



Review Article

Disasters and international business: Insights and recommendations from a systematic review

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Disasters – natural or manmade – are on the rise with far-reaching implications for international business (IB) actors and transactions. While the Covid-19 pandemic has generated much academic interest for its impact on business in general, little effort has been made to consolidate the fragmented research on disasters more broadly in the field of international business. Therefore, it is important and urgent to consolidate the existing knowledge to provide a solid basis for future research. We systematically review 132 articles published between 1991 and 2022 and critically evaluate the nascent but rapidly growing literature at the intersection of disasters and IB. Our examination of the different types of disasters (natural and manmade) shows two separate streams: (1) a dominant MNE-centric stream of strategic IB research which regards disaster as an exogenous shock impacting MNE strategies, responses, and resilience, and (2) an emergent stream which places disaster as a more central, embedded phenomenon of investigation impacted by MNEs and other global actors. Our systematic review highlights the gaps in this literature and concludes with a discussion of the intersection of IB-disasters in relation to the 17 United Nations' Sustainable Development Goals (SDGs) to suggest directions for future research.

1. Introduction

Disaster impact and frequency have tripled over the last fifty years (Al Adem et al., 2018; Thomas & López, 2015) with devastating effects on people and environments worldwide. The Covid-19 pandemic has become one of the most severe exogenous shocks to political, economic, and social stability in modern history (Alonso et al., 2021; Baker & Judge, 2020). Other recent devastating natural disasters, including floodings, hurricanes, wildfires, and draughts, many of which are climate-related, have caused a diaspora of people, illness, and death throughout the world. As of this writing, the ongoing war in Ukraine as well as other recent manmade disasters, including sabotage, terrorism, and industrial disasters, continue to cause widespread destruction and distress wherever they occur.

Both manmade and natural disasters have a significant impact on International Business (IB). For instance, the 9/11 terrorist attacks on America caused significant economic damage in the immediate aftermath, rippling through global financial markets (e.g., Czinkota et al., 2010). Airlines and insurance companies took the hardest immediate hit, and U.S. stock markets initially fell more than 10% in the days after (Davis, 2022). The World Investment Report 2021 shows that the

Covid-19 pandemic has reduced global Foreign Direct Investment (FDI) in 2020 by 35%. After Hurricane Katrina in 2005, oil production and refining were shut down for weeks affecting global oil prices (e.g., Byard et al., 2007). The volcanic eruptions in Iceland in 2010 grounded flights in Europe and beyond for weeks resulting in major disruptions to supply chains as well as business and tourist travels. Wildfires, flooding, and manmade disasters such as wars continue to wreak havoc on IB transactions, with the Ukraine crisis a stark reminder. These examples provide strong evidence of the massive effects of disasters on both national and global economies, and IB more generally.

Heeding calls to tackle what are increasingly termed “grand challenges”, such as health crises, climate change, poverty, mass migrations, and inequality (Buckley et al., 2017; George et al., 2016; Howard-Grenville, 2021), to be more phenomenon-driven and energetic (Delios, 2017; Doh, 2017), and to focus more on the neglected firms and actors (Arikan & Shenkar, 2021), it is only natural that academic interest in disasters and their relationship to IB phenomena has increased, leading to the recent profusion of viewpoints, practitioners-oriented articles, and even early empirical measurements of disaster impact on IB (e.g., Alonso et al., 2021; Doh & Benischke, 2022; Dörrenbächer et al., 2021; Huang et al., 2018; Oh & Oetzel, 2022). As noted by Montiel et al.

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(2021), those disasters connect with the coordinated action toward the 2015 United Nations' 2030 Agenda for Sustainable Development and the associated 17 United Nations' Sustainable Development Goals (SDGs) (van Zanten & van Tulder, 2018). These SDGs represent a systematic categorization of the most pressing grand challenges humanity faces in the decades to come and, as such, important future avenues to expand and revitalize the IB field (Buckley et al., 2017; Montiel et al., 2021). Indeed, disaster risk reduction cuts across different aspects and sectors of development and there are 25 targets related to disaster risk reduction in 10 of the 17 SDGs, firmly establishing the role of disaster risk reduction as a core development strategy (UN, 2015). Multinational enterprises (MNEs) are critical contributors to the implementation of the SDGs (Kolk et al., 2017; Liou & Rao-Nicholson, 2021). Indeed, the intersection between IB and disaster research (to be developed further in our discussion section) is explicitly aligned with multiple SDGs, such as terrorism and violence (SDG 16 – Peace, Justice, and Strong Institutions, e.g., Reade et al., 2019), pandemics (SDG 3 – Good Health and Well-Being, e.g., Van Zanten & Van Tulder, 2020), or industrial disasters (SDG 12 – Responsible Production and Consumption).

