

Impact case study (REF3)

Institution: University of Northumbria at Newcastle		
Unit of Assessment: 14 (Geography and Environmental Studies)		
Title of case study: Empowering local communities to reduce health vulnerabilities after disaster through a people-centred approach to health in disaster risk reduction		
Period when the underpinning research was undertaken: January 2000 – December 2020		
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:
Andrew Collins	Professor	July 1997 - present
Period when the claimed impact occurred: 2015 - December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Over the past two decades, decision-making in disaster risk management has evolved from a predominantly centralised, ‘command and control’ style of management to more ‘people-centred’ approaches involving local participation. Northumbria University research has identified strategies for risk reduction of infectious diseases that focus on affected communities’ vulnerabilities and capabilities. Professor Andrew Collins’ research is now integral to the health policies of the United Nations (UN) Sendai Framework for Disaster Risk Reduction with 109 signatory countries and has guided the World Health Organisation’s (WHO) Framework for Health Emergency and Disaster Risk Management. On the ground, Collins’ research helped to refocus UN development practices in Mozambique towards enhancing community-response capacity. It has also improved public health policies and hand-washing facilities in schools in Nairobi, Kenya, that have contributed to reduced sickness, improved school attendance and performance, and increased personal responsibility for wellbeing in school children.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>Under the auspices of the Disaster and Development Network (DDN) at Northumbria University, Professor Andrew Collins has worked with communities at risk of disaster across the world to develop new insights into enhancing disaster preparedness. Collins’ research has developed, applied, and tested the people-centred disaster risk reduction (DRR) model with project partners in communities across the world in highly vulnerable locations. Collins’ research in marginalised communities has highlighted the lack of physical and institutional infrastructure in the most disaster-prone areas. Top-down DRR approaches in these contexts neglect to engage local communities and consequently fail to mobilise preparedness and response in the face of combined socioeconomic and environmental threats [R1, R2]. Collins’ research demonstrates the efficacy of embedding people-centred approaches, catalysing community engagement, and maximising local knowledge [R1, R2]. Community resilience is empowered through self-coordinated engagement and communication, reducing dependence on external support [R1, R2].</p> <p>Collins’ research investigates mitigating vulnerabilities through a focus on capabilities, specifically in a risk reduction context. Solutions co-designed with local communities through responsive and innovative people-centred methodologies reduce vulnerabilities to disasters and the associated precarity and long-term risk of disease. Key components include community ownership of risk assessment. When risk assessment and management are governed locally and localised or indigenous knowledge is incorporated, then capacity is strengthened [R3].</p> <p>Grounded in investigations of infectious disease risk reduction using hazard vulnerabilities and capabilities, Collins’ work includes the world’s first integrated infectious disease risk reduction programme based on DRR assessment and early warning principles established by Collins in Beira, Mozambique [R4]. Collins’ research of Infectious Disease Risk Management showed that</p>		

recognition of socio-economic and behavioural influences, alongside pathogenic and environmental hazards, reveals risks that vary in nature from place to place over time [R4]. In Bangladesh, Collins carried out a project to establish the potential of a health security approach to disaster resilience among people living in high-risk environments. This identified the ways in which local, support-led services can empower communities to develop resilience and organise themselves in the face of disaster vulnerability and respond better to the human security agenda more widely [R5].

Collins' research and engagement projects in marginalised communities prioritise the generation of multiple types of data that amplify the people-centred approach. There are significant difficulties in generating context-specific data in marginalised communities. These communities are in most need of bespoke policies and practices supporting a local-level response, drawing on local knowledge. This research challenges the orthodoxies that govern data collection by international agencies by promoting three types: numeric, narrative, and visual data. The term 'action data', coined by Collins, is targeted not on the top-down application of generic categories for data-capture, but on uncovering and recording the distinct experiences unique to the communities themselves [R6]. Action data refers to data that effects change; this sort of data creates a voice that can be operational at all levels of human engagement in disaster prevention and response and forms a central pillar of the strategy for achieving the UN's Sendai Framework for Disaster Risk Reduction (SFDRR). Through this more sensitised understanding, action data reveals the specific vulnerabilities faced by marginalised communities and enables contextual, variegated, and bespoke responses that empower community-led preparedness and response to both slow and rapid onset disasters [R6]. Action data is highly valuable in extreme environments in developing countries to better understand the vulnerabilities of those exposed to disasters and therefore co-design strategies and actions to reduce risks [R6].

