

SPECIAL ISSUE ARTICLE



WILEY

Re-designing Social Impact Assessment to enhance community resilience for Disaster Risk Reduction, Climate Action and Sustainable Development

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Abstract

Enhancing disaster risk reduction (DRR) and community resilience are fundamental for sustainable development. However, cultural and political-institutional barriers hinder governments from progressing towards sustainability. We propose a redesign of social impact assessment (SIA) to make it more applicable to the field of regional and urban planning, and we discuss the role SIA can have in enhancing community resilience to achieve DRR and sustainable development in localities. We argue that, to convert SIA into a tool that can inform regional recovery and development planning, a rethinking of SIA and of the role of SIA practitioners is needed. We therefore expound the SIA Framework for Action and we enhance it to be a community-based process focussed on informing regional policies and plans and decisions about the projects to be included in such plans. Application of the SIA Framework for Action will help governments overcome the barriers to DRR and sustainable development.

KEYWORDS

capacity development, climate change adaptation, community participation, disaster risk governance, environmental governance, place-based development, urban and regional planning

1 | INTRODUCTION

Since the Brundtland Report (WCED, 1987) was published in 1987, reducing disaster risk has been regarded as a key strategy to achieve sustainable development (Imperiale & Vanclay, 2021a). Recognition that disasters were increasing in frequency and in terms of the numbers of people affected was at the core of the sustainable development thinking already at that time (WCED, 1987). However, although the international community has achieved considerable advances in the technology used to monitor natural hazards (Aitsi-Selmi et al., 2016; Baudoin et al., 2016; Tiernan et al., 2019; Tozier de la Poterie & Baudoin, 2015), the extent, intensity and frequency of disasters have increased globally (Hallegatte et al., 2017, 2018; Wallemacq & House, 2018). With the disastrous consequences of the

COVID-19 syndemic (i.e., synergistic epidemic) (Horton, 2020; Mendenhall, 2020) and increasing climate change risks (IPCC, 2022), the social implications of the global risk landscape in which we all live have never been more evident (Ovink et al., 2023). In such a global risk landscape, enhancing the capacity of all governments to integrate effective disaster risk reduction (DRR) and community resilience-building strategies into all planned interventions is more crucial than ever.

Over the last 20 years, a rapidly expanding literature (Abdalla et al., 2021; Adger et al., 2005; Coles & Buckle, 2004; Fransen et al., 2022; Haque & Azad, 2022; Imperiale & Vanclay, 2016a; Jewett et al., 2021; McManus et al., 2012; Norris et al., 2008; Scott, 2013; Skerratt, 2013; Sonn & Fisher, 1998) has provided considerable evidence that community resilience is crucial to reduce

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disaster risks and impacts in localities. Drawing on previous work (Imperiale & Vanclay, 2016a, 2016b, 2021a), we define community resilience as being the set of social conditions (e.g., community resources, services, and capacities), processes, actions and behaviours comprising the proactive human agency that enables people to learn from crises, disasters and past failures, and sustainably transform towards: reducing local vulnerabilities, risks and impacts; and enhancing community wellbeing to build forward better in localities. Social learning and transformation towards sustainability, in other words 'sustainability transformation', are key processes at the core of this proactive human agency (Carmen et al., 2022; Cinner et al., 2018; Imperiale & Vanclay, 2016a, 2021a; Lejano et al., 2021; Wilson, 2013, 2015). The United Nations has long advocated that, to enhance DRR and achieve sustainable development, enhancing the resilience of local communities should be a key strategy of all governments (IDNDR, 1994; UNDRR, 2005, 2015). Nevertheless, governments keep failing to recognise, engage and empower the capacities of local people to learn and transform towards sustainability in their localities, thus failing to build resilience in local communities and across all governance levels (Imperiale & Vanclay, 2019a, 2019b, 2020a, 2020b, 2021b).

As our previous work has shown (Imperiale & Vanclay, 2019a, 2019b, 2020a, 2020b, 2021a, 2021b), there are cultural and political-institutional barriers that hinder governments from integrating effective DRR and community resilience-building strategies into planned interventions. The cultural barrier is the existence of a top-down paternalistic social protection culture, which hinders governments from understanding the multiple dimensions of disaster risk and resilience in localities, especially the social dimensions. The political-institutional barrier is the persistent reliance on a command-and-control approach to knowledge, technologies, resources and responsibilities for DRR and development. These barriers lead to inadequate governance strategies, which orient the conception, decision, design and implementation of projects towards facilitating disaster capitalism and creating second disasters in localities (Gunewardena & Schuller, 2008; Harvey, 2017; Imperiale & Vanclay, 2019b, 2020a, 2021b; Klein, 2007; Oliver-Smith, 1990; Paudel & Le Billon, 2020; Sandoval et al., 2020; Yee, 2018). Unfortunately, knowledge constraints and false beliefs about the behaviour of local people and their coping, adaptive and transformative capacities keep hindering governments from overcoming these barriers and achieving sustainable development (Imperiale & Vanclay, 2021a; Moreira et al., 2022).

To overcome the cultural barriers to DRR and sustainable development, any risk management strategy that is intended to orient recovery and/or development interventions should require the application of a social scientific understanding of the multiple dimensions of risk and resilience, rather than only use techno-scientific knowledge (Gaillard, 2010; Imperiale & Vanclay, 2019a, 2021a; Scolobig et al., 2015). Such a social scientific understanding should be transdisciplinary, co-produced with local communities, and be transformative (Imperiale & Vanclay, 2021a; Thomas et al., 2019). It should inform the governance strategies and development processes (i.e., conception, decision, design and

implementation) about: (1) the social preconditions of disaster (e.g., pre-disaster vulnerability, hazard exposure, root causes of disaster, and the lack of local prevention and preparedness); (2) the likely strategies to reduce these preconditions; (3) the local community resources, services, capacities, actions, processes and behaviours that comprise the proactive agency of resilient communities; and (4) the likely strategies to engage and empower local community resilience and enhance community services and capacities across governance levels.

In this paper, we argue that an effective way to achieve such a social scientific understanding is by using social impact assessment (SIA). SIA is a social science field of research and practice, and is part of the discourse and family of impact assessment (Vanclay, 2015a, 2020). SIA is a transdisciplinary paradigm that seeks to be co-produced and transformative (Imperiale & Vanclay, 2016b), and it ideally would provide the field of regional planning and development decision-making with insights about local community vulnerabilities, risks, capacities, wellbeing and resilience (Climent-Gil et al., 2018; Imperiale & Vanclay, 2016b; Rowan, 2009; Vanclay, 2012). Drawing on a literature review, document analysis, and on our previous action research (Imperiale & Vanclay, 2016b), we reflect on the potential role that SIA can have in regional recovery and development planning and in contributing to enhancing community resilience and building a socially sustainable risk governance for DRR and sustainable development. We elaborate on the philosophy and process of SIA, and we discuss the concepts of DRR and resilience as being the principles, means and outcomes of sustainable development. We reflect on the main cultural and political-institutional barriers to this. We also discuss the pathways that should be taken to overcome these barriers and to integrate DRR and community resilience-building into any planned intervention. Therefore, we argue that innovation is needed in SIA to better integrate DRR and resilience into SIA theory and practice.

We contend that a paradigm shift should occur in SIA, from focusing on 'managing the impacts of development' to focussing on 'reducing the risks of development and building resilience'. We argue that such a shift can be achieved by switches in SIA theory and practice: (1) from a project-based to a community-based approach; and (2) from focussing only on pre-determined projects to also focussing on recovery and development policies and plans, before any project is conceived. Therefore, we elaborate on the SIA Framework for Action, which we developed in previous research, and expand it so that it can accomplish these switches. We discuss about how this will contribute to making SIA more capable of informing regional recovery and development plans, and of influencing the conception of the interventions to be included in such plans. We conclude that full application of the SIA Framework for Action will help local communities to achieve their vision for sustainability transformation, and will help external stakeholders to overcome the barriers to DRR and sustainable development.

