

‘We are *not* in the same boat’: Representations of disaster and recovery in India

Roger Few^{a, d, *}, Nihal Ranjit^b, Vineetha Nalla^b, Garima Jain^b, Mark G.L. Tebboth^{a, d}, Chandni Singh^b, Vasudha Chhotray^a, Hazel Marsh^c

^a School of International Development, University of East Anglia, UK

^b School of Environment and Sustainability, Indian Institute for Human Settlements, India

^c School of Politics, Philosophy, Languages and Communication, University of East Anglia, UK

^d Tyndall Centre for Climate Change Research, UK

ARTICLE INFO

Keywords:

Disaster
Recovery
Representation
Narratives
Marginalization

ABSTRACT

‘Representations’ of recovery refer to the creation, circulation, reinforcement and subversion of ideas about what should be done in the months and years after a hazard has struck. The research reported in this paper outlines how contrasting and, in some cases, openly contested narratives can emerge in society around the nature and causes of the event, the impacts and needs of the affected population, and the priorities and effectiveness of recovery processes. We worked in three states in India – Odisha, Tamil Nadu and Kerala – collecting and collating a range of information on ideas, experiences and debates about disaster recovery from people in disaster-affected communities, from governmental and non-governmental organisations, from reports in the media, from academic studies and from official documentation. These related to major hazard events over the last two decades as well as recent events that hit the states prior to or during the course of the research.

Though there is much variation between disaster cases in the pattern of representations by different actors, there are some discernible elements that do tend to work together to generate an effect on outcomes, often in ways that not only side-line livelihood and wellbeing priorities of disaster-affected people but also sometimes downplay or even negate the needs and rights of specific social groups. Managing disaster recovery is a hugely challenging task. However, it is not well served if the ways in which impacts and recovery needs are articulated lead to the effective exclusion of certain sectors, social groups, needs and concerns from full consideration, or to the blocking of alternative perspectives such as proactive approaches to future risk reduction. Key in this, we maintain, is the need to shift representations of recovery to better match the needs and voices of those most affected.

1. Introduction

One might expect the aftermath of a disaster to be a time of solidarity and shared purpose. History and experience tell us that such a rosy picture seldom emerges. The recovery phase is a crucible for intense debate about the past, present and future, one that extends over many months and years, accentuating differences in who holds power, who lays claims and who shapes priorities [1–3]. Stirring this discursive mix are the narrative constructions (accounts of events and issues) created by different actors and interest groups

* Corresponding author. School of International Development, University of East Anglia, Norwich, NR4 7TJ, UK.

E-mail address: r.few@uea.ac.uk (R. Few).

about what led to the disaster, what happened, the impact and trajectories for recovery. These create alternative versions of the situation - backdrops for different scenarios of what should and should not be done [4,5].

In this paper we aim to show why the ideas and arguments that are created around disaster impact and recovery can be so influential, and why understanding these 'representations' is so important if we are to strengthen recovery processes, especially for the most vulnerable and/or marginalised within society. We do so by drawing on a multi-layered programme of research examining disasters that have occurred in recent memory in three states of India – Odisha, Tamil Nadu and Kerala. The research combined policy review and media analysis with interviews and participatory work in disaster-affected communities. The value of such an approach for deepening analysis of recovery processes is that it draws on different types of sources to both triangulate findings and bring out different dimensions of narrative construction. Outputs focussing on specific aspects of this research work have preceded, and will follow, this overview paper. Here, our aim is to offer a synthesis that works across the different strands of research. Inevitably, this constrains the level of empirical detail we can provide on each. After a brief scene-setting drawing from the international literature base on disaster recovery, we describe the disaster contexts and the methodologies used in the case study work. We then provide a digest of the complex empirical findings that resulted, using specific examples in three sections to highlight the construction of ideas on hazard events, impacts and recovery priorities. The significance and implications of these ideas for disaster recovery is then elaborated further in the discussion and conclusion.

1.1. Disaster recovery and its contested representation

Disaster recovery is a typically prolonged and uneven process, entailing decisions, actions and investments by multiple actors – from the disaster-affected people themselves to civil society, private sector, governmental and international aid agencies. It is perhaps inevitable, therefore, that the political recovery 'space', in which priorities for recovery emerge and are promoted, becomes a representational arena of different, and often contested, visions and motivations [6]. This section draws on existing literature to discuss contestation in representation, especially between external and grassroots narratives, different value systems and issues of trust, and the potential and limitations for challenge to dominant narratives.

Chandrasekhar et al. (2014), in their analysis of recovery planning after disasters in India, China and the USA, examine why disasters throw up such intense representational issues. The phases following a disastrous hazard event, they argue, are times of rapid change. The abnormal pace at which recovery planning and development are often addressed might legitimise certain decisions that would have been contested in normal times, precluding broader-based processes of participation. Using the concept of social interfaces between actors [7], sees patterns of both cooperation and conflict emerging at these interfaces between external actors (especially those offering assistance) and disaster-affected people. Largely, where conflict exists at these interfaces it is driven by discursive representations of the disaster situation that generate differing perspectives on priorities, underwritten by different capacities, resources and power [8–10]. [11]; for example, claims that inherent biases in the portrayal of affected communities, especially constructions around the deservedness of aid recipients, can channel the intervention priorities of governmental and other agencies and reinforce top-down approaches. [12]; p1144) shows how communities access recovery support from formal and informal channels in varied ways but crucially, she highlights 'the role of external actors such as NGOs and donors in shaping the discourse and practice of public service delivery'.

The role of the media is often crucial here, feeding from and into the public transcript of recovery priorities. For example, much has been written in this respect about the aftermath of Hurricane Katrina in the USA in 2005 (see e.g., Refs. [13–15]. According to Lindahl (2012), media accounts constructed negative portrayals of poorer New Orleans residents, in communities too disordered to be helped. The contrasting stories of survivors who expressed how people provided mutual assistance but experienced a lack of engagement from government agencies, were commonly bypassed by the mainstream media, resulting in 'divided narrative communities, narrative content, and narrative reception' [16,17]. note that bias in media reports on disasters can result not only from the media's association with interest groups (such as political support groups, advertising clients and funding corporates), but also simply from reporting practices that create spatial as well as social biases (for example, tending to favour reporting from locations that are closer and more accessible). The systematic biases of media reporting can in turn affect and disrupt the direction and flow of aid from national and international sources [18].

Importantly, how the underlying hazard event is portrayed can also have a bearing on the discursive construction of recovery needs [19]. The representation of disasters as unpredictable, violent phenomena that are external to society remains prevalent in disaster management approaches, despite wider recognition of the systemic societal roots of risk and vulnerability and the social generation of disasters [20]. This representation matters deeply for all aspects of disaster risk reduction (DRR), allowing the predominance of technical, infrastructure-oriented solutions, and the neglect of longer-term vulnerability reduction processes, including those oriented to boosting local capacities or strengthening local livelihoods [3,11,21]. It also shapes discourses of causality. [22]; for example, describes how contested representations of causality of the Lapindo volcanic mudflow disaster in Indonesia in 2006 – i.e., whether it was earthquake-induced or human-induced (the result of oil drilling) – influenced constructions of victimhood and the support provided for response and recovery. Amid legal disputes over accountability and rights, the governmental body set up to manage the impacts of the disaster tended to characterise affected communities as misinformed by activists, thereby deflecting attention from a more considered understanding of their needs. [23]; focussing on the Bhopal gas tragedy, argues that the state-corporate nexus sought to 'disremember' Bhopal by deliberately manipulating the factual context of the disaster, while the media discourse tended to remain within the limits set by the state and corporate interests. This coalition of interests shifted the narrative away from the disaster as an act of corporate/industrial negligence.