This health-focussed, people-centred approach has been co-developed by Northumbria University as part of its Disaster and Development Network with partners including: the United Nations Office for Disaster Risk Reduction (UNDRR), the United Nations Development Programme (UNDP), the United Nations Children Fund (UNICEF), the United Nations Refugee Agency (UNHCR), as well as local Non-Governmental Organisations (NGOs). Local communities and marginalised groups were supported to improve disaster preparedness through increased social cohesion, education, and sanitation [R1, R3].

3. References to the research (indicative maximum of six references)

R1. Andrew Collins (2018) 'Advancing the disaster and development paradigm', *International Journal of Disaster Risk Science*, **9**(4): p486-95 <https://doi.org/10.1007/s13753-018-0206-5>

R2. Andrew Collins (2015) 'Beyond experiential learning in disaster and development communication' in: Egner, H., Schorch, M. and Voss, M. (Eds.) *Learning and Calamities: Practices, Interpretations, Patterns* (London, UK: Routledge) p56-76. Available on request

R3. Andrew Collins (2009) 'The people-centred approach to early warning systems and the 'Last Mile', in *International Federation of the Red Cross and Red Crescent Societies (IFRC), Focus on Early Warning, Early Action, World Disaster Report*, Chapter 2, p39-68. Available on request

R4. Andrew Collins, Lucas, M.E., Islam, M.S., and Williams, L.E. (2006) Socio-economic and environmental origins of cholera epidemics in Mozambique: guidelines for tackling uncertainty in infectious disease prevention and control, *International Journal of Environmental Studies Special Issue on Africa*, **63**(5): p537-549 <https://doi.org/10.1080/00207230600963122>

R5. Ray-Bennett, N., Andrew Collins, Bhuiya, A., Edgeworth, R., Nahar, P., and Alamgir, F. (2010) 'Exploring the meaning of health security for disaster resilience through people's perspectives in Bangladesh', *Health and Place*, **16**: p581-9 <https://doi.org/10.1016/j.healthplace.2010.01.003>

R6. Andrew Collins, Richardson, B., and Zodrow, I. (2020) UNDRR STAG Data Working Group (DWG) Report on Concept, Activity and Implication <https://www.undrr.org/publication/stag-data-working-group-report>

Research Funding in the period total over GBP 2 million including:

G1. PI Collins, DFID (2002-2006) Infectious Disease Risk Management in Mozambique and Bangladesh, GBP360,000 [AG3178]

G2. PI Collins, ESRC (2007-2009) The Meaning of Health Security for Disaster Resilience in Bangladesh: a health security framework for disaster risk reduction, ES/E014852/1, GBP221,981 [RES-167- 25-0241]

G3. CI Collins, ELRHA (DFID), (2017-2018) No Strings: Infectious Disease Risk Reduction – International Hand Washing with Soap Innovation, HIF, GBP35,000 to Northumbria of GBP120,000 [HIF 41015]

4. Details of the impact (indicative maximum 750 words)

Collins' work has embedded health and people-centred resilience into disaster reduction programmes at the UN, including the WHO. This impact is delivered at the international strategic and monitoring levels, but also in terms of implementation planning, including laying the groundwork for generating the needed contextual data in the most at-risk communities. Impact is also felt on the ground in Mozambique and Kenya where work with the UN Development Programme (UNDP) and international NGO, No Strings International, has seen the people-centred approach to local environment and health resilience implemented in vulnerable communities. This approach built on existing local knowledge and enhanced community responsiveness, including new public health policies, teacher training, and hand-washing facilities in Nairobi schools.