2 | HISTORY AND EVOLUTION OF SIA

Although there are multiple discourses confusingly claiming the label 'SIA' (Vanclay, 2020), in this paper we connect to the discourse that

aligns with the overarching field of 'impact assessment', which is generally understood as being the processes of identifying and managing the consequences of a current or proposed intervention, including policies, plans, programs and projects (Vanclay & Bronstein, 1995). A 'family' of impact assessment exists, including cultural, environmental, health, human rights, social, technology and many other forms of impact assessment (Vanclay, 2015a). Among these, the oldest and perhaps best known is environmental impact assessment (EIA), which emerged from the environmental disasters of the 1960s, and became established as a legal instrument in 1969 with the passage of the United States National Environmental Policy Act (NEPA) (Vanclay, 2014, 2020; Vanclay & Bronstein, 1995). After being adopted by many countries around the world, EIA was implemented by the European Union in the EIA Directive of 1985, and now is a requirement in most countries around the world (Vanclay, 2020). SIA originated alongside the implementation of NEPA and EIA, and is now part of the regulatory systems of many countries (Becker and Vanclay, 2003; Esteves et al., 2012; Vanclay, 2020). Furthermore, SIA is an expectation of many international standards, including the International Finance Corporation Performance Standards (IFC, 2012) and the Equator Principles (Vanclay & Hanna, 2019).

The social impacts of a planned intervention or a disaster encompass all the ways by which people are affected, including by changes to any of the multiple dimensions of their wellbeing (Cottrell & King, 2010, 2011; Imperiale & Vanclay, 2021a; Smyth & Vanclay, 2017). Social impacts can be tangible and intangible, direct and indirect, and are unequally distributed among the affected population (Vanclay, 2012). They can be direct, in that they derive directly from a planned intervention in the form of intended objectives, or as expected unavoidable negative consequences, or as the unintended consequences (both positive and negative) of the interventions. Social impacts can also be indirect and derive from other changes in the environment or society that arise from the planned intervention (Slootweg et al., 2001; Vanclay, 2002).

Drawing on the conceptual framework of Slootweg et al. (2001), Vanclay (2002) distinguished social change processes from social impacts, and clarified the causal relationships between the first-order impacts that result directly from an intervention and the second and higher-order change processes and impacts. Based on a conceptual overview of all possible impacts from planned interventions, Vanclay articulated 7 categories of social change processes and 7 categories of social impacts, identifying around 80 potential social impacts in total (Vanclay, 2002). An alternative model, the *Social Framework for Projects* (Smyth & Vanclay, 2017), specified the eight key dimensions of community life that can be impacted by projects and that potentially affect people's wellbeing. Imperiale and Vanclay (2021a) elaborated on this framework to conceptualise the social impacts of crises and disasters. They also conceptualised the social dimensions of risk and resilience, the agency of resilient communities, and the strategies for resilience-building across multiple governance levels. Furthermore, they developed the SIA Framework for Action in order to expand the SIA domain to focus on sustainable development plans and DRR and community resilience-building strategies.

The likelihood and severity of each social impact are unequally distributed in a population, and depending on the type of intervention, as well as on the vulnerabilities, capacities, resilience and governance issues that characterise local people and their communities (Imperiale & Vanclay, 2021a). The more vulnerable people and communities are, the more they are exposed to and suffer from negative social impacts (Bullard, 1990; Koks et al., 2015; Ottersen et al., 2014; Povall et al., 2014). Conversely, enhancing local people's capacities and community resilience can lead to reducing local vulnerabilities and the negative risks and impacts of planned interventions, crises and disasters (Imperiale & Vanclay, 2021a). Therefore, SIA practice must always be context-specific, and the key social issues to be considered have to be determined in conjunction with local communities through transformative knowledge co-production processes (Imperiale & Vanclay, 2016b, 2021a; Patterson et al., 2017; Vanclay, 2006; Zurba et al., 2022).

Originally a regulatory assessment tool for large scale projects, SIA is now understood as being a philosophy about development and democracy, and a process of adaptive management of the social issues associated with planned interventions (Vanclay, 2003, 2020). As a philosophy, SIA considers the pathologies, goals and processes of development policies, plans, programs and projects (hereinafter 4P) (Vanclay, 2003). As a process of adaptive management, SIA 'includes the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment' (Vanclay, 2003, p. 6). The established core values of the SIA profession are: commitment to social sustainability; openness and accountability; fairness and equity; preservation of human rights; empowerment of local people, especially women, minority groups and the disadvantaged; capacity development; and acceptance of multiple value systems (Vanclay, 2003).

Thinking of SIA as a philosophy and as an adaptive management process has led to a fundamental change in the way SIA is understood: from predicting and mitigating the negative consequences of projects within a regulatory framework, towards becoming a more holistic enhancement process to inform development 4P from conception until after project closure (Esteves & Vanclay, 2009; Imperiale & Vanclay, 2016a; Vanclay, 2003, 2020). SIA uses a range of social science concepts and tools to contribute to enhancing social development outcomes, including: free, prior and informed consent (Hanna & Vanclay, 2013); social licence to operate (Dare et al., 2014; Jijelava & Vanclay, 2017, 2018); community-based agreement making (Imperiale & Vanclay, 2016a; Nish & Bice, 2011); impact and benefit agreements (or community development agreements) (Nish & Bice, 2011; O'Faircheallaigh, 2007, 2013); social impact management plans (Franks & Vanclay, 2013); human rights impact assessment (Esteves et al., 2017; Götzmann, 2017; Götzmann et al., 2016; van der Ploeg & Vanclay, 2017, 2018); and social risk assessment (Esteves et al., 2017; Mahmoudi et al., 2013).

Even if the majority of SIA practice has been at the project level (Vanclay, 2020; Vanclay et al., 2015; Vanclay & Esteves, 2011), SIA is also applicable to the assessment of policies, plans and programs, and of place-based development, gradual change and climate change risk (Dani & Beddies, 2011; Leith & Vanclay, 2015; Vanclay, 2008, 2012, 2015b). It is also applicable to the co-design of sustainable development strategies that are intended to reduce local vulnerabilities and enhance the resilience of individuals, households, neighbourhoods, and communities (Aucamp & Lombard, 2018; Imperiale & Vanclay, 2016a). Recent advances in disaster studies recommend that SIA should accompany disaster management and post-disaster development interventions in order to: (1) enhance understanding of the social, cultural, economic and political context; (2) incorporate the needs, perspectives and interests of those people the planned interventions are intended to assist; (3) anticipate the project's social impacts (both positive and negative); (4) mitigate negative impacts; and (5) enhance DRR and community wellbeing and resilience to build forward better (Benson & Twigg, 2007; Imperiale & Vanclay, 2016a; Jha et al., 2010; Kruger et al., 2022). Such a recommendation is further emphasised by the *Sendai Framework for Disaster Risk Reduction 2015–2030*, which advocates the need for applying 'economic, social, structural, technological and environmental impact assessments' in any planned intervention before and after disasters (UNISDR, 2015, p. 19).

Although most international guidelines recommend that all countries apply SIA to better integrate DRR and resilience into disaster risk management and development, SIA is rarely used in planning emergency response, recovery, reconstruction and redevelopment activities. Despite the conceptual and practical advances achieved in the SIA field so far, application of SIA remains confined primarily to the context of pre-determined projects and their implementation. Conducting SIA remains primarily a responsibility of project proponents, and there still is no role for SIA in identifying local communities' needs from a DRR, climate action and resilience perspective and in informing national and regional recovery and development planning accordingly, before any project is conceived. The fields of SIA, disaster studies and of urban and regional planning have not fully explored the role SIA can have in recovery and development planning and in strengthening community resilience to enhance DRR and achieve sustainable development. This is what we seek to contribute with our paper.