Apart from a few exceptions, the interest in disasters by IB scholars has remained surprisingly limited, and research isolated and often disconnected with no clear definition of a disaster. Among the notable contributors to research on disasters and IB, the work of Oh and Oetzel (2011; 2017), Dai et al. (2013, 2017), and Bader and colleagues (e.g., Bader & Berg, 2013; Bader & Schuster 2015), helped define disasters broadly, and largely paved the road and advanced our knowledge about terrorism and risk for expatriates and organizations. Yet, the systematic linkage of disaster events such as terrorist acts, climate change, or pandemics to IB more broadly is missing. Moreover, the important roles of IB actors in the relationship between disasters and accomplishing the SDGs have hitherto been ignored.

This review has several objectives. First, following Oh & Oetzel's (2022) classification, our review of 132 articles published between 1991 and 2022 distinguishes the IB implications of manmade disasters (e.g., political violence, war, industrial disasters) and natural disasters (e.g., pandemics, extreme weathers, earthquakes¹), elaborating on some disaster types that seem to remain under-researched (e.g., industrial disasters). Second, our analysis classifies the research on disasters and IB into two distinct streams. The first stream (disaster as an exogenous shock) places MNEs at the center of inquiry, investigating mostly how disasters impact MNE strategies, decisions, and resilience. The second stream (disaster as an embedded phenomenon) focuses on often forgotten IB actors (e.g., migrants, refugees, unions), discussing the roles and responsibilities of MNEs and other IB actors in disaster prevention, relief, and recovery. Third, we point to important gaps in this literature that provide opportunities for cross-disciplinary future research connecting research in the intersection of disasters and IB with specific SDGs.

The remainder of the paper is organized as follows. First, we describe the research design including scope and article selection, as well as the analytical approach utilized to systematically review and integrate the literatures. Next, we conduct a content analysis of disaster and IB studies, organized within the two above-mentioned streams of literature. Finally, we discuss the research implications of our analyses and provide guidance for future research on the intersection of disasters and IB with regards to the SDGs.

2. Research design

We begin by clarifying the scope of our systematic literature review. First, based on the disaster literature, we define disaster as a manmade or natural event causing casualties (10 or more), affecting people (100 or more) in their health or living conditions, or leading to a national state of emergency (e.g., Emergency Events Database; Oh & Reuven, 2010; Quarantelli, 1985; Oliver, 1998). Second, while the field of IB is by nature relatively broad, we use prior established definitions and frameworks (e.g., Eden, 2008; Eden & Nielsen, 2020; Griffith et al., 2008; Werner, 2002) to define our IB dimensions (see Appendix 1).

We followed the methodological guidelines of Denyer and Tranfield (2009) in our review. To ensure sufficient coverage, we used *Web of Science*, *Scopus*, and *ProQuest* to search for and identify relevant articles. To review the intersecting research fields of IB and disasters, we conducted a grid search crossing, for each IB dimension², two sets of keywords³: disaster-related keywords (e.g., pandemic, flood, terroris*) and IB-related keywords (e.g., MNE, subsidiar*, expatriat*, FDI). Based on the IB dimensions defined above, we conducted a Boolean search in the titles, abstracts, and keywords. We then focused our analysis on the field of Business and Management (excluding for instance research based on pure economic perspectives). This led us to an initial sample of 2,125 articles published between 1979 and September 2022.