However, not all representational conflicts are as starkly politicized as those examples. Differences in values and norms can also be key in a mismatch of priorities, along with the mistrust between actors that this engenders [24]. Looking across three disaster situa-

tions in India, [25] demonstrated how NGO and private sector actors often approached house construction in a way that was insensitive to local culture and values such as the importance of respecting traditional housing design. The survey work by Ref. [26] after the 2015 floods in Chennai reported low levels of trust by households in the ability of various actors - government, NGOs, private sector, community leaders and academia - to support their recovery process. This can stem from sectoral biases in recovery interventions, commonly oriented to housing and infrastructure, that may overshadow other recovery needs of disaster-affected communities related to more holistic aspects of social, psychological, cultural and environmental wellbeing [27]. Aspects such as psychosocial support typically struggle to achieve equivalent priority, although discussion of needs and responses is growing in the aftermath of more recent disasters, as was notable following the Kerala floods of 2018 and 2019 (e.g. Refs. [28–30]).

The depiction of disaster recovery – the creation, circulation, reinforcement and subversion of different ideas about hazard events, impacts and recovery priorities - is therefore what we refer to as representations of recovery. The operation of these elements in the discursive space of disaster recovery (see Fig. 1) provides the framing for our research. Looking across the case studies we seek here to summarize what forms of representations emerged and offer indications of how they became manifest in recovery policies, support and interventions.

1.2. Case study contexts and methods

Odisha's coastal districts along the Bay of Bengal are exposed to frequent floods and cyclones of severe intensity. Combined with the state's high incidence of poverty, food insecurity and precarious livelihoods, a significant segment of the population is extremely vulnerable to disasters. We initially studied two areas with distinct histories of cyclonic impacts – Jagatsinghpur district, that bore the brunt of the 1999 Supercyclone, and Ganjam district, that was affected by the 2013 cyclone Phailin. While Phailin was the most economically destructive, the Supercyclone claimed by far the most lives, with over 10,000 deaths in a single block of Ersama alone. The Supercyclone was a turning point in the state's history, laying the foundation for a new era of disaster management, in which the state to adopt a 'zero casualty' approach, moving away from solely emergency responses toward strengthening preparedness measures, including early warning systems and provision of cyclone shelters. During the study period, in April 2019, cyclone Fani hit the Puri district, and we decided to include this area to study ongoing narratives and recovery actions.

In Tamil Nadu, our focal areas were the coastal conurbation of Chennai and the rural coastal district of Nagapattinam, and we explored three major disasters – the 2004 Indian Ocean Tsunami, severe flood events in 2015 and cyclone Gaja which hit the state in 2018. Nagapattinam was the district worst affected by the 2004 Tsunami, reporting 76% of all deaths in the state,¹ with particularly heavy impacts on fishing livelihoods. Cyclone Gaja again severely impacted Nagapattinam. Deaths were far fewer, but the damages included destruction of hundreds of thousands of coconut and banana trees, and saltwater intrusion and sand sedimentation caused long-term degradation of agricultural lands. Chennai was one of the areas worst affected by extreme rains and flooding in 2015, and the severity of the floods was exacerbated by poor reservoir management and changes in the natural drainage system of the city, driven by encroachment on wetlands and water bodies. Our fieldwork was conducted predominantly in two sites: Semmencheri, a slum resettlement colony located in the southern periphery of the city; and Nochikuppam, an in-situ rehabilitation site in the urban centre. Semmencheri also includes post-tsunami housing, for families displaced previously from the coastal belt.

In Kerala, our focus was primarily on two areas, Kuttanad and Wayanad, which were heavily impacted during the successive flood and landslide disasters associated with extreme monsoon rains in 2018 and 2019. The 2018 floods were one of the worst disasters in the history of the state, resulting in 433 casualties.² Kuttanad, a low-lying, deltaic region in the central part of Kerala was severely impacted by the floods. Though the region witnesses perennial flooding, which is closely linked to the agricultural calendar and seasonal farming practices, the floods were of a scale and depth that deeply affected not only agriculture (mainly paddy cultivation), but also livelihoods in fisheries and tourism. Wayanad, in the north of the state within the Western Ghats with a large indigenous population, is prone to minor flooding and landslides during annual monsoons but witnessed severe damage during the 2018 disaster. A large number of people lost their homes and livelihoods, especially in agriculture where over 35% of the net cropped area was damaged. Severe floods and landslides returned again to Kerala during the following year's monsoon resulting in the loss of a further 125 lives and causing major damages again in both the study areas of Kuttanad and Wayanad.³

All three study sites present a tropical coastal context, and, with that, exposure to climatic shocks and stresses including sea-level rise and cyclonic storms. All states embody social heterogeneity relating to class and caste, and there is a commonality also in terms of economic reliance on natural resources for a significant portion of their populations, especially via fishing. However, it is important to note that the three states are distinctive in their recent political histories, levels of social activism and the maturity of their disaster management systems. It was this diversity that shaped our choice of cases, to provide a flavour of the highly diverse national context that India presents. Nevertheless, we found that experiences across the case studies reflect many of the issues reported above from disaster recovery processes across the globe.

In order to capture largely retrospective information on representations, we took a multi-stranded approach to data collection, combining different forms of secondary data analysis with primary data collection in communities affected by disasters dating back to the late 1990s. This work was carried out in the period between 2018 and 2020, by a team of researchers from India and the UK. The research work broadly followed the same approach across the three states.

¹ Study Report on Gaja Cyclone 2018. National Disaster Management Authority, Ministry of Home Affairs, Government of India (2018).

² Kerala Post Disaster Needs Assessment: Floods and Landslides. United Nations, Asian Development Bank, Government of Kerala, World Bank, & European Union Civil Protection and Humanitarian Aid (2018).

³ Rebuild Kerala Development Programme: A resilient recovery policy framework and action plan for shaping Kerala's resilient, risk-informed development and recovery from 2018 floods. Government of Kerala (2019).