3 | UNDERSTANDING DRR AND RESILIENCE AS PREREQUISITES FOR SUSTAINABLE DEVELOPMENT

Global interest in sustainable development was triggered, inter alia, by recognition that disasters, including those associated with climate change and development mismanagement, were increasing in frequency, severity, and in terms of numbers of people affected worldwide (Fourie & Terblanché-Greeff, 2021; Robinson, 2004; WCED, 1987). The Brundtland Report (WCED, 1987) warned that the

future would be marked by increasing global risk. Chapter 12 highlighted that the risks associated with new technologies were also growing, and that the risks of irreversible damage to natural systems regionally (e.g., through acidification, desertification, salinisation, and deforestation) and globally (e.g., through global warming) were becoming more significant. It has since been recognised that progress in achieving sustainable development depends on the capacity of governments to reduce the risk of disasters globally and locally. The Brundtland Report highlighted that governments were responsible, individually and collectively, to gather data systematically, and to use these data to assess and reduce risks. The Report, however, remarked that only a few countries had the capacity to do this (WCED, 1987), and it advocated for the establishment of a Global Risks Assessment Programme in order to provide advice and support to governments at all levels for the implementation of DRR activities (WCED, 1987).

3.1 | DRR and resilience as principles, means and outcomes of recovery and development planning

Prompted partly by the Brundtland Report and by previous disaster reports (e.g., UNDRO, 1982), the United Nations declared the 1990s as the International Decade for Natural Disaster Reduction. The International Decade had the purpose of fostering state efforts to reduce the likelihood and consequences of hazards before disasters occur, rather than to only react when they occur (Coppola, 2015). The Yokohama Strategy (IDNDR, 1994) further highlighted that: (1) disaster response alone was not sufficient or ethical because it yields temporary results at great expense; (2) disaster prevention (i.e., DRR) and resilience were fundamental in reducing the costs of disasters (and disaster relief); and (3) disaster prevention and resilience had to be integral aspects of disaster response, recovery, reconstruction and development policy and planning at local, national and international levels (IDNDR, 1994).

The International Decade and the Yokohama Strategy contributed to a shift in disaster management theory from a centralised, response-centred approach, to a more decentralised, place-based, and participatory prevention-centred approach (Imperiale & Vanclay, 2020a, 2021a). This led to the DRR and resilience paradigm becoming the new cornerstone of disaster management and sustainable development thinking (Coppola, 2015; Imperiale & Vanclay, 2020a). Central to the DRR and resilience paradigm was recognition that local communities influence disaster risk in localities. This led to a set of key principles being established including: genuine community engagement and empowerment; reduction of community vulnerabilities and risks; and enhancement of community capacities and resilience (IDNDR, 1994; UNDRO, 1982).

The Hyogo Framework for Action (UNDRR, 2005) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNDRR, 2015) further contributed to establishing the DRR and resilience paradigm worldwide (Alexander, 2013; Imperiale & Vanclay, 2020a). In these international frameworks and declarations, DRR and resilience were considered, not only as being the desired outcomes of disaster management

and development 4P, but also the principles and means by which all countries should orient and implement their planned interventions (Bosher & Dainty, 2011; Fernandez & Ahmed, 2019; Imperiale & Vanclay, 2019a, 2021b; Klein et al., 2019; Nohrstedt et al., 2022; Wamsler & Riggers, 2018). However, both the Hyogo Framework for Action and the Sendai Framework highlighted that gaps in disaster management and development 4P were still hindering effective DRR and resilience outcomes at the local community and all governance levels.

After reviewing the progress made by governments in implementing the 1994 Yokohama Strategy, in the 2005 Hyogo Framework for Action, the United Nations stressed that, in development funding, only limited amounts were being allocated for risk reduction at international, national and regional levels (UNDRR, 2005). Ten years later, no change was evident, and in the Sendai Framework (UNDRR, 2015), the United Nations remarked that there were still inadequacies in how governments addressed the underlying disaster risk factors, formulated goals and priorities for action, fostered disaster resilience, and ensured adequate implementation. Unfortunately, governments continue to fail in genuinely engaging and empowering the capacities and resilience of local communities in recovery and development interventions (Cook & Zurita, 2016, 2019; Imperiale & Vanclay, 2019a, 2019b, 2020a, 2021a; Satizábal et al., 2022). Rather than enhancing prevention, preparedness and community resilience, before disasters, most governments deny the multiple dimensions of risk, and they reassure local communities that everything is under control, while considering risk reduction to be only the business of a select few and ignoring the social preconditions of disaster in localities (Imperiale & Vanclay, 2019a, 2020b). Once disasters occur, most governments over-react, and fail to consider the environmental and social impacts that may be created by their post-disaster interventions, and the pre-disaster vulnerabilities, hazard exposure, and root causes of disasters that may be exacerbated by such interventions (Imperiale & Vanclay, 2019b, 2020b, 2021b; Yee, 2018).

Although the United Nations has long acknowledged the constraints that hinder governments from enhancing DRR and sustainable development (IDNDR, 1994, UNDRO, 1982, UNDRR, 2005, 2015), and although much literature has described the disastrous consequences that are created by the failures of governments, little has been said about how to address them. Apart from advocating for 'genuine community engagement and empowerment' (IDNDR, 1994; UNDRO, 1982; UNDRR, 2005, 2015), little has been said about the specific knowledge production processes and governance strategies needed to enact engagement and empowerment in order to overcome the barriers to enhancing DRR and community resilience. Because of all this, effective DRR and resilience outcomes are still far from being achieved, while disaster risk, loss and damage keep increasing worldwide.

3.2 | Overcoming the limits of techno-scientific knowledge

Far from simply being the mere outcomes of hazards, risks (and how they are perceived and experienced) are the result of multiple factors,

including: the type of hazard (e.g., natural, socio-natural, medical/health, industrial, infrastructural, technological, or socio-political); people's hazard exposure and susceptibility; the social preconditions of disaster; and people's capacities and resilience (Imperiale & Vanclay, 2021a). To understand disaster risk in all its multiple dimensions, understanding the type of hazards is necessary but not sufficient to fully understand the multiple dimensions of disaster risk in localities (Charnley et al., 2021; Gaillard, 2010; Imperiale & Vanclay, 2019a, 2021a; Scolobig et al., 2015; Ward & Shively, 2017). The intensity, extent, likelihood and distribution of disaster risk are also influenced by people's hazard exposure and susceptibility, which are exacerbated by the social preconditions of disaster, and, conversely, are reduced by people's capacities and resilience (Imperiale & Vanclay, 2021a).

Traditional approaches to risk assessment define risk narrowly as being only the relation between probability and consequence of a hazard, and they only focus on the physical characteristics of the hazard (Esteves et al., 2017; Imperiale & Vanclay, 2019a, 2021a; Kemp et al., 2016). These approaches fail to acknowledge: how local community vulnerabilities, risks, capacities and resilience influence risks and impacts in localities; the broader social context in which risks and impacts are constructed; and the differing needs, values and perceptions of people, especially between local communities and those assessing risks and impacts (Esteves et al., 2017; Imperiale & Vanclay, 2019a, 2021a). Traditional risk assessment applied to disaster management and development 4P does not adequately consider the costs to the communities who live with risks that may be acceptable to the business but not to the communities (Esteves et al., 2017). Conversely, social scientific approaches to risks and impacts do consider qualitative factors, including community vulnerabilities, risks, capacities, and resilience, how these are distributed within and among the affected communities, and how they influence hazard exposure, susceptibility and risk in localities (Esteves et al., 2017; Imperiale & Vanclay, 2019a, 2021a; Mahmoudi et al., 2013). Nevertheless, in project management circles, 'social risks' are still primarily understood only through a techno-scientific and business-led perspective that interprets them as being the set of non-technical issues (e.g., managerial, socioeconomic, legal, political issues) that may be faced by a project, rather than by the affected community. The risks a project may create to community wellbeing (i.e., the likely social impacts) and the social risk processes that may arise from project implementation (e.g., elite capture, organised crime infiltration, disaster capitalism, corruption, inequity) are typically overlooked in project management (Imperiale & Vanclay, 2021a).