Next, duplicates and irrelevant publications (e.g., no authors, editorial notes, commentaries) were removed. To ensure quality, we restricted the sample to the articles published in Q1-ranked journals (SCImago Journal Rank, SJR; see Carracedo et al., 2021 for similar approach). We then manually examined the article abstracts and excluded those that were judged irrelevant because they did not cover conjointly the topics of disaster and IB. To control the consistency of the research design and associated data, we restricted it to empirical articles; therefore, we also excluded conceptual articles and reviews to concentrate the synthesis on empirical findings. After the exclusion process, we proceeded to an additional verification step by conducting an ancestry search (Aguinis et al., 2011), reviewing the reference lists of the current selection of articles. This led to a final sample of 132 articles published in more than 40 journals over the last three decades (1991–2022)⁴. The descriptives pertaining to manmade and natural disasters are presented in Table 1.

The cross-field of disaster and IB is sparse yet eclectic. Therefore, we used a qualitative approach to analyze the content of our sample of 132 articles⁵. This approach provides an in-depth examination of the research content which would be hard to grasp otherwise (e.g., Gaur & Kumar, 2018). We conducted our analysis in several steps. First, a dataset was created combining the key information of each publication. We combined, for each article, the year of publication, journal, authors, and abstracts. Second, we manually coded the disaster type(s), the IB dimension(s), the status given to disasters (exogenous shock or more central, embedded phenomenon), and the connections with SDGs, if any. Our qualitative analysis of the sample led to two distinct and relatively disconnected streams of research, presented below.

3. Disasters and IB: Multiple Streams

Our analysis suggests that the disaster and IB scholarship can be divided into two streams based on the status given to disasters and its implications in terms of research orientation. The first stream is MNE-

¹ We consider extra-terrestrial disasters as natural hazards that can be merged with natural disasters. We also acknowledge that the separation between natural and manmade disasters is not necessarily as clear. Moreover, as it is difficult to know the extent of the influence of human action on nature, we do not distinguish natural vs anthropogenic disasters.

² See Appendix 1

³ See Appendix 2

⁴ We acknowledge that this review combines only the first empirical studies in relation to Covid-19 and that conclusions regarding Covid-19 and IB are confined to the early period of observation. See journal distribution in Appendix 4.

⁵ See Appendix 5.

Table 1
Types of disasters in the IB literature.

Type of disaster	Count	Illustrative studies
<i>Manmade disasters</i>	72	
Terrorism	38	Vergne (2012); Bader & Schuster (2015); Liu & Li (2020)
Political violence	31	Jallat & Shultz (2011); Al Adem et al. (2018); Albino-Pimentel et al., (2021)
Wars	10	Feldman & Thomas (1991); Fisher & Hutchings (2013); Smith (2016)
Industrial disasters	7	Reinecke & Donaghey (2015); Chowdhury (2017); Donaghey & Reinecke (2018)
<i>Natural disasters</i>	65	
COVID-19	20	Allahi et al. (2021); Dorothy Ai-wan et al. (2021); Golubeva (2021)
Other pandemics e. g., SARS	2	Ballesteros & Magelssen (2021); Oetzel & Oh (2021)
Hurricanes	16	Oetzel & Oh (2014); Cruz et al. (2016); Huang et al. (2018)
Tsunamis	10	Pettit et al. (2013); Cruz et al. (2016); Oh & Oetzel (2011)
Wildfires	9	Oetzel & Oh (2014); Ballesteros & Magelssen (2021); Oh et al. (2021)
Flood	13	Banomyong & Julagasigorn (2017); Huang et al. (2018); Damoah, (2021)
Earthquakes	19	Cruz et al. (2016); Dalgas (2018); Maghsoudi & Moshtari (2020)
Extreme temperature	8	Oetzel & Oh (2014); Cruz et al. (2016); Huang et al. (2018)
Climate change	17	Ansari et al. (2013); Eberlein & Matten (2009); Liu et al. (2021)
<i>Total</i>	132	

centric and represents a dominant cluster of strategic IB research, which regards disaster as an exogenous shock (Oh & Oetzel, 2011) that impacts MNE strategies (e.g., entry mode, internationalization, FDI), responses (e.g., collaboration), and resilience (e.g., preparedness, global supply chain). The second stream diverges from the MNE-centric perspective as it places disaster as a more central, embedded phenomenon focusing on less debated topics (e.g., the role, contribution, or dark side of MNEs) or IB actors that are traditionally neglected (e.g., migrants, refugees, subsidiary unions). We present below how the cumulated findings of these two streams lead to different implications (see Tables 2 and 3 for synthesis).