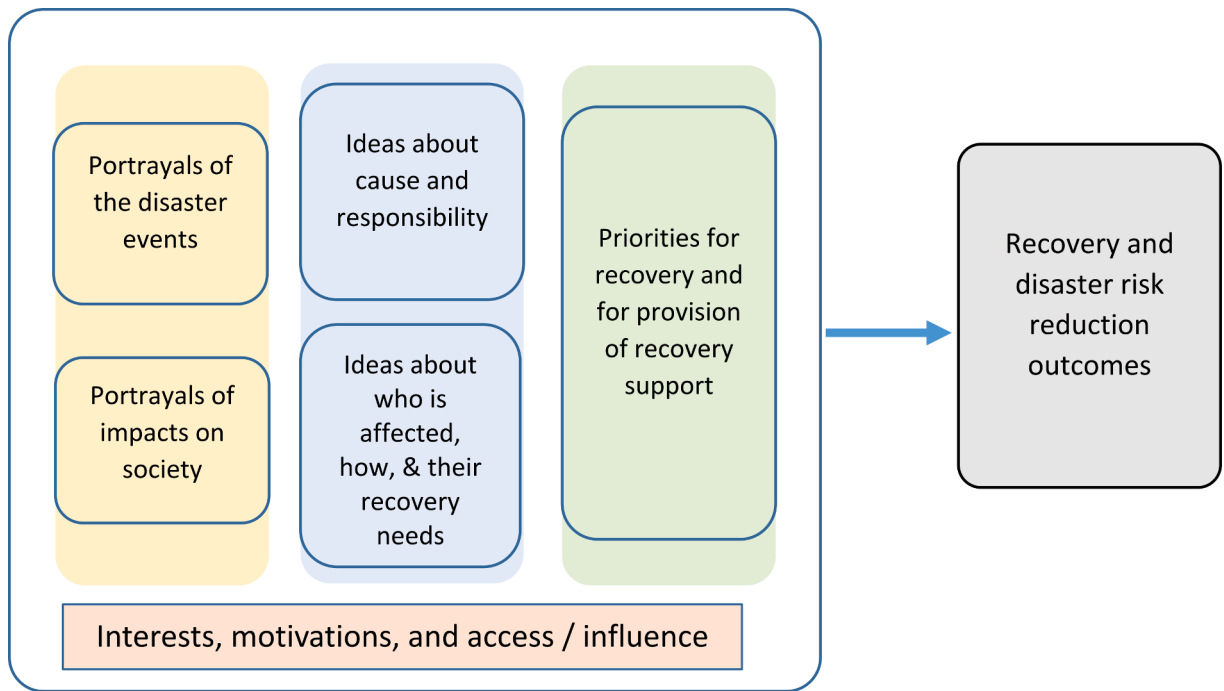


Fig. 1. The contested discursive 'space' of recovery.

Secondary data sources comprised mainly documents and reports on policy interventions relating to disaster recovery and risk reduction produced by state governments and non-government agencies, and media sources comprising both print and online newspaper reports. The policy reviews drew widely on disaster management, housing, environment, fisheries and agriculture sectors, in which most disaster-related interventions were situated, but with inclusion of health and social sectors where disaster recovery was a clear focus. Across the cases, a total of 109 documents were analysed to compile and collate statements expressing perspectives about the hazard event, its impacts, relief and recovery needs and justifying priorities for recovery intervention. The media review drew on a variety of sources spanning national and state-level newspapers, online media sources in India, select international media outlets, and to a lesser extent community radio archives, local and national television reports. Across all media sources, a total of 469 sources were analysed using standardised templates to record how the hazard event, the people affected and recovery interventions were portrayed.

Primary data comprised a mix of interview and groupwork techniques with disaster-affected communities and key informant interviews both at the local and state level. At community level, a total of 118 people (64 women and 54 men) took part in semi-structured interviews across the study locations to capture people's experiences and perspectives on historic and recent disasters, the losses and impacts they suffered, recovery processes, the support received from governmental and other agencies and future disaster risk. Care was taken to stratify the samples of those invited to participate to include people from across different livelihoods, castes and social class, as well as gender. In addition, 32 gender-segregated group discussions (typically with 5–10 people in each) were designed to encourage people to convey more broadly their conceptions of what long-term recovery means, and to discuss and challenge their representations in media pieces (including audio and video sources). This helped us understand people's articulation of their own recovery needs in contrast (or in alignment) with the media coverage. Key informant interviews were undertaken with a mix of 106 stakeholders in government, NGOs, humanitarian aid agencies, and with activists, academics and journalists. These semi-structured interviews focused questions on the process and prioritisation of relief and longer-term recovery measures, to help understand broader narratives of impact and recovery processes. All interviews were qualitative in form and analysed through coding and collation of responses.

2. Representations of hazard events

We contend that we first need to understand how the occurrence of a disastrous hazard event itself is portrayed by different actors in order to unravel the representational dimensions of subsequent impact and recovery. By hazard 'event' we refer here to that trigger process when a disaster initially comes into effect: when a hazardous phenomenon encounters populations that are vulnerable to its multiple impacts, so much so that a chain of consequences is set in place sufficient to constitute a disaster. We fully recognise that disasters should not be conceived as momentary ruptures to the norm, that any disaster has antecedent roots within the social and environmental fabric of risk and extends over time as its long-term dimensions ramify [20,31]. Nevertheless, it is important when analysing how society describes disasters to consider that phase when the force of a hazard occurs and takes direct effect. And what is key for our analysis about the 'event' is ideas that circulate about its characteristics, its exceptionalism and its causation.

Across our case studies of multiple disasters in India, it was still commonplace to hear accounts of hazard events described in terms of irresistible forces of nature, often invoking conceptions of fury and monstrosity. They are often portrayed in statements by politicians, governmental agencies and the media as shock events that could not have been foreseen or the impacts of which could not have been averted. Increasingly, such narratives place blame on new uncertainties associated with climate change and, in doing so, sometimes eschews the historical record of hazards. This portrayal of events ignores the role of human agency and social structures in shaping how hazards become magnified, who becomes exposed to them and who is affected most by them. It can also create an image of disaster in which responsibility for the event is diverted to nature and/or to the global processes that generate climate change.

Media reports about the heavy rains and floods that hit Kerala in August 2018 provide contrasting windows into the depiction of disasters. Adjectives such as ‘raging’ and ‘monster’ commonly used in reports and commentaries invoked anger or malevolent intent to nature,⁴ describing ‘raging’ rivers and a ‘monster flood’, and the hazards were also repeatedly described in initial media reports as ‘unprecedented’ in their magnitude and impact.⁵ The terrible loss of life certainly exceeded previous recorded events, but floods of a similar magnitude occurred in 1924, and regular flood damage also occurred in the intervening years, including an extreme monsoon season in 1961 when 115 lives were lost in floods and landslides. And the singular descriptions of the 2018 disaster were undermined further when devastating floods and landslides returned in 2019. Challenges to the conceptions of the disaster as externally-generated and wholly unpredictable also rapidly emerged. Some commentators claimed that dam mismanagement, meteorological forecasting failures and ineffective early warning systems were at fault in turning these hazard events into disasters.⁶ A number of experts cited in newspaper articles represented the floods and landslides as at least exacerbated by land degradation, changes to watercourses and other human activity in the Western Ghats, arguing for a renewed emphasis on active disaster risk reduction through strengthened environmental management.⁷

Interviews with local government officers in Odisha revealed a shared conception of the impact of Cyclone Fani associated primarily with unpredictability and the limitations of science, especially in the face of global climate change. The discussions indicated that, despite the state's regular encounters with tropical cyclones, the level of preparedness varies greatly across the state. One official rationalised poor preparedness in Puri district for Cyclone Fani of 2019 because it was not commonly in the path of storm-tracks and ‘the people and the administration did not anticipate the cyclone’. Similar narratives about cyclone unpredictability across the state and consequent unpreparedness in certain districts emerged in two other interviews with local officials. It is not to say that these claims of scientific limitations are wrong, but that they can constitute an internal governmental narrative that places disaster causality beyond societal decisions and actions.