To overcome the limitations in understanding the multiple dimensions of disaster risk, in any risk management strategy, there must be adequate arrangements to ensure deeper understanding and assessment of: (1) the multiple dimensions of community wellbeing and how these can be affected by the planned intervention; (2) the local vulnerabilities and social preconditions of disaster; (3) the local community needs, desires, capacities and positive agency (i.e., community resilience); and (4) the strategies that local communities and other key actors (e.g., governments and their disaster and development agencies, funding bodies and project teams) should implement to address

local community needs, reduce vulnerabilities, prevent social risks, and to genuinely engage and empower community capacities and resilience, when planning disaster management and development interventions in localities (Imperiale & Vanclay, 2021a).

3.3 | Debunking myths about community behaviour using the lens of community resilience

Within local communities, there are negative and positive social processes and trends. There are social risks and social preconditions of disaster (Imperiale & Vanclay, 2020a, 2021b; Knutsen et al., 2017; Solé-Ollé & Sorribas-Navarro, 2008), but there are also community capacities and resilience (Castro-Arce & Vanclay, 2020; Imperiale & Vanclay, 2016a; Norris et al., 2008). However, too often, disaster management and development interventions are accompanied by a paternalistic social protection culture that leads external actors (i.e., decision-makers, proponents and investors) to hold false beliefs about the behaviour of local communities and, consequently, to overlook their capacities and resilience (Imperiale & Vanclay, 2021a; Lejano et al., 2021; Moreira et al., 2022). These false beliefs include considering affected local people as being mere victims that are: ignorant; self-interested and greedy; aggressive; overly emotional, unprepared and untrained; inclined to anxiety, alarmism and panic; and in shock and incapable of providing useful information and knowledge, acting appropriately, or of contributing meaningfully to disaster management and development operations. These false beliefs often attain the status of myth and are perpetuated and exaggerated in disaster management and planning practice (Imperiale & Vanclay, 2016a, 2019b, 2021a; Moreira et al., 2022; Tierney et al., 2006).

Contrary to these widely held myths and beliefs, a substantial literature over half a century (Fritz & Williams, 1957; Tobin, 1999) has provided evidence that, rather than be shocked, in panic, or unable to provide relevant support, local people are capable of providing meaningful knowledge and acting responsibly (both individually and collectively) to reduce (or to demand the reduction of) risks and impacts, and enhance (or demand the enhancement of) community wellbeing in their localities. Over the last two decades, this literature has converged into what is now called the community resilience discourse (Davis et al., 2021; George & Stark, 2016; Skerratt, 2013). Community resilience is the proactive human agency that members of communities-of-place are able to enact in order to prevent and anticipate risks, to respond effectively to impacts, and to build forward better in their localities (Berkes & Ross, 2013, 2016; Davidson, 2010; Imperiale & Vanclay, 2016a, 2021a; Magis, 2010; Skerratt, 2013). This proactive human agency is: (1) individually and collectively activated within local communities; (2) facilitated by specific social conditions (e.g., community resources, services, capacities and skills); and (3) oriented towards specific shared objectives (namely sustainability outcomes).

The social conditions that enable community resilience to emerge at the local community level include: (1) a culture of and sensitivity towards sustainability; (2) good governance, collective efficacy, efficient

services, and effective DRR planning; (3) a good level and fair distribution of economic, social and natural capital; (4) effective leadership and self-organisation capacity; (5) reliable and independent information sources; (6) adequate physical infrastructure, efficient local transport, and safe housing; and (7) adequate and fairly distributed healthcare services (Cutter et al., 2008; Imperiale & Vanclay, 2016b; Maclean et al., 2014; Norris et al., 2008; Sharifi, 2016; Sherrieb et al., 2010). Measuring these social conditions is desirable but not sufficient to understand, recognise, engage and strengthen resilience at the local community level. For example, measuring the presence of social capital in a community does not automatically mean that the community is resilient. Ironically, criminal organisations also have high levels of bonding social capital, and it is partly due to this feature that they thrive (Corsino, 2013; Lo, 2010).

To fully understand community resilience, it is also important to understand: (1) the shared community objectives people aim to achieve when they harness their resources and capacities, and deal collectively with risks and impacts in their localities; (2) the collective intentionality through which these objectives are identified; and (3) the ecological and social relationality through which the set of processes, actions and behaviours of community resilience are collectively enacted and organised, and the shared objectives are collectively achieved. In the community resilience literature, it is widely recognised that sustainability outcomes (e.g., reducing local vulnerabilities, risks and impacts, and enhancing community wellbeing) are the shared objectives of community resilience in action (Imperiale & Vanclay, 2016b; Magis, 2010; Poortinga, 2012; Skerratt, 2013; Wilson, 2012, 2013). However, little has been said about the cognitive and interactional processes that lead people to: (1) identify sustainability outcomes as being their common objectives, and (2) organise and enact their efforts towards achieving these outcomes in their localities.

The community resilience literature has long pointed out that identifying sustainability outcomes and achieving them are processes that result from the transformative learning and deliberativeness that occur within and among communities living with risk (Davidson, 2010; Davoudi, 2012; Magis, 2010; Wilson, 2012). Social learning (transformative learning) and sustainability transformation are key processes at the very core of the proactive agency that underlie community resilience in localities (Berkes & Ross, 2013; Choudhury et al., 2021; Haque & Doberstein, 2021; Imperiale & Vanclay, 2016a, 2016b, 2021a; Uddin et al., 2021; Wilson, 2015). Transformative learning and sustainability transformation occur when people realise that they live in situations of risk, that the preventive measures they have enacted in the past have failed, or that enhancing the ways by which local risks and impacts are reduced and community wellbeing is enhanced is a common need that must be collectively addressed. This learning is termed 'transformative' in that it leads people to changing their assumptions (or beliefs), including about whether the place where they live is safe, and whether the actions undertaken in the past were effective. Such changes in people's beliefs are crucial for people to take deliberative, collective actions and thus improve preventive and precautionary measures, and/or recover and build forward better in

their localities, and thus achieve sustainability transformation (Imperiale & Vanclay, 2016a, 2021a; Lee & Morling, 2022; Martin & Mullan, 2021; Wilson, 2012).

To fully understand the multiple dimensions of disaster risk in localities, and especially to reduce the risks, the false beliefs about the behaviour of local communities should be debunked. Instead, the positive capacities and the agency of local communities to learn and transform towards sustainability (i.e., community resilience) should be recognised and enhanced. To fully appreciate community resilience as a proactive human agency, it is necessary but not sufficient to understand: (1) the social conditions that facilitate resilience at the local community level; (2) the specific hazards; and (3) the shared objectives of the resilient community (e.g., sustainability outcomes). It is also important to recognise and assess: (1) the individual and collective cognitive processes (i.e., transformative learning) through which the sustainability objectives are identified and decided upon; (2) the kind of individual and collective processes, actions and behaviours that people enact to achieve these objectives in their localities; and (3) the social and ecological interactions by which people organise and enact sustainability transformation in their localities.

3.4 | Overcoming command-and-control through community resilience-building strategies

Social systems are organised through multiple governance levels, from communities-of-place (e.g., family or neighbourhood committees, municipalities, inter-municipal districts) to larger administrative levels of social organisation (e.g., provinces, regions, inter-regional districts, national governments, intergovernmental organisations). As a heuristic device, we differentiate 'community resilience' from 'social resilience' in order to emphasise the local dimension of resilience in society, which we consider to be a crucial component of the governance dimension of resilience building (social resilience).

Community resilience is the set of social conditions, processes, actions and behaviours that comprise the proactive human agency of people to prevent and anticipate risks, to respond to impacts, and to build forward better in their localities (Imperiale & Vanclay, 2016a, 2021a). Social resilience is the set of adaptive and transformative capacities, governance strategies and planned interventions and investments that are enacted at multiple administrative levels and are addressed to build resilience at the local community level and across multiple governance levels and social-ecological scales. Community resilience and social resilience influence each other. Depending on the governance strategies and processes used, planned interventions and investments create positive and negative outcomes. They can create new vulnerabilities and risks and further exacerbate existing ones, thus increasing disaster risk in localities. Alternatively, they can foster genuine community engagement and empowerment, enhance community capacities and resilience, and thus achieve DRR and sustainable development at all governance levels.