3.1. MNEs and disaster as an exogenous shock

While the literature on disasters and IB has attracted sporadic empirical attention over the last 30 years, Oh, Oetzel, and colleagues (e. g., Oh & Oetzel, 2011; Oetzel & Getz, 2012; Oetzel & Oh, 2014) have led the way and shaped the scope of what is known about disasters in IB. In particular Oh and Oetzel's (2011) article helped to define and conceptualize disasters as exogenous shocks, which in turn paved the way for the first stream of literature: how MNEs perceive, adjust, respond, manage, and survive different types of disasters.

3.1.1. Not all disasters are equal

Extant research provides evidence that MNEs are more likely to disinvest after terrorist attacks in comparison to natural disasters (Oh & Oetzel, 2011), but also that the intermittent or persistent nature of the disasters may affect MNE decisions, such as location choice and expansion. While discontinuous natural risk is a significant barrier to firm entry and expansion (Oetzel & Oh, 2014), intermittent violence or low-impact yet persistent disaster risk have a lower impact on MNE strategies than conflicts at the national level (Witte et al., 2017, 2020). Similarly, industrial accidents' systematic risk does not show a lasting imprint on stock indices, while discontinuous natural disasters and industrial accidents actually reduce the systematic risk in the short term (Kollias & Papadamou, 2016). Research also attempts to distinguish business and non-business-related disasters, showing that all terrorist

Table 2
Disaster as an exogenous shock.

	Manmade disasters	Natural disasters
Types of disasters		
Natural vs manmade	Oh & Oetzel (2011); Kollias & Papadamou (2016)	Oh & Oetzel (2011) Covid vs climate change: Ruiu et al. (2020) Natural vs anthropogenic: Oetzel & Oh (2014); Kollias & Papadamou (2016)
Intermittent vs persistent	Witte et al. (2017; 2020)	
Business and non-business	Powers & Choi (2012); Dimitrova et al. (2022)	
Global business		
Economic growth, trade	Abadie & Gardeazabal (2003); Bayer et al. (2004); Shah et al. (2020); Bussman (2010); Asongu & Nwachukwu (2017)	Macedo et al. (2020); Sharma et al. (2021); Uddin et al. (2021)
Business failure and firm performance	Tingbani et al. (2019)	Golubeva (2021); Guedhami et al. (2022); Kanagaretnam et al. (2022)
Migration flow		Nagumey et al. (2021)
MNEs' strategies		
Host characteristics	Busse & Hefeker (2007); Oh & Oetzel (2011); Ramos & Ashby (2017) Jimenez & Lupton (2021)	Jimenez et al. (2021)
Investor's characteristics	Steiner (2010); Driffiel et al. (2013); Ramos & Ashby (2013); Pek et al. (2018)	Oetzel & Oh (2014)
Industry / resource factors	Skovoroda et al. (2019)	
MNEs' responses		
Collaboration	Oetzel, & Getz (2012); Corbo et al. (2016)	Oetzel & Oh (2021)
R&D	Li et al. (2022)	Corsini et al. (2021); Janzwood (2021)
Mimicking	Liu & Li (2020)	
Strategic profile	Meyer, & Thein (2014); Witte et al. (2017)	
Philanthropy	Crampton & Patten (2008); Ballesteros & Magelssen (2021)	Muller & Whiteman (2009); Mithani (2017); Ballesteros & Magelssen (2021)
MNEs' resilience		
Experience	Chen (2017); Oh & Oetzel (2017); Jimenez & Lupton (2021); Oh et al. (2021)	Oetzel & Oh (2021); Puhr & Müllner (2022)
Legitimacy	Darendeli & Hill (2016); Smith (2020); Darendeli et al. (2020)	
Geographic factors	Dai et al (2013); Dai et al. (2017); Jia & Mayer (2017)	Oh et al. (2020)
Risk and recovery strategies	Manuj & Mentzer (2008); Branzei & Abdelnour (2010); Wan et al. (2021)	Manuj & Mentzer (2008)
Staff management	Dickmann et al. (2019); Fee et al. (2019); Gannon & Paraskevas (2019); Suder et al. (2019); Albino-Pimentel et al. (2021)	
Resources		
Global supply chain		Huang et al. (2018). Pettit et al. (2013); Paul et al. (2021); Orlando et al. (2022)

attacks may not be equal, however, conclusions are still unclear as some studies suggest that both forms of terrorism influence FDI, especially in institutionally fragile countries (Dimitrova et al., 2022). This makes terrorism a major factor of threat and uncertainty to MNEs in emerging