In Tamil Nadu, the 2015 floods were initially portrayed through narratives of unparalleled heavy rainfall over the area, implying that the event was ‘natural’ and impossible to foresee or adequately manage. However, such a version of events came under sustained public critique and the floods increasingly came to be recognised as a consequence of Chennai's spatial changes, development and urbanisation [32]. For example, the Comptroller and Auditor General audit report,⁸ holds several government bodies culpable in the floods, for failing to stop large constructions along waterways, and for the unauthorised conversion of wetlands and waterbodies to commercial and residential land.

This example aptly highlights why the attribution of events is important. Framings of extreme events in Tamil Nadu were often described in terms of their exceptionality but also in terms of the degree to which they are exacerbated by human influence, with links to issues of blame and attribution. A natural framing of an event forecloses the space to consider how and why certain populations were vulnerable and others not and absolves specific actors of responsibility for their (in)actions, making it harder for affected populations to attribute blame and seek redress. However, as noted above, such portrayals do not go unchallenged and are now frequently met by counter-narratives, often conveyed through the media and through civic protest, that point to increasing scientific knowledge about hazards and place the blame on development issues and decision-making at a more local scale. These different representations, in turn, affect how the responsibility to support people's recovery is construed, either as a form of charity for misfortunes bestowed by fate, or as a form of redress for governmental failings and vested interests pursued by powerful actors. They also shape whether there is recognition of the gains that can be made in the recovery period to reduce future disaster risk and build resilience within society.

2.1. Representations of impacts and the needs of disaster-affected people

The consequences associated with a major hazard take many different forms, with effects that continue to emerge and ramify long after the immediate impacts of a flood, cyclone or landslide have become manifest [33,34]. Equally, people's experience of the impacts and how they respond to the crisis is inevitably highly differentiated. How all this is described and conveyed within society, we

⁴ For example: Times of India, 17 August 2018 <https://timesofindia.indiatimes.com/city/kochi/kerala-floods-raging-pampa-submerges-houses-hundreds-stranded/articleshow/65435971.cms>; Times of India, 12 January 2019 <https://www.outlookindia.com/magazine/story/the-damn-floods-keralas-monster-monsoon-leaves-us-with-a-deluge-of-questions/300542>.

⁵ For example: Mint, 20 August 2018 <https://www.livemint.com/Opinion/w3QBtwsVp5i0ZQrZ9PRqyK/Opinion--Kerala-floods-An-unprecedented-tragedy-foretold.html>; The Hindu, 2 April 2021 <https://www.thehindu.com/news/national/kerala/2018-floods-due-to-unprecedented-rainfall-not-man-made-kerala-cm/article34223371.ece>.

⁶ For example: The New Indian Express, 3 April 2019 <https://www.newindianexpress.com/states/kerala/2019/apr/03/amicus-curiae-blames-bad-management-of-dams-for-worsening-kerala-floods-demands-judicial-inquiry-1959727.html>; DownToEarth, 2 December 2021 <https://www.downtoearth.org.in/news/governance/did-poor-government-handling-in-kerala-cause-2018-floods-yes-says-cag-80494>.

⁷ For example: Times of India, 27 August 2018 <https://timesofindia.indiatimes.com/india/failure-to-stop-degradation-of-western-ghats-worsened-kerala-floods/articleshow/65555641.cms>; Mint, 13 August 2019 <https://www.livemint.com/news/india/damage-to-western-ghats-makes-kerala-floods-worse-1565634396271.html>.

⁸ Performance Audit of Flood Management and Response in Chennai and its Suburban Areas Government of Tamil Nadu. Audit Institute of India, Comptroller and Auditor General of India (2017).

argue, fundamentally shapes how the process of recovery ensues, especially in terms of external support for disaster-affected populations. There are three inter-linked representational aspects that emerged strongly from the case studies in India: (1) a focus on tangible, material impacts; (2) the ways in which disaster-affected people themselves are depicted; and (3) the homogenisation of impacts versus social differentiation in recovery needs.

The first aspect concerns how focus tends to be placed on certain types of impact to the relative neglect of other types, especially non-material losses. The specific sectoral emphases vary from one case context to another, but there is a general tendency to focus on visible, typically quantifiable impacts such as physical destruction of buildings, infrastructure, crops and other economic resources, as well as numerical loss of lives. This is a familiar story in critical research on disaster recovery (e.g. Refs. [35–37]), but in our research we noted how such narratives of impact can emerge and be sustained, especially through the processes of disaster reporting that prioritises relief. However, such narratives may be contested as only partial representations of recovery needs.

In Tamil Nadu, across both media accounts and in formal disaster reporting by governmental and non-governmental agencies, the more immediate, tangible and quantifiable impacts such as loss of life and loss of built infrastructure (housing, power lines, roads) were effectively used as indicators to depict disaster impacts. In general, there was much less emphasis on wider but less quantifiable and/or intangible impacts such as disrupted cultural and religious practices, loss of cherished landscape features, environmental degradation, disruption of community cohesion and psychosocial effects. To a large extent, this is perhaps inevitable, given the urgency required of reporting when a disaster strikes and the disruptions to transport that typically arise, meaning that many initial assessments are made in locations with dependable road access. Much of this type of reporting is confined to the immediate aftermath of hazards, but this is nevertheless a critical stage when external attention is at its most intense and narratives of impacts and needs emerge. There is much less recognition over time of important ongoing effects, such as long-term psychological impacts or increased conflict within communities due to enforced changes in livelihoods. In the research in Odisha, community groups discussed what issues they would like to be covered by the media in terms of their recovery needs. Housing needs were not their greatest concern in most cases. The responses include a high prioritisation of issues such as access to water, access to health facilities, and the disruption of electrical power infrastructure.

The second key aspect relates to the contrasting ways in which disaster-affected people tend to be represented in discussions, reports and accounts of the aftermath of events. Not surprisingly, it is common for media reports, for example, to focus immediately on the vulnerability and misery of their experience, the hopelessness and suffering. In these accounts most people are constructed primarily as victims. Yet, at the same time there are likely to be reports that highlight specific agencies and capabilities of disaster-affected people, especially during the disaster emergency phase. Even when positive attributes of disaster-hit communities are described in this way, this can still potentially create negative effects. Accounts of people's heroism and their tolerance of adversity create caricatures about resilience that can undermine wider recognition of people's recovery needs. After the Kerala floods, there was a repeated characterisation in the media of fishermen as tough, gritty and brave, expressing few words and little emotional display.⁹ There were also accounts of fishermen being subsequently honoured for the important role they played in rescue efforts¹⁰, but there was much less attention given to the severe livelihood disruptions and mental health stresses faced by fishing communities in subsequent months.