Unfortunately, the persistence of false beliefs about local community behaviour leads external actors and local political leaders to

consider the sharing of knowledge concerning local vulnerabilities, development plans and associated risks and impacts to be a source of collective anxiety that creates social disorder (Imperiale & Vanclay, 2021a, 2021b; Moreira et al., 2022). These false beliefs also lead external actors to fear that, in times of crises and disasters, there will be lawlessness and looting, and to consider that: militarization of the disaster area and strict surveillance will be required; normal laws, governance oversight and community engagement will retard emergency and recovery operations and have to be by-passed; and that, to be efficient, there must be a 'single man in charge' (i.e. one-man rule) who has authority to make quick decisions (Imperiale & Vanclay, 2019b). Too often, recovery and development interventions result in pre-determined solutions that are decided and designed outside the location of their implementation. They are not based on any assessment of local community needs, and are typically hijacked by local, national and international elites (Darrow & Tomas, 2005; Imperiale & Vanclay, 2019b; Platteau, 2004). Opportunities for participation are inadequate, episodic, limited to project approval mechanisms, and are only undertaken once the project has been conceived, decided and designed (Dougherty, 2019; Khan et al., 2020; Williams & Dupuy, 2017). They are usually limited to narrow consultation techniques that only engage with local leaders (not the broader local population) (Moreira et al., 2022; O'Faircheallaigh & Corbett, 2005; Vanclay, 2020), and they fail to foster transformative learning (Sánchez & Mitchell, 2017). In order to be heard, local people have to take legal action or organise protests or blockades before corporations and governments engage with them (Aguilar-Støen & Hirsch, 2015, 2017; Hanna et al., 2016; O'Faircheallaigh & Corbett, 2005).

Over the last 50 years, much literature has shown that local people play a crucial role in DRR, both before and after disasters. Since the 1960s, recognition of this has led to the development and implementation of a 'community-based DRR' (CBDRR) approach (Delica-Willison & Gaillard, 2012). In contrast to the typical command-and-control approach and the false beliefs concerning local community behaviour, the CBDRR approach considers local people to be the primary actors of DRR activities in their localities. The CBDRR approach emerged from evidence that local communities do play a key role in preparing, planning and acting to enhance DRR in their localities, as well as in rescuing and evacuation activities, and in helping the vulnerable members of their communities in pre and post-disaster situations (Aitsi-Selmi et al., 2016; Delica-Willison, 2005; Delica-Willison & Gaillard, 2012; Fritz & Williams, 1957; Imperiale & Vanclay, 2016a; Quarantelli & Dynes, 1977; Seddiki et al., 2020). However, CBDRR activities tend to be considered by governments and national and international agencies as being separate from, and/or marginal to, disaster management and development interventions. As a result, CBDRR continues to be limited to temporary or rapid initiatives rather than to shape the full range of disaster management and development interventions in localities (Delica-Willison & Gaillard, 2012).

CBDRR approaches have traditionally been criticised because of their alleged naïveté. As stated above, within local communities there are negative and positive social trends. CBDRR approaches may

overlook, and be vulnerable to, the power dynamics and social risks that exist within local communities and that threaten the social sustainability of communities and the desired sustainability outcomes of planned interventions (Dasgupta & Beard, 2007; Platteau, 2004). In generality, the community development and CBDRR discourses, which have long been advocating for community empowerment, have hardly drawn on the recent literature about community resilience (Cavaye & Ross, 2019). Too often, inadequate national policies lead to poor governance strategies, which enable decentralised or community-driven development that exacerbates social risks and fails to enhance local community resources, services, capacities and skills (Kamoto et al., 2013). The community resilience literature has elucidated the negative and positive social processes that undermine or enable resilience at the local community level (Imperiale & Vanclay, 2021a). Using this literature may be of great benefit to community development theory and practice (Cavaye & Ross, 2019).

4 | RE-DESIGNING SIA TO INTEGRATE DRR AND COMMUNITY RESILIENCE INTO SIA THEORY AND PRACTICE

4.1 | The case for a new purpose for SIA

The principle of prevention is a key concept in sustainability, and has much relevance to SIA (Vanclay, 2003). The prevention principle can be stated as 'it is generally preferable and cheaper in the long run to prevent negative social impacts and ecological damage from happening than having to restore or rectify damage after the event' (Vanclay, 2003, p. 6). However, most SIA practice is typically project-based and primarily focused on mitigating the impacts only after projects are already determined (Vanclay, 2020). Too often, planned interventions are conceived, decided and designed outside the locality of the intervention, and are frequently captured by the economic interests of local, national and international elites (Barca, 2009; Imperiale & Vanclay, 2016a, 2019b, 2020a, 2021b). No matter what efforts are made to mitigate the impacts, mitigation activities are never enough to prevent these interventions from exacerbating local vulnerabilities, and from inevitably becoming disasters for local communities. To prevent this from happening and to better align disaster management and development efforts with the DRR and resilience paradigm, it is not sufficient to focus only on mitigating the impacts of pre-determined interventions.

To make SIA a valuable tool that is capable of orienting planned interventions towards enhancing DRR and community resilience and achieving better sustainable development outcomes, there needs to be a rethinking of SIA. A paradigm shift from 'managing the impacts of development' to 'reducing the risks of development and building resilience' should occur in SIA theory and practice. Embracing such a shift implies that there should be theoretical and practical switches in SIA: from a project-based to a community-based approach; and from being only focused on pre-determined projects to also focussing on recovery and development policies, plans and programs. From a DRR

and resilience perspective, instead of only being about the social impacts that may be created by pre-determined projects, much more important is that SIA would co-produce with local communities a transformative understanding of what projects are needed to enhance DRR and community resilience in localities. This new form of community-based SIA should be co-produced with local communities and be transformative, in that it should be capable of enhancing transformative learning and of supporting local communities in envisioning their own sustainable future. With these switches, SIA practitioners will build social trust and cohesion, avoid conflict, and enable mutual learning and agreement within and between the key external actors and local communities about the projects that should be included in local recovery and development plans.

Recent research in the field of SIA has already suggested that moving beyond a project-based approach and integrating DRR into SIA will result in SIA becoming a process that is broader in scope and capable of orienting regional development planning towards better DRR, community resilience and sustainable development outcomes (Aznar-Crespo et al., 2021; Cottrell & King, 2011; Dani & Beddies, 2011; Imperiale & Vanclay, 2016b; Kruger et al., 2022). However, little has been said about how to fully implement the paradigm shift in SIA. Also, little has been said about how SIA practitioners can change from the typical project-based approach into a community-based SIA approach, or how such a community-based approach could enhance social learning and sustainability transformation in localities and inform the governance of regional recovery and development plans and projects. The conceptual models and practical guidance that have been published in the SIA literature to date were project-oriented, and they provided analytical tools and practical advice only about how to conduct SIA in the context of pre-determined projects. There are few, if any, models or practical guidance about how to conduct SIA in the context of regional recovery, reconstruction and/or development plans and projects.

We, therefore, introduce the SIA Framework for Action, which we designed and implemented during our previous action research (Imperiale & Vanclay, 2016b). Below, we elaborate on this Framework and expand it to make it capable of informing the design of local recovery and development plans, and the conception and decisions about the projects to be included in such plans. This new model of SIA requires that there be a new form of SIA practitioner: people who are employed by the government and who assist local communities in processes to learn from past failures, crises and disasters and to envisage community pathways and enact the sustainability transformation and sustainable development actions that are needed.