Table 3
Disaster as an embedded phenomenon.

	Manmade disasters	Natural disasters
Global business		
Political & historical ties	Li & Vashchilko (2010); Arikan & Shenkar (2013); Arikan et al. (2020)	
MNEs responsibility		
MNEs' contribution to disaster relief	Smadi et al. (2018); Copping et al. (2021)	Ballesteros et al. (2017); Banomyong & Julagasigorn (2017); Koria (2009); Park et al. (2013); Damoah (2021)
MNEs' contribution to disaster prevention	Canhoto (2021)	
MNEs' questionable activities	Ramos & Ashby (2013); Chowdhury (2017); Belhoste & Nivet (2021)	Cho et al. (2011)
Mechanisms of MNEs' engagement		Eberlein & Matten (2009); Reid & Toffel (2009); Delmas & Montes-Sancho (2010); Comyns (2016); Ansari et al. (2013); Zhang & Luo (2013); Oesch & Urban (2021)
Global workforce		
Expatriates	Feldman & Thomas (1991); Harvey (1993); Bader & Berg (2013); Fisher & Hutchings (2013); Bader (2015); Bader et al. (2015); Bader & Schuster (2015); Fee & McGrath-Champ (2017); Bader et al. (2019) Dalgas (2018)	Koveshnikov et al. (2022)
Migrants and refugees		Allahi et al. (2021); Coffey et al. (2021); De Nardi & Phillips (2021); Dorothy Ai-wan et al. (2021); Giordano (2021); Nardon et al. (2021)
Subsidiaries' unions	Reinecke & Donaghey (2015); Donaghey & Reinecke (2018)	

markets, while others show that only terrorism directly targeted towards MNE facilities, production, or employees negatively influence FDI (Powers & Choi, 2012).

Little research has been devoted to similarly disaggregating natural disasters, distinguishing between business experience of natural disasters (e.g., system of production directly damaged, or employees directly affected by the disaster) or non-business experience, such as the experience of disaster in a more or less distant neighborhood, or CEO's disaster experience during formative years which could have an impact on their strategic decisions (Marquis & Tilcsik, 2013; Chen et al., 2021; Bernile et al. 2017). The conversation on separating natural disasters from anthropogenic (human-induced natural disasters) disasters has also received very little attention (for a notable exception, see e.g., Kollias & Papadamou, 2016), yet they differ to great extent in their predictability and potential avoidance. While asteroids, volcanic eruptions, or earthquakes are unpreventable, the Covid-19 pandemic raises some questions regarding the human impact on the natural environment and the increased risk of pandemics as human activities trespass the boundary of safe separation between humans and animals (Rutz et al., 2020; Bar, 2021; Montiel et al., 2022).

By the same token, the first wave of research associated with the Covid-19 pandemic has shown striking differences with research on climate change (Bostrom et al., 2020; Fuentes et al., 2020). Despite important similarities – both can be seen as global disasters,

necessitating global efforts and prone to politicization, the pandemic has awoken a strong interest in natural disasters which climate change struggled to not achieve (Manzanedo & Manning, 2020; Klenert et al., 2020; Cooper & Nagel, 2021). For instance, from a communication perspective, Ruiu et al. (2020) discuss the difference in perceived urgency and the elements that make Covid-19 restrictions acceptable by both the public and policymakers, while such restrictions are pushed back by the same parties when dealing with climate change. This is an interesting first step toward a deeper reflection on how Covid-19 may change IB research.