4.1 Embedding health in the Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction (SFDRR) is the UN's framework for disaster risk reduction, adopted in 2015. It replaced the Hyogo Framework for Action (HFA) which was in place between 2005 and 2015. The adoption of SFDRR marks the first time that the fields of health and disaster risk management were substantially interwoven at the global, multisectoral policy level. Collins' research findings have directly informed the SFDRR by placing a people-centred and community-empowering approach to health at the heart of the UN's DRR response. Through research-led '*expert contributions*' to '*stakeholder consultations and the Sendai Framework negotiations*' and providing '*a key voice for people and public health in the Science and Technology Advisory Group of the UN Office for DRR*' Collins' research has '*helped to ensure that health was central to the final agreed text of the SFDRR 2015-2030*' [E1]. Jonathon Abrahams, Officer for Health Policy in DRR at the WHO, who coordinated the UN process of putting health at the centre of the Sendai Framework, explains, '*there is a clear focus in the Sendai framework principles of a people-centred and inclusive approach which has been at the core of Professor Collins' work which has served as a continual reminder to focus on action at the local level*' [E1]. In the foreword to the SFDRR, Margareta Wahlström, Former United Nations Special Representative of the Secretary-General for Disaster Risk Reduction, notes that a focus on health resilience is one of the '*significant shifts*' as the SFDRR replaces the HFA [E2, p4]. Health is '*strongly promoted throughout*' [E2, p4] but one of the seven targets of the SFDRR is to '*Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030*' [E2, p11, target d].

Collins' work has guided development of the WHO's Health Emergency and Disaster Risk Management (HEDRM) Framework which is designed to deliver on the SFDRR commitments. Abrahams, in coordinating Health Policy in DRR at the WHO, says, '*Collins has been an instrumental member of the core group that has taken forward the WHO Thematic Platform for HEDRM*' and developed the HEDRM Framework in 2019. This Framework, with 194 countries committed to its rules, '*provides guidance to ministries of health and ... multisectoral health*

stakeholders on the functions required to reduce the risks and consequences of emergencies and disasters' [E1].

195 countries are required to report on progress against the SFDRR annually. In addition to guiding the health policy of the SFDRR, Mami Mizutori, the current Special Representative for UNDRR to the Secretary General, explains the importance of Collins' ongoing role in the Framework's successful execution, saying, his *'engagement and thought leadership in this critical phase of the implementation of the Sendai Framework in close coherence with the Sustainable Development Goals and Paris Climate Agreement has helped lay the ground for UNDRR and our partners to better promote and support risk-informed decision-making and investment across all 2030 agendas' [E3].*

In 2019, the UNDRR commissioned Collins to write a report on the uses of action data in DRR to enhance the capacity of international agencies and local communities to deliver the appropriate data that underpins the most effective responses to disaster risk [E4]. Ricardo Mena, Director of UN Office for DRR, explains Collins worked closely with his office *'to apply his research findings on Action Data and significant project experience' into this report, and that this 'policy document provides the framework for the UNDRR Science and Technology Advisory Group (STAG) Data Working Group, a key element of the Sendai Framework implementation' [E5].* As a result, there is now a *'new emphasis on Action Data at the heart of the ongoing implementation and monitoring of the Sendai Framework' [E5].*