4.2 | The case for a new role for SIA practitioners

To enhance DRR and community resilience and achieve sustainable development, a new way of conceptualising SIA is needed (see above). This will also require rethinking the role and positioning of SIA practitioners. Currently, SIA practitioners are primarily hired by the private sector, or perhaps by financial institutions, but are rarely hired by

government agencies. SIA practitioners are hired by companies to assist in obtaining project approval and a social licence to operate, and in managing the social issues associated with the proposed project. They are also hired by banks to assess whether a proposed project seeking funding meets the social performance standards of the bank. We argue that there is no reason why the expertise of SIA practitioners and the advances in SIA theory and practice should not also be utilised by public sector agencies. Therefore, in contrast to the standard model of SIA, we argue that SIA practitioners should also play an important role in the public sector, especially in disaster management (e.g., preparedness, emergency response, recovery, reconstruction) and development interventions.

Since the focus of SIA should change from assessing the social impacts of pre-determined projects to determining which plans and projects should be developed, SIA should be conceived as the process to make disaster management and development socially sustainable. We advocate that, in each country, a network of 'SIA officers' should be established, with the officers, one for each specific area (typically multiple municipalities), employed by an appropriate government department or agency responsible for disaster management and/or development. By using the SIA Framework for Action, the SIA practitioners will foster transformative learning in localities and assist government agencies to enhance local DRR, community resilience and sustainable development. They will liaise between national government and local municipalities. They will inform governance at all levels about the local social preconditions of disaster that should be reduced, the local community needs that should be addressed, and the local community resources, services, capacities, skills and resilience that should be enhanced. Most importantly, they will work with local communities to understand local vulnerabilities, strengthen community resilience, envisage future possibilities, and develop appropriate projects to achieve sustainability transformation in localities.

4.3 | The SIA framework for action for local recovery and development plans

Drawing on our SIA action research in the mountain area affected by the 2009 L'Aquila earthquake (Abruzzo region, Italy) and on the SIA process as elaborated by the guidance document of the International Association for Impact Assessment (Vanclay et al., 2015), in previous work (Imperiale & Vanclay, 2016b) we developed the SIA Framework for Action in order to focus on enhancing DRR and community resilience in localities. We implemented the Framework in the context of a sustainable rural development project that engaged many of the municipalities in the L'Aquila mountain province. We demonstrated how using the Framework can help governments at all levels, funding bodies, project teams and local communities enhance community resilience, especially in terms of enabling inclusive transformative learning, fostering community vision, and developing community-based agreements and plans for sustainability transformation.

In this paper, we expand the SIA Framework for Action to make it capable of informing, not only the implementation of recovery and/or development projects in localities, but also the elaboration of local recovery and development plans and programs, and of the way projects are conceived, decided, and designed in such plans. The SIA Framework for Action comprises four phases: (1) Understanding community wellbeing and the social preconditions of disaster; (2) recognising local community resilience, social conditions, and desired outcomes; (3) engaging local communities and their capacities and resilience; and (4) empowering social learning and sustainability transformation. It is an expectation of the framework that there will be mutual transformative learning between local communities and relevant external actors. Due to their overlapping, socially defined and non-linear nature, the phases are processes that influence and strengthen each other through increasing understanding of the local social preconditions of disaster, community resilience, the multiple dimensions of community wellbeing, and of the projects that are needed to enhance DRR and achieve sustainable development in localities (see Figure 1).

4.4 | Phase 1: Understanding community wellbeing and the social preconditions of disasters

The SIA Understanding Phase informs and is informed by the other three phases and is meant to orient planned interventions, including recovery and development plans, from conception. It includes gaining a thorough, transdisciplinary and co-produced understanding of the local communities and of the locality of the intervention in terms of: (1) The multiple dimensions of local community wellbeing; (2) the various hazards characterising the locality of intervention; (3) the local community resources, assets, capacities, competences and services, including local prevention and preparedness measures; (4) the history of past local development processes (and associated local environmental and social changes and impacts); and (5) the local vulnerabilities and risks (i.e., the root causes of disaster) that have arisen from these processes, affect the multiple dimensions of community wellbeing, and expose them to (or make them susceptible to) the negative consequences of hazards.

In the Understanding Phase, SIA practitioners should build a SIA transdisciplinary team, primarily consisting of local people, including members of: (1) Local government entities (e.g., councillors, public officers, and representatives of various agencies, utilities, and community services); (2) local civil society (e.g., community-based organisations and representatives of vulnerable groups, such as women, children, the elderly, people with disabilities, Indigenous people, and migrant groups); (3) local academia and research networks; (4) local business and professional associations and trade unions; (5) local financial institutions; and (6) key other individuals such as local identities, experts, journalists, religious leaders, opinion leaders, and so forth. In this phase, SIA practitioners and local people should together use appropriate conceptual models, methods and techniques to: identify key stakeholders; thoroughly understand the local biophysical,

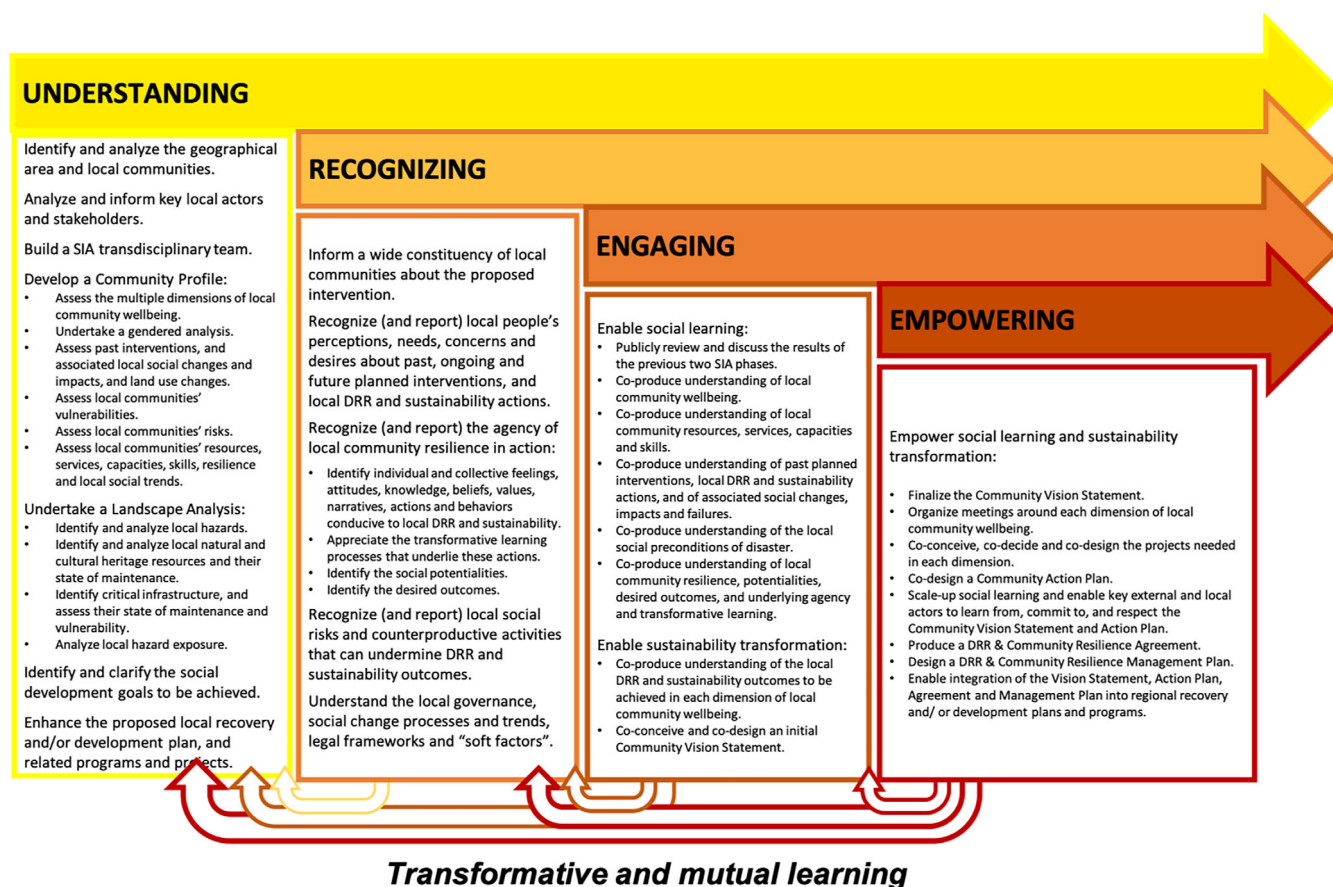


FIGURE 1 The social impact assessment (SIA) framework for action. Source: The authors.

social, and institutional context; and identify and analyse the multiple dimensions of risk and community wellbeing in localities (Imperiale & Vanclay, 2021a; Smyth & Vanclay, 2017).