While there may be initial compassion at the heart of both kinds of depictions (vulnerability versus capability), over time we commonly see narratives evolving that lead to some social groups being perceived as overly dependent on relief or even manipulative of the aid system. This was exemplified in the view expressed by one government agency director in Odisha that 'after a disaster, communities are more focussed on what they would get from the government and not so much on their recovery'. After the floods in Kerala, as discussed below, emphases in recovery intervention in the lowlands tended to favour the paddy farm owners, with much less attention given to the needs of landless labourers. While local government officials were empathetic about what they regarded as the genuine losses suffered by people, some were sceptical of the extent of losses being reported. A repeated notion was that such groups exaggerated losses to claim assistance or were misusing the funds they received for purposes other than recovery needs. Such negative portrayals served to generate a sense that they are undeserving beneficiaries or 'bad victims', claiming aid to which they are not necessarily entitled.

The third aspect of the representation of impacts and needs that arose strongly in the research was the extent to which social differentiation of need was recognised. Despite the often-repeated idea that disasters are great 'levellers', affecting rich and poor the same, there is ample evidence from across the world that disaster risk is highly inequitable [20]. We see differential vulnerability play out even more starkly in the aftermath of a hazard when people affected take steps to rebuild their livelihoods and wellbeing. To put it simply, resources, options and opportunities for recovery vary hugely from person to person, from one social group to another, and from place to place. They vary according to patterns of wealth and savings, but also according to social status, political connections and the norms and disparities associated with gender, ethnicity, caste, disability and other dimensions of identity. Yet, all too often, the narrative of disaster impact fails to acknowledge these disparities.

The words of one newspaper article about Odisha conveyed both the persistence of a levelling narrative and what it obscured, in this case with reference particularly to Dalits: 'Disaster does not spare people along caste lines, or as rich and poor. But after the cy-

⁹ For example: Times of India, 12 January 2019 <https://timesofindia.indiatimes.com/india/the-people-behind-the-mega-rescue-mission-during-the-kerala-floods/primeshow/67323771.cms?from=mdr>; The Indian Express, 24 August 2018 <https://indianexpress.com/article/india/kerala-floods-fishermen-relief-rescue-operation-5317511/>.

¹⁰ For example: Times of India, 29 August 2018 <https://timesofindia.indiatimes.com/city/thiruvananthapuram/keralas-big-salute-to-fishermen-who-rescued-flood-hit-people/articleshow/65595691.cms>.

clone Fani ravaged Puri district, a clear pattern has emerged that vulnerability to disaster among the social excluded [Dalits] is high, while resilience is very weak'.¹¹

In Tamil Nadu, we encountered contrasting tendencies in the representation of disaster losses. On the one hand, reports by governmental and aid agencies (and replicated in the media), in describing disaster impacts in aggregate with a focus on numerical loss of life and damage to infrastructure, implicitly ended up homogenising affected populations and masking the differentiated experiences of the disaster and recovery processes. On the other hand, losses for specific livelihoods or population groups commonly became highlighted in impact narratives – in ways not necessarily reflective of wider needs. For example, fishing communities in Tamil Nadu were regarded as most adversely affected by the tsunami,¹² and there was less reporting on losses incurred by other groups such as farmers, small industries, and wage labourers. This resulted in most of the recovery efforts being concentrated around fishing, so much so that livelihood support meant for fishers became offered to those engaged in other occupations. The fishers in Nagapattinam have historically been at the forefront of collective action and bottom-up activism through strong traditional, caste-based panchayats [12]. Our discussions in communities suggest that, after cyclone Gaja, this visibility, combined with strong social and political networks, again helped lead to differential access to recovery support when compared with other similarly disaster-affected groups with less political capital, in this case including smallholder farmers and landless agricultural labourers. Without strong collectivisation and socio-political networks, the farming community tended to be excluded and their needs seldom vocalised or acted upon.

In the Kuttanad region of Kerala, the larger narrative surrounding the floods and recovery centred on the paddy sector. However, these narratives failed to capture the social hierarchies within the sector, resulting in the invisibilisation of the voices and needs of landless agricultural labourers [38]. Most of the larger paddy fields are run by landowning farmers who reside in more accessible areas. Landless agricultural labourers, the majority of whom belong to historically marginalised communities, reside in remote areas near the paddy fields but not accessible by road. During the floods, these areas were completely cut off from the main villages. The lack of accessibility to these areas, in addition to hampering relief and rescue activities, also made it difficult for the media and other actors to reach them, resulting in the under-representation of marginalised communities in the larger narrative of the disaster.¹³ In contrast, much more attention focussed on supporting the landowning paddy farmers, including financial compensation for damaged crops. The subsequent harvest season witnessed high yields, and both the media¹⁴ and state dubbed it a 'bumper harvest', showered praise on the 'resilience' shown by farmers and portrayed the success as symbolic of the recovery of Kuttanad. Most of the local level participants in our study claimed that the revenue benefits of this harvest seldom trickled down to the labourers who were coping with their personal disaster losses, because they had fixed wages. Dominant narratives, driven in part by political motives, failed to capture the hierarchies and differentiation of recovery outcomes within the paddy sector.

2.2. Recovery priorities and forms of intervention

As the foregoing sections reveal, decisions about recovery support and intervention following a disaster are seldom simple or linear. The pathways to repair, rehabilitation, restoration and reduction of future risk are subject to differing, and often contested, ideas about causation and responsibility, the appropriate use of resources, what actions should be prioritised and who should benefit from them [39,40]. Since recovery commonly requires major state intervention, it is the ideas of government agencies and their political superstructure that often seek to dominate the public discourse. But other agencies and key individuals within them, including aid organisations, private sector organisations, and, in some cases, religious organisations, can also become highly influential ([22,41]. This interplay of interests can make the dialogue around intervention increasingly abstracted from situations on the ground. It can lead to 'recovery' actions that become distanced from the objective of addressing disaster-affected people's needs equitably, particularly those of more marginalised social groups. Even the actions of public authorities that flow from ideas of what constitutes good practice can have discriminatory effects and be subject to contestation.

Conversations with district government officials in Tamil Nadu revealed the importance for public authorities to convey images of efficiency, transparency and avoidance of corruption claims in their support for affected populations. As one interviewee noted, when disasters strike 'the image of the government is also at stake', so it is 'important to act efficiently'. After Gaja, the demand for immediate data on damages and losses meant that initial assessments were quick and basic. Recognising errors in this rapid assessment, the district administration followed up with a 'super-check process' carried out in a multi-scalar fashion: the figures of each enumerator were checked by the administrative area official above them and so on up the hierarchy. According to the same interviewee, this process reduced the total estimate of damaged houses by 35–40%, but did not necessarily lead to more accurate assessments. A culture of demonstrating efficiency and avoiding false claims implemented through hierarchical monitoring ended up as too restrictive. According to the same district-level official:

'In a massive disaster this backfires and [the] process seems too draconian and delayed. If you focus on the 20 per cent who might make false claims, and not the 80 per cent who genuinely lost, then there's a problem in preventing assistance that's needed'.

¹¹ For example: The Hindu, 2 June 2019 <https://www.thehindu.com/news/national/other-states/dalits-stranded-in-puri-community-shelters-a-month-after-cyclone-fani/article27406811.ece>.

¹² See e.g.: Tiding over Tsunami. Part 2. Government of Tamil Nadu (2008).

¹³ The Extent of Inclusion of Dalit and Adivasi Communities in the Post-disaster Response in Kerala 2018. National Campaign on Dalit Human Rights (2019).