3.1.2. Disasters and global business

Within the perspective of disasters as a form of (exogenous) disruption of economic activities, research has already established evidence of the negative effects of disasters on global business, attempting to measure the potential indirect effects of disasters (Czinkota et al., 2010). Terrorism outbreaks are shown to negatively impact GDP (e.g., Abadie & Gardeazabal, 2003) or exports (e.g., Asongu & Nwachukwu, 2017), but also may lead to business failure in developing and fragile states (Tingbani et al., 2019), or decrease the FDI spillover effects and negatively impact the FDI-trade relationship due to increased security costs and decreased productivity (Bandyopadhyay et al., 2014; Shah et al., 2020). More broadly, terrorist activities impact economic growth by damaging multiple channels of growth from infrastructures and public expenses to market stability and country ties (e.g., Arif et al., 2020). Evidence also shows that civil wars substantially decrease bilateral trade between states at war but also spread to joiners (Bayer et al., 2004). An interesting reverse perspective is the pacifying effect of FDI, reducing the risk of war and military conflicts. Based on a similar logic of conflict avoidance not to disrupt mutually beneficial economic exchange, Bussman (2010) shows that FDI is a force for peace.

The Covid-19 pandemic has brought comparable scholarship attempting to distill the pandemic effects on the global business environment. This has been done by investigating country differences in terms of strategies, past pandemic experience, and governance structure, or more generally country-level economic characteristics with direct implications for business (e.g., Sharma et al., 2021), such as increased volatility (Uddin et al., 2021). Others also investigate the impact of Covid-19 in relation to organizational factors such as firm size, supply chain, R&D, or participation in exports on firm performance (e.g., Golubeva, 2021), or on MNEs firm stock value (Guedhami et al., 2022). Other natural disasters have raised little attention in comparison. Yet, some studies show the negative impact of extreme temperatures on specific industries, such as wine exports (Macedo et al., 2020), or the negative association between climate risk and organizational capital (Kanagaretnam et al., 2022). However, in contrast to pandemic-related research, other natural disasters have not yet triggered broad empirical testing to identify a larger range of contextualized factors to explain whether and how some MNEs may benefit from more or less suitable environments.

3.1.3. Disasters and MNE strategies

Research on the direct effects of terrorism (Czinkota et al., 2010) is among the most engaged and mature in the IB-disaster scholarship. Although the fragile environment of terrorism-endangered countries presents major risks, MNEs continue to enter and invest in these high-risk markets (Albino-Pimentel et al., 2021). Research has evaluated the impact of host country characteristics, such as the negative effect of host government accountability on the probability of satisfactory project completion, as a mechanism of higher indirect costs and decreased confidence from investors (Jiménez & Lupton, 2021). Similarly, government characteristics at large (e.g., stability, corruption, internal tensions, or quality of bureaucracy) are shown to be a crucial determinant of FDI flows (Busse & Hefeker, 2007). Interestingly, although localized, organized crime is shown to also change the country image, creating a geographic halo effect at the country level, in turn reducing

FDI into the country (Ramos & Ashby, 2017).

Research further examined the specific country characteristics that increase the likelihood of investment in high-risk locations, especially those exposed to terrorism. Prior studies provide evidence that MNEs from countries with lower CSR engagement, weaker institutions, or high-crime environments are more likely to invest in conflict or terrorism-endangered locations (Driffel et al., 2013; Ramos & Ashby, 2013). This may suggest that MNEs perceive their home country (risk) experience as transferable across borders (Ramos & Ashby, 2013). In the same vein, Oetzel and Oh (2014) show that MNEs with experience in high-impact disasters are more likely to expand in countries experiencing natural disasters.

While the negative impact of political violence and terrorism on FDI is now well-established (see e.g., Busse & Hefeker, 2007; Busmann, 2010), Chen (2017) suggests that this only shows the aggregate relationships between macro indicators. While examining the mechanisms at the firm level, other results show that some MNEs may thrive and profit from investing in conflict zones (e.g., Guidolin & La Ferrara, 2007; Jallat & Shultz, 2011; Skovoroda et al., 2019). Yet, while terrorism can reduce investment intentionally targeting FDI (e.g., Abadie & Gardeazabal, 2008), Arif et al. (2020) suggest that market opportunities and trade partnerships may at