In this phase, the SIA transdisciplinary team conducts a community profiling process (Vanclay et al., 2015) that will help to gain an overall understanding of the local communities living in the area of intervention in terms of their wellbeing, vulnerabilities and risks. Such a community profile should report and measure the vulnerabilities, risks, resources, services and capacities characterising the multiple dimensions of local community wellbeing, including local prevention, preparedness and DRR plans. The community profile should be enriched by a landscape analysis that helps to geolocalise and investigate, inter alia: the hazards that characterise the locality of intervention; the past and ongoing human activities that influence local land use; the local critical infrastructure and community services; and the local natural and cultural heritage resources and their state of conservation. Finally, the landscape analysis should lead to turning all information gathered through community profiling into geolocalised data that will facilitate the analysis and visualisation of the local vulnerabilities and hazard exposure, and, ultimately, of how disaster risk is distributed within and among local communities living in the locality of intervention.

The community profile and landscape analysis help to understand the multiple dimensions of local community wellbeing, the

local social preconditions of disaster, and the distribution of hazard exposure. Also, they help to reflect on past local development and DRR measures and associated social changes, impacts and failures, and to investigate the strengths, weaknesses, opportunities and threats of the locality of intervention. All this, together with recognition of local community resilience, helps to identify the desired sustainability outcomes that have to be achieved. The identified desired outcomes will inform the conception, decision, design and implementation of the projects to be included in local disaster management and development plans during the SIA Engaging and Empowering Phases.

4.5 | Phase 2: Recognising the agency of community resilience

In the Recognising Phase, SIA enriches the co-production of the transformative knowledge that was developed in the understanding phase. It provides further insights about the individual and collective actions and behaviours local people autonomously enact in order to reduce (or demand the reduction of) local vulnerabilities, risks and impacts, and enhance (or demand the enhancement of) community wellbeing in their localities (i.e., sustainability transformation). The Recognising Phase also helps to appreciate the processes through which

transformative learning is enacted, the shared community objectives are identified, and the positive individual and collective actions are organised and implemented to achieve these objectives. In this phase, SIA practitioners should also gain insights about the local power geometry, institutional and governance arrangements, and the social risks and conflicts that may undermine community resilience and the sustainability outcomes of any planned intervention.

In this phase, SIA practitioners should assess the agency of individuals and communities. To do this, they should understand the cognitive and interactional triggers that lead local people to autonomously act, both individually and collectively, towards sustainability transformation in their localities. SIA practitioners therefore should perceive, listen to and appreciate those cognitive characteristics that compose the collective intentionality of community resilience: perception of shared needs, concerns, desires and capacities for DRR and sustainability; feelings (especially empathy and caring); attitudes (especially social responsibility and sense of public duty); knowledge, beliefs, values and narratives (especially those conducive to sense of place, sense of community and sense of risk). Together, these cognitive characteristics lead local people to learn from the past, identify community outcomes, and orient their actions and behaviours towards sustainability transformation in their localities.

In the Recognising Phase, SIA practitioners should do extensive ethnographic fieldwork, and conduct participant observation and in-depth and/or semi-structured interviews supported by surveys. These methods should assist in assessing the differing needs, interests, values, aspirations and capacities of the various subgroups of local communities, especially the vulnerable. These should consider how local people perceive and relate to hazards, as well as: the knowledge, beliefs and narratives they use to understand the hazards; the mitigation and coping strategies that people implement in their localities to deal with these hazards; and the individual and collective resources, services and capacities they use to cope and thrive in an environment characterised by hazards. In this phase, SIA practitioners should also recognise and assess: how local people perceive past local development and DRR processes and measures; the needs and desires they have in relation to present and future interventions; the mistakes local people think have been made in local planning; the likely enhancement strategies people think might be needed to improve DRR and community wellbeing; and the local communities' resources, knowledge, services and competencies that can contribute to the conception, decision, design and implementation of disaster management and development projects.

In the Recognising Phase, SIA practitioners should inform people about the proposed planned intervention, and that there is an intention to develop a plan for the recovery and/or development of their locality. It is important to note that a 'planned intervention' in this context does not mean a pre-determined project, but rather a plan that is intended to be designed, under which a variety of projects will be conceived, decided and designed. The qualitative methods used in the Recognising Phase should lead SIA practitioners to also identify the counterproductive feelings, attitudes, actions and behaviours that may undermine community resilience, DRR and sustainable

development. These include social risks (e.g., rent-seeking, elite capture, organised crime infiltration, disaster capitalism, corruption, inequality and marginalisation) and any active or latent conflict, which characterise the local social context, and/or that may arise during the planning or implementation of disaster management and development activities. To achieve an understanding of such social risks, SIA practitioners should undertake document and media analysis and use qualitative methods that include a thorough assessment of the social change processes and trends within the local communities that have occurred in the past, that are happening now, and that may occur in the future (Vanclay, 2002; Vanclay et al., 2015). In addition, there should be an analysis of legal frameworks and local governance, and of any 'soft factors' (especially the dubious, devious, extra-legal activities) that might characterise the local context and influence application of the DRR and resilience principles and regulatory codes. The insights that are gathered during the Recognising Phase are crucial to inform the SIA Engaging and Empowering Phases (see below).

4.6 | Phase 3: Engaging local communities to enhance transformative social learning

The Engaging Phase aims to involve a broader constituency of local communities in building a community vision about the projects that should be included in local recovery and development plans. Such a community vision should be grounded on the knowledge gained in the previous phases. It should be based on a collective understanding of: the hazards; the social preconditions of disaster that have to be reduced; the local community resources, services and capacities that can be harnessed and improved; and the multiple dimensions of local community wellbeing that should be enhanced. It should also be based on a recognition of: The needs that should be addressed; the positive local agency (i.e., community resilience) that should be engaged and empowered; and the social risks that should be reduced and prevented.

In the Engaging Phase, SIA practitioners help local people to progress from a perspective that is focussed only on individual needs, desires and concerns, to a shared vision about the recovery and sustainable development of the local community and the locality where they live. To help people achieve this and develop a community vision, SIA practitioners should facilitate a public discussion about, and analysis of the social issues that were analysed in the previous phases. These include: (1) The internal and external hazards that characterise the local context; (2) the local vulnerabilities, hazard exposure and how these are distributed within the local population; (3) the individual perceptions, needs, concerns and desires in relation to local vulnerabilities, hazard exposure and past development and prevention measures, and associated social changes, impacts and failures; (4) the individual and collective capacities and positive agency (i.e., community resilience), especially of the most vulnerable and most exposed to the negative consequences of the hazards; (5) the multiple dimensions of local community wellbeing, and the local community resources, knowledge, services and capacities that can contribute to reducing disaster risk, vulnerabilities and

hazard exposure in the locality of intervention; (6) the past failures, social risks and lack of effective local DRR and resilience plans; and (7) the likely community pathways to learn from these failures and transform towards sustainability.