¹⁴ For example: The Hindu, 26 February 2019 <https://www.thehindu.com/news/national/kerala/kuttanad-farmers-prove-their-resilience-with-a-bumper-harvest/article26379481.ece>; Times of India, 22 February 2019 http://timesofindia.indiatimes.com/articleshow/68102844.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.

Ideas about disaster risk reduction priorities also shape the general level of attention given to recovery within the fabric of public policy. As a reaction largely to the catastrophic level of fatalities during the 1999 Supercyclone, the Odisha state placed primary emphasis in its DRR initiatives on protecting human lives through early warning, preparedness, evacuation and shelter measures. It prides itself on its zero casualty policy¹⁵: in public statements and during our research interviews, government officials often highlighted the far lower levels of deaths in more recent cyclones such as Phailin of 2013 and Fani of 2019. Key institutions draw on this aspirational emphasis to show their advances in a positive light. Yet this is a partial framing of disaster, which effectively downplays other forms of losses that undermine the livelihoods and wellbeing of a much larger recovering population. While preparedness measures strengthen, there is little strategic planning or institutional coordinating architecture across sectors for long-term recovery. One interviewee from the NGO sector argued that 'each government department should have special recovery plans integrated into their development plans, with an earmarked amount in annual budgets to deal with any unforeseen events'.

In the previous section we discussed how conceptions of people's recovery needs by external actors tended to focus on material losses, and we found this was almost always reflected in the balance of interventions. Because disaster impacts on society are so diverse, approaches to recovery intervention by governments and other agencies ought to, and usually do cross multiple sectors. Nevertheless, the weight of effort is commonly uneven and targeted to certain priorities. The situation that arises is frequently one of contested priorities, when the prevailing ideas of more influential actors and institutions do not always map closely on to the recovery ideas and aspirations of the most disaster-affected people.

For Wayanad, in Kerala, the imperative for housing reconstruction or rehousing tended to be highlighted in reports and interviews at all scales about recovery from the floods and landslides. Given the intensity and wide scale of physical destruction, this was an understandable sectoral focus. However, housing issues were only part of the recovery story, and some interviewees at community level raised concerns about the lesser levels of support for other aspects. Tribal communities, in particular, highlighted the need to restore stable livelihoods for recovery. Farmlands in many flood-affected areas were rendered uncultivable due to thick sand deposited by the flood waters. This, along with the absence of relief measures targeted at agricultural labourers, forced several tribal communities, many of whom were employed as agricultural labourers, to migrate to neighbouring states in search of work.

Among recovery initiatives in Tamil Nadu, the Rajiv Gandhi Rehabilitation Package, the Emergency Tsunami Reconstruction Project, and the Tsunami Emergency Assistance Project, all had a major focus on providing housing and repairing or replacing damaged and destroyed dwellings. Again, while housing provision was an undoubtedly important element of recovery, among disaster-affected populations in the state we heard people expressing recovery as a more long-term, continual, and systemic re-creation of lives and livelihoods. Using a relatively expansive understanding of recovery, people often highlighted how repairing the social fabric, meeting aspirations, coming to terms with altered social relations with nature, and measures to reduce future disaster risk tend to remain unaddressed in recovery support. In many cases, people wanted to frame recovery as a chance for positive improvement in their overall wellbeing, and not just a return to pre-event state. But their options to shift the foci of interventions were limited. The experience of recovery was generally top-down with processes of loss enumeration and selection of appropriate recovery interventions being state-led without local participation. It should be noted, though, that while the focus on housing remains in many interventions, the remit has been expanded in recent state policies¹⁶ to include aspects such as psychosocial recovery and livelihood strengthening.

A further implication of the ways in which impacts and recovery needs become partially conveyed and re-interpreted by external actors is the emergence of both social and spatial biases in intervention support. Amid the urgency and politics of disaster response, there is a high chance that the situations and needs of more marginalised social groups may draw even less attention than they normally receive. In our studies, people in informal housing, migrant workers and those of scheduled castes and scheduled tribes had the least physical, social and cultural access to the media, public services and the institutions that manage external aid. In the process, their voices and concerns may simply have been unheard by those making decisions about support and intervention. And even among population groups that did gain more attention, not everyone gained the same recognition. In Odisha, our research on rehousing programmes after Cyclone Phailin in 2013 revealed 'beneficiary' identification processes that regarded people as eligible for receiving houses only if they met certain conditions, the most prominent being land ownership. Those who did not qualify (usually the ones in greater need of assistance) rarely received recovery support, often because the simple 'kutchra' hut homes that were lost were built on land to which the occupants had no title.

Representations of need also operate differently between, as well as within, communities. The research team's interviews with state officials in Odisha revealed a tendency for them to be favourable to communities that demonstrated greater social cohesion and collectively self-mobilized for negotiation. For instance, in Ganjam district, Markandi village, which has in the past experienced several cyclones and has a well-established community structure, communication with the state via a strong single voice has been possible. As a result, one interviewee stated: 'we will work there ... whatever government schemes are there, we will implement all of them in Markandi because we are sure it will work and be effective'. An interviewee from the NGO sector suggested that Ganjam district as a whole has learned how to gain attention from the state, in such a way that other districts affected by Phailin such as Puri and Khordha could not match.

In Tamil Nadu, there was evidence of spatial disparities operating between urban and rural locations. For example, media reporting on the 2015 South India flood heavily focussed on Chennai city, the economic and political centre of the state, with relatively little reporting on major impacts in neighbouring rural districts. The existence of this skew in reporting was confirmed by interviews with both journalists and humanitarian agencies. Several pointed to a similar contrast in media attention between the Chennai flooding

¹⁵ See for example, https://revenue.odisha.gov.in/sites/default/files/2020-05/2013_14.pdf and international recognition of the approach as in <https://ndmindia.mha.gov.in/images/pdf/PhailinReport-UNDP-Odisha.pdf>.

¹⁶ See: State Disaster Management Perspective Plan 2018–2030. Government of Tamil Nadu.

and cyclone Gaja, which had widespread impacts but spread mainly over rural areas. For example, a senior government official noted that Gaja did not receive enough media coverage 'as it is not Chennai', and a reporter admitted that this was associated both with journalistic priorities towards urban centres and the practicalities of reporting that give inadequate time to travel to remote affected villages. One NGO officer argued that the poor coverage of Gaja's impacts was at least partly responsible for the low levels of federal and international recovery aid reaching the affected territories:

'In Gaja, no NGOs came; no money flowed in. This was because number of deaths were low and so perhaps, foreign organisations felt 'this is a usual one'. Many [affected people] came to a post Gaja meeting to demand Gaja be announced as a 'national disaster'. They were angry that Chennai floods got so much attention'.

At times, marginalised groups may even be by-passed entirely with priorities directed elsewhere. In the process, groups of people likely to have been deeply affected by disaster are, in effect, given no stake within the dominant discourses of recovery. In all the case studies we witnessed the struggle that women routinely faced in expressing their needs, together with the limited channels of influence open to certain castes, scheduled tribes, landless people and marginal occupational groups. But the structural neglect of migrant workers following severe disasters is perhaps the most vivid example of this representational extreme – one laid bare in many crises, including the aftermath of the Kerala floods. Single, male, inter-state migrant workers account for roughly 10% of Kerala's population. Migrant workers engaged in daily wage labour were among the most affected groups in the flooded zones, unable to find work for weeks at a stretch, but rarely mentioned in the dominant narratives surrounding the floods. With minimal savings to fall back on, limited access to rations and essential goods, sometimes facing discrimination by other community members and with constrained access to relief provisions, many were forced to return to their source states. The state government's response was mainly to facilitate their movement back to their 'home' states by charting special trains and waiving ticket fares. Despite their economic contributions, migrant workers therefore became largely excluded from the prevailing discourse of societal recovery.

