIK saying that what they couldn't do, BARCIK has done. We have learnt how to preserve seeds properly from BARCIK... We have learnt about the dry seedbeds of paddy and now we can plant much younger ... saplings that give us better yields. Whereas earlier we used to plant saplings of 2-3 months that resulted in premature harvesting with less yields.*' (Source 4). This impact is corroborated by a BARCIK co-ordinator: *Following (Sillitoe's) research we sought to show how jhum (local shifting cultivation systems) vary widely and feature complex natural resource management strategies* ' (Source 3).

The MISEROR report concluded that "*BARCIK has contributed to higher food security and less vulnerability of poor farmers... The status of women has improved... Farmer-to-farmer relationships have improved.*" and noted: "*There were many social effects ...on accessing government support, and ...much multiplication, spreading sustainable farming practices to many more villages. There was also news coverage ... that led to more awareness*" (Source 5: p24).

Training Bangladeshi NGO practitioners

Beyond BARCIK, our research has informed Bangladeshi university curricula for training a new generation of local NGO practitioners: IK-aware strategies are now integral to the preparation of NGO workers for the field: '*... they found it [Sillitoe's approach] very inspiring ..., many students have gone through them [Manual guidelines]. His work in ethno-science has been particularly helpful to us on the food security programme where we have made much use of the methodologies that he gives in his books. For instance in researching and promoting local crop varieties threatened by the HYVs (high yield varieties) of the green revolution which are proving unsustainable and damaging to our country's natural resources...*' (Source 6).

Impact beyond Bangladesh

Work extending and implementing our IK research in Bangladesh continued with UNESCO (Social & Human Sciences Sector) funding from its Local & Indigenous Knowledge Systems Programme (LINKS) for a project entitled 'Documentation and application of indigenous knowledge in Charan, Bangladesh' (2002-7). Within the REF period, Durham's research publications continue to inform the LINKS programme: "*we recommend (Indigenous Knowledge Inquiries) to our...project partners around the world as a valuable guide to ways to work with indigenous knowledge*" (Source 7).

5. Sources to corroborate the impact

Source 1: Letter from the Executive Director of BARCIK, 2nd January 2013. Supplemented by an

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interview transcript and film (April 2013) in which the Director describes the ways in which Durham Anthropology's work has been used by BARCIK since its inception. Both available on request.

Source 2: Chapter written by Executive Director of BARCIK (as above) describing the development of BARCIK and its networks and the seminal role of the Durham-led workshop in Sillitoe, P. (2000a) *Indigenous knowledge development in Bangladesh: Present and future*. London: Intermediate Technology Publications & Dhaka University Press (edited book is Output 3).

Source 3: Letter from a BARCIK co-ordinator for the Food Security Programme, 19th April 2013, supplemented by an interview transcript and film of the interview (April 2013). The letter describes using Durham's research in a UNESCO-funded training workshop that reached over 1,000 NGO workers in Bangladesh and 'is responsible for the inclusion of indigenous knowledge issues in many development initiatives across the country today'. All available on request.

Source 4: Transcript of an interview with a farmer supported by BARCIK (April 2013) supplemented by film of the interview. The transcript illustrates first, the role of IK in preserving biodiversity in rice cultivation and seed exchange, and second, how BARCIK facilitated knowledge exchange. Both available on request.

Source 5: Misereor 2011 field study report on the work of BARCIK, carried out by FAKT consultancy. Sector Evaluation, Rural Development, Special Focus on Food Security. Available on request

Source 6: Letter from a development lecturer and former BARCIK worker at the Independent University of Bangladesh (21st April 2013) in which the impact of Durham IK research is detailed. Supplemented by an interview transcript and film of an interview with him. All available on request.

Source 7: Letter from Chief of Small Islands and Indigenous Knowledge Section, Division of Science Policy and Capacity-Building, UNESCO (10 April 2013) outlining role of Durham Research in capacity building in IK beyond Bangladesh. Corroborating Source 3 above, the letter notes: '*A UNESCO colleague ... also worked together with BARCIK colleagues and Paul to produce an Indigenous Knowledge Training Manual' (which draws on the ... Indigenous Knowledge Inquiries book) that was used in a series of workshops across Bangladesh to inform NGO workers about the potential of incorporating indigenous knowledge into their work and how to devise IK-aware projects; it is estimated that the workshops reached over 1,000 persons.*' Available on request.