To enable such a public discussion and analysis, SIA practitioners should use a variety of participatory approaches, including: participatory field visits; focus groups; community forums; public meetings; and cultural events. These can be supported by techniques that facilitate community engagement and social interaction, including: community mapping; collective visualisation of geospatial data through the use of geo-information systems (GIS) tools; and other participatory methods (Chambers, 1994; van Asselt Marjolein & Rijkens-Klomp, 2002). To be effective, these methods should enhance transformative learning and lead to developing a community vision and identifying community pathways towards sustainability transformation in localities. They should do this by strengthening: (1) empathy and caring towards (and learning from) the needs and conditions of the most vulnerable and most exposed in their communities; (2) awareness of the shared needs, desires and capacities for, and social responsibility towards vulnerability reduction, DRR and sustainability; (3) knowledge, beliefs, values and narratives about the multiple dimensions of local disaster risk; (4) sense of community, sense of place and sense of risk; and (5) mutual aid, cooperation, equity, participation, social cohesion, and awareness of DRR and sustainability. These positive changes in local people's feelings, attitudes, knowledge, and in their capacity to cooperate will enable positive transformative learning.

The positive transformative learning process that is enabled in this phase, and the participatory methods used, should help local communities to identify and conceive the desired sustainability transformation, and the projects that have to be implemented to achieve this transformation. Therefore, in the Engaging Phase, SIA practitioners should help local people develop a preliminary draft community vision statement that includes consideration of: the local vulnerabilities and hazard exposure that need to be reduced; the needs that have to be addressed; the local community wellbeing, resources, services, capacities and resilience that have to be enhanced; the sustainability transformation and outcomes that are intended to be achieved in each dimension of community wellbeing; and the projects that are needed to achieve this.

4.7 | Phase 4: Empowering social learning and sustainability transformation

The Empowering Phase serves to finalise the community vision statement and to formally embed the vision into the local recovery and development plans that will be developed. It does this through facilitating community-based processes involving local people and key external actors, and by facilitating mutual, transformative learning among them. This process leads to four outputs: (1) a DRR and Community Resilience Vision Statement; (2) a DRR and Resilience Community Action Plan; (3) a DRR and Community Resilience Agreement; and (4) a DRR and Community Resilience Management Plan.

The development of the Community Vision Statement is the formalisation of the community vision process. For this task, the SIA transdisciplinary team elaborates on the knowledge gained in the previous SIA phases, and refines the preliminary draft of the community vision statement that emerged from the Engaging Phase. In the Empowering Phase, the team writes a draft final Vision Statement, which is presented to local communities and key external actors for comment. After reflection and revision based on any comments received, a formal Vision Statement is produced, which is endorsed by key internal actors and later embedded in the DRR and Community Resilience Agreement (see below).

The development of the Community Action Plan is where local communities and the SIA transdisciplinary team co-conceive, co-decide and co-produce preliminary designs for the projects that were identified in the Vision Statement. The projects are designed in a series of meetings organised specifically around each dimension of community wellbeing and that include local people who have a strong interest in that dimension. The meetings discuss, identify and design desirable projects oriented towards reducing local vulnerabilities and hazard exposure, and towards achieving the community vision. During the meetings, the identified projects should be prioritised and rough cost estimates worked out. A draft Action Plan is produced, which is distributed to local communities and key external actors for comment. If desirable, additional community workshops could be held for further refinement of the projects and/or additional ideas. After revision, the plan should be re-presented, this time as the final Community Action Plan to be endorsed by key internal actors, and included in the DRR and Community Resilience Agreement.

In the process of developing the formal DRR and Community Resilience Agreement, local communities discuss with key external actors (especially the national government) about how to incorporate the contents of the Community Vision Statement and Action Plan into official recovery and development plans. In practice, local communities are represented by a 'negotiation team', the composition of which will depend on each context. The negotiation is facilitated by the SIA practitioner. Ideally, the external actors will learn from the transformative learning that has occurred through the SIA community-based process, and they should respect and commit to the Community Vision Statement and Action Plan. In some cases, SIA practitioners might assist the negotiation team to re-align the projects to better meet the objectives of the various funding schemes that might be available, or they might advocate to the key external actors for new lines of funding. This negotiation process brings the external actors and the negotiation team to discuss and ultimately agree on: (1) the projects to be implemented; (2) the amount of funding to be allocated to implement these projects; (3) the conditions (if any) that might apply to the funding; and (4) the impact assessment (ESIA), monitoring and evaluation strategies to be undertaken (see below).

In the development of the DRR and Community Resilience Management Plan, the external actors and the local negotiation team agree on how the social and environmental risks and impacts of the projects will be addressed. The Management Plan will also specify the procedures to monitor and evaluate the extent to which

the agreed goals, objectives and outcomes are achieved by each project.

5 | CONCLUSION

Enhancing resilience in society is fundamental for DRR, climate action and sustainable development, and this needs to be done at the local community level (i.e., community resilience), and across all governance levels (i.e., social resilience). To achieve sustainable development, recovery and development policies, plans, programs and projects should reduce climate change and disaster risk in localities, and enhance community wellbeing, resources, services, capacities, and skills for DRR and resilience. Additionally, they should recognise, engage and empower the social learning and sustainability transformation processes that underlie the proactive agency of resilient communities. Unfortunately, there are still cultural and political-institutional barriers that hinder governments from understanding the social dimensions of disaster risk and the proactive agency of resilient communities in localities. The persistence of myths and false beliefs about the behaviour of local communities and reliance only on techno-scientific knowledge hinder governments from fully understanding these social dimensions. Furthermore, a persistent reliance on a command-and-control approach, especially in relation to knowledge, resources, technologies and responsibilities for DRR, recovery and development, leads to poor governance strategies that fail to orient planned interventions towards achieving DRR, community resilience and sustainability outcomes in localities.

In this paper, we elaborated on DRR and community resilience as principles, means and outcomes of sustainable development. We discussed the cultural and political-institutional barriers to DRR and sustainable development, and we elaborated on the likely assessment and community resilience-building strategies that are needed in order to overcome these barriers. We introduced and elaborated on the philosophy and process of SIA and highlighted the theoretical and practical limitations in SIA that still hinder SIA from informing recovery and development plans about the appropriate projects to include in such plans in order to enhance DRR, climate action and sustainable development in localities.

To make SIA a process capable of developing such a co-produced and transformative understanding, we argue that a rethinking of SIA is needed. There should be a paradigm shift in SIA theory and practice from 'managing the impacts of projects' to 'reducing the risks of projects and building resilience'. We argued that this paradigm shift in SIA can be achieved by switches in SIA theory and practice: (1) From a project-based to a community-based approach; and (2) from focusing only on pre-determined projects to informing recovery and development planning before any project is conceived. We elaborated on the SIA Framework for Action and expanded it to make it capable of accomplishing such switches.

Being a process that enables the building of local teams, the co-production of a transdisciplinary and transformative understanding of the social dimensions of risk and resilience in localities, and of community

visioning processes, the SIA Framework for Action can help governments and communities overcome the cultural barriers to DRR, climate action and sustainable development. Through the design and implementation of a DRR and Community Resilience Vision Statement, Action Plan, DRR and Community Resilience Agreement and Management Plan, SIA practitioners can help governments and communities to overcome the political-institutional barriers to DRR, climate action and sustainable development. By using the SIA Framework for Action, they can engage and empower local communities—and foster the social learning and sustainability transformation processes underpinning their resilience—thus contributing to achieving DRR, climate action and sustainable development in localities. However, to make all this possible, we advocate for a new purpose for SIA—one that better acknowledges the role SIA can have in enhancing sustainable recovery and development policies and plans in urban and rural areas before any project is conceived. We also advocate for a new role for SIA practitioners: people who will be employed by governments to assist local communities in community visioning processes for DRR, climate action and sustainable development. Finally, we urgently encourage governments and SIA scholars and practitioners to embrace this advocated changes, test the SIA Framework for Action that we proposed in this paper across multiple localities, countries, and regions of the world, and thus help to build a leading position for the Social Sciences and SIA in DRR, climate action and sustainable development planning worldwide.

CONFLICT OF INTEREST STATEMENT

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

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How to cite this article: Imperiale, A. J., & Vanclay, F. (2024). Re-designing Social Impact Assessment to enhance community resilience for Disaster Risk Reduction, Climate Action and Sustainable Development. *Sustainable Development*, 32(2), 1571–1587. <https://doi.org/10.1002/sd.2690>