3. Discussion: representations and their implications for support, recovery and future risk

The representational themes that surround a disaster and its impacts are manifold and not unidirectional. Across our research examining recent disasters in three states of India we see contrasting and, in some cases, openly contested narratives emerging around the nature and causes of the event, the impacts and needs of the affected population, and the priorities and effectiveness of recovery processes. Different actors, from those directly affected by hazards to those reporting on their effects to those mandated to manage societal impacts, have differing perspectives on the way forward. These viewpoints are inevitably shaped by the actors' own interests and concerns. Some of these concerns may arise out of the disaster itself, but they may also reflect pre-existing agendas that take advantage of such times of urgency, and availability of funds.

There is no single overall pattern to this constellation of representations by different actors. However, there are some key elements that do tend to be replicated, and we suggest that these commonly work together to generate an effect on outcomes, most clearly in the way that certain actions and priorities become constructed as a dominant narrative of how recovery should be supported. As perspectives and approaches to recovery circulate within society, it is the norm for ideas expressed by more powerful actors, with ready access to the media and with the networks and resources to exercise their influence among other stakeholders, to dominate the public discourse. From the people-centred and equity focus that we take in this research, we can see how this tends to downplay or divert from the expressed needs of some social groups. Some conceptions of disaster causality and impact also serve to reinforce the persistence of reactive approaches to managing disaster risk and a narrow focus on emergency response, though such perspectives are coming under increasing pressure to change.

We see evidence that the way in which ideas are constructed about appropriate support for disaster recovery from government and other agencies serves to privilege certain actions, such as an overall emphasis on economic recovery and housing reconstruction, and prioritisation of support to certain forms of livelihoods such as paddy farming in Kerala after the 2018 floods and fishing in Tamil Nadu after the 2004 Tsunami. Economic restoration through a focus on what are seen as key sectors and the need for addressing housing crises are undoubtedly crucial, but the dominant emphasis on them leaves much less room for consideration of other non-material needs that are no less significant for human wellbeing. At the same time the needs and concerns of some social groups affected by the disaster become rendered less visible (or even less important) to society at large through a combination of: simplified imagery of ordinary people's heroism and self-reliance; uneven media coverage; difficulties of access; assumptions about the level and persistence of impacts experienced; and pre-existing conceptions of deservedness.

We suggest that, together, these sets of factors have tended to create or reinforce social and spatial patterns of inequity in approaches to recovery support. At the same time, the more negative framings about poorer disaster-affected people that we have seen in the opinions, for example, of some governmental figures can serve to deny the huge, largely unacknowledged contributions that people themselves make to the physical, economic, social and psychosocial recovery of their households and communities. It denies their capacities and undermines their right to define the support that they themselves would wish to receive. In some cases, this neglect may be a deliberate political act of exclusion - one perhaps not feasible under normal circumstances but made possible by the disruption of norms following a major disaster.

We also see contrasting representations emerging that influence how the need to reduce future risk is conceived. Many media accounts of disasters, and the descriptions of them by some actors, construct a notion of severe hazards as unprecedented, singular events, of such force that they would inevitably overwhelm society. Such a construct reinforces a sense of managing as best as one can to clean up and restore following a one-off devastation, and of people having to accept gratefully any help they receive. Alternative views that we collated, pointing to multiple causal factors beyond the forces of nature, do not necessarily counter this perspective

about recovery, but do indicate a need to consider future risk of more hazards under a changing climate and the need to move toward sustainable approaches to land and resource management to help reduce future risk.

Drawing on these arguments, Figs. 2 and 3 summarize how alternative conceptions of recovery and support for recovery could be constructed, using the same framework as introduced earlier in Fig. 1. In Fig. 2 we depict sets of ideas about events, impacts, needs, responsibilities and priorities that commonly operate together with the effect of undermining equitable and sustainable recovery. Fig. 3, in contrast, depicts alternative sets of ideas that could have the opposite discursive effect. For example, Fig. 2 includes notions of disasters as ‘natural’ events, the state as provider of ‘philanthropic’ relief and the aim of recovery as a return to the status quo (i.e., to pre-disaster conditions). Fig. 3 counters these with ideas of disaster risk as socially determined, the state as partly culpable in the face of impacts and recovery as an opportunity to reduce future vulnerability. We fully accept that these are simplistic diagrams, in that the coalescence of ideas is by no means as binary as this division suggests. Nevertheless, depicting them in this way conveys exactly why representations can matter so much in shaping disaster recovery.

Finally, it is important to underline that, although we found evidence of recovery interventions being shaped in a way that was at odds with grassroots concerns, this was evidence only of a discursive imbalance and not necessarily of an absence of resistance. Yes, research participants among the more marginalised groups commonly felt they had little capacity to voice their collective concerns in the face of official power structures and/or generations of historical neglect. However, the discussions and testimonies we heard in the interviews with disaster-affected people, indicated a readiness to explain what they feel worked well and what did not and to identify and demand measures to help avoid future disasters. Increasingly, disaster-affected people in India and elsewhere are using creative means such as community theatre and artworks in public spaces to raise awareness around their needs and to influence the opinions of others (see e.g. Refs. [42,43]). Such forums are often organised with outside support, but they can provide an alternative, accessible channel for self-representation. The desire to have an active voice in shaping the factors that influence risk indicates a level of agency that is often rendered invisible in the way that poorer groups recovering from a crisis can become portrayed as people ‘only waiting for handouts’. The opportunity for those voices to be exercised and respected is surely one way to help bring about socially just and sustainable disaster recovery.

4. Conclusion

Disaster recovery is a political arena of action. It is more likely than not that ideas about recovery priorities will be contested and challenged. Through this paper we have sought to show how the ways in which hazard events, the people affected and the priorities for intervention that are conceived, portrayed and discussed within society, come together to create competing sets of ideas of what should be done, by who and for whom in the long term. In studying multiple disasters of recent occurrence in three states of India, we present examples to show how different discourses of disaster impacts and recovery emerge. And in shaping the options and support