4.2 Implementing a people-centred approach in vulnerable communities

To support implementation of community capacity enhancement policies on the ground, Collins has worked closely with the UN Development Programme (UNDP) in Mozambique. Dr Titus Kuuyuor, Chief Technical Advisor for DRR/Climate Change Adaptation at UNDP for Mozambique, confirms that Collins' research and research-informed expertise has addressed challenges the UNDP and other development agencies face at the community level. Dr Kuuyuor explains: *'most agencies, including UNDP, are based in Maputo and [are] unable to provide ongoing capacity development and advice due to the distances involved, exacerbated by the high staff turnover' [E6].* Collins' research on locally informed responses and capacity led to community volunteers serving on Local Risk Management Boards, creating *'an important link between community level disaster risk management and government' and changing UNDP policy towards 'enhancing community knowledge and skills in preparedness and planning and developing early warning systems' [E6].* As Dr Kuuyuor puts it: *'after working with Collins ... we refocused our capacity-strengthening initiatives on different scales and ... working with local officials in communities is proving far more effective for embedding resilience to disasters' [E6].*

Beyond the UN, Collins has worked with NGOs directly embedded within communities to enhance their locally led response capacity, engaging with Collins' research and expert advice on local resilience to implement child-led approaches to risk communication [E7]. No Strings International (NSI), an NGO working internationally to improve children's health and hygiene, *'revised [their] practices towards a child-centred risk reduction approach in Nairobi' [E7, p2].* Rosie Waller, Programme Manager for NSI, explains that the application of the child-centred approach has helped with *'engaging the children, getting them excited to learn about hand-washing, and embed best hygiene practices in school and taking those lessons home to share with their family' [E7, p2].* NSI work in five schools in Nairobi taught hand-washing and good hygiene to all pupils aged 6 to 15. They use puppetry, interactive crafts, and performance activities to engage and place children at the centre of the learning experience [E8]. This approach has urged greater responsibility than is customary in classrooms, embedding the children as agents of change for risk reduction while at the same time heightening their awareness of personal wellbeing [E7]. The Ministry of Education have since adopted this approach, *'there is now an emphasis on child-centred methodologies or strategies, which helps the children to absorb more of what they are taught ... these [new methodologies] are passed on to the master trainers who train TOT's (Trainers of Trainers), who then train the teachers. When you have trained teachers, you have trained children' [E7, p7].* In addition, children practice this at home *'so the whole community are now affected' [E7, p11].* To spread these benefits of child-

Impact case study (REF3)

centred learning, *'public health strategy is now to train the teachers and school health club together with the head of the school and the school management committee, which includes parents ... due to this there is a lot of improvement'* [E7, p12]. Successes have been rewarded by an expansion in classroom sanitation facilities: *'if you go to the schools now, water points are in almost all of the schools and being used correctly'* [E7, p8]. Erik Inda, the Public Health Hygiene Coordinator for 2,500 schools in Nairobi, has *'seen a measurable decrease in faecal and related diseases at the class level'* where these projects have run [E7, p5].

5. Sources to corroborate the impact (indicative maximum of 10 references)

Ref.	Source of corroboration	Link to Claimed impact
E1	Testimonial - Jonathon Abrahams, the Technical Officer for Health Policy in DRR at the WHO	Value of Collins' research in SFDRR and WHO policy
E2	Sendai Framework	Health as a new priority in SFDRR
E3	Testimonial - Mami Mizutori, Special Representative of the Secretary General of the UN	Collins' influence on UNDRR policy implementation
E4	UNDRR STAG Data Working Group (DWG) Report on Concept, Activity and Implication [see R6]	Directly informing UNDRR policy
E5	Testimonial - Ricardo Mena, Director of the UN Office for DRR	Directly informing UNDRR policy
E6	Testimonial - Dr Titus Kuuyuor, Former National level UNDP lead for Disaster Risk Reduction, Mozambique	Influence on UNDP policy and practices building local capacity
E7	Testimonial – Rosie Waller, NSI Programme Manager with appended evaluation report qualitative data for use on redesigned NSI website	Influence on NSI adopting the child-centred approach to learning
E8	No Strings International website to host project report based on E7 content	Use of Collins' people-centred approach in changing educational practice leading to better public health policy, and student health outcomes