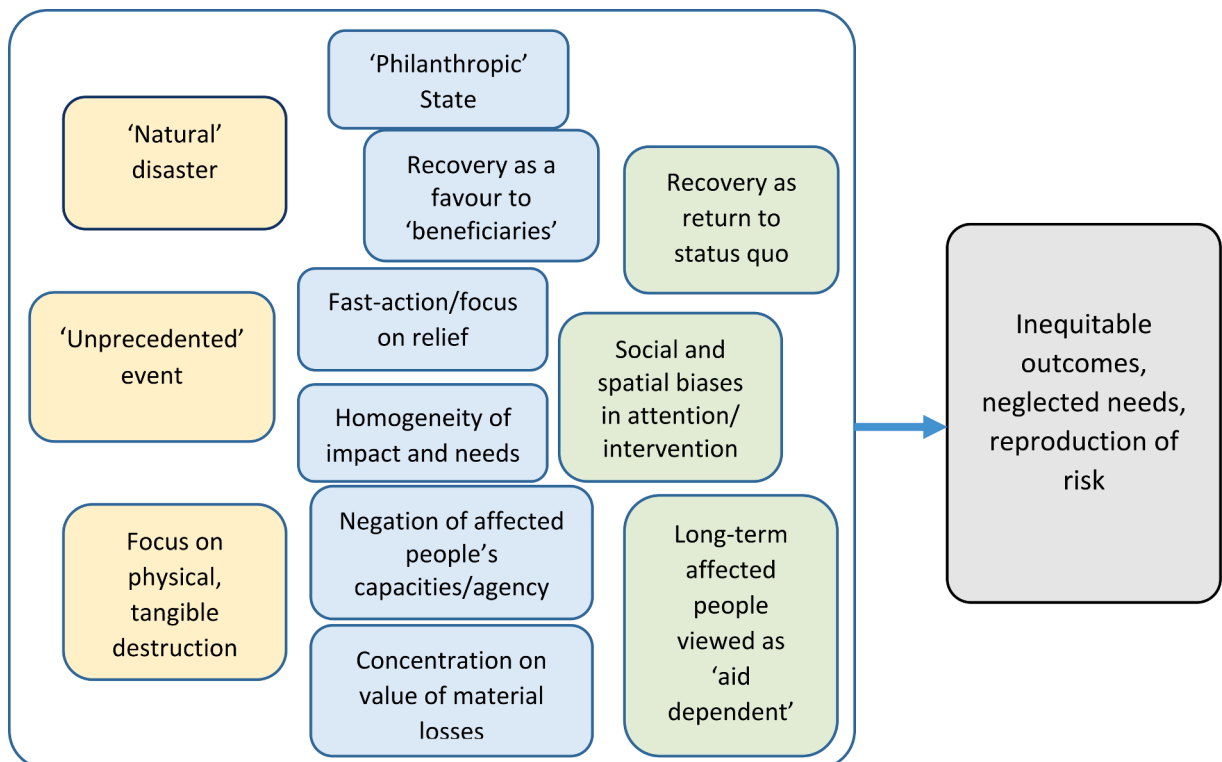


Fig. 2. Representational elements that commonly undermine equitable and sustainable recovery.

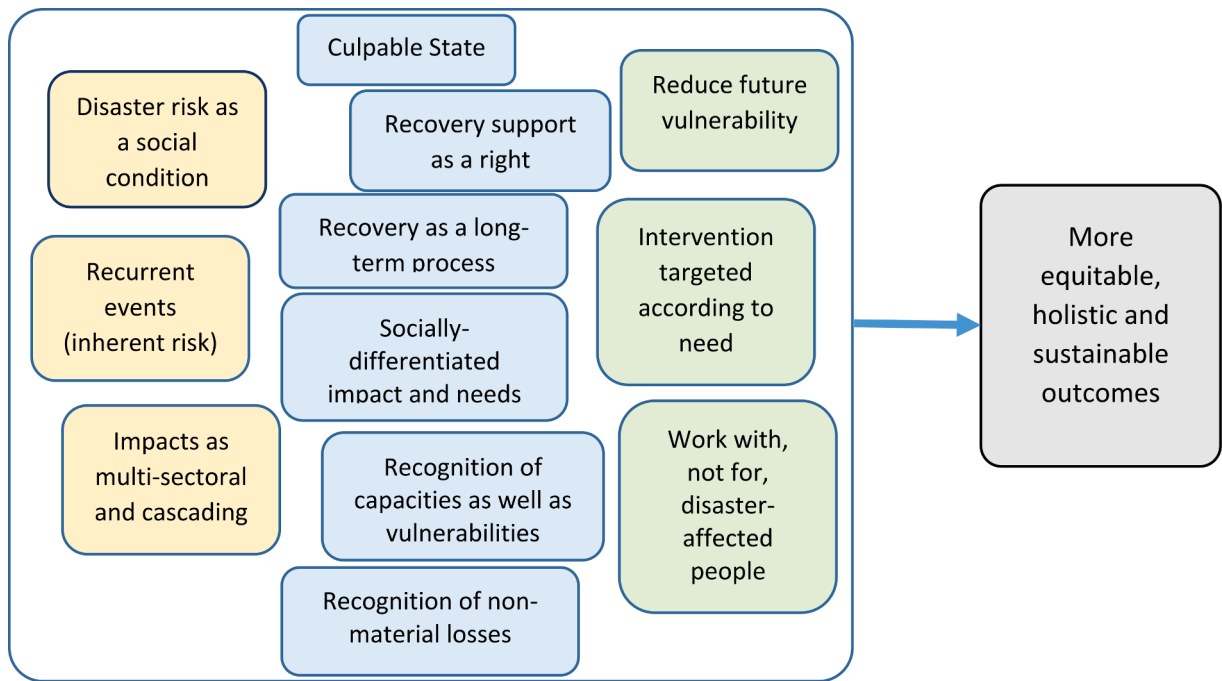


Fig. 3. Alternative representational elements.

available to disaster-affected people, we suggest that representations of recovery can have profound effects on people's chances to restore their livelihoods and wellbeing. While mindful of the study's limitations (we report from only one country context), we do feel that the diversity of disaster settings across the three states indicates the value of this research approach. Through this research, we show the varying ways that interests and power shape how recovery priorities can emerge. We propose that this approach is likely to be applicable across many forms of crisis and most geographical contexts. The sociologist Robert A. Stallings has said, 'questions about disaster are less important than questions about societies that can be answered by studying disasters' (cited in Ref. [44]; p 14). This paper offers the additional insight that studying how disasters are represented reveals a great deal about the societies in which they are situated.

Managing the long-term consequences of disasters is a hugely challenging task, particularly as governmental responsibility for recovery tends to be diffused across sectoral government departments. However, it is even less well served if the ways in which impacts and recovery needs are articulated lead to the effective exclusion of certain sectors, social groups, needs and concerns from full consideration, or to the blocking of alternative perspectives such as proactive approaches to reducing vulnerability and future risk [10, 34,45]. Our research demonstrates the importance of processes and spaces for expressing and recognising the perspectives of diverse social actors. Key in this is the need to shift representations of recovery to better match the needs and voices of those most affected, particularly those for whom poverty and marginalization make the process of recovery an especially prolonged struggle.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Acknowledgements

We owe special thanks to the disaster-affected people and other stakeholders in Odisha, Tamil Nadu and Kerala in India who shared with us their testimonies and perspectives. We also gratefully acknowledge the contributions of Mythili Madhavan, Jasmita Arvind, NC Narayanan and Kaniska Singh to the case study research work. This paper was produced under the project 'Recovery with Dignity', funded by the British Academy's GCRF Sustainable Development Programme [award number SDP2\100257]. It also draws directly on the UEA GCRF QR project 'Voices after Disaster: narratives and representation following the Kerala floods of August 2018' [RR0219-6], and indirectly on multiple research projects on disaster risk and recovery undertaken in different countries by the writing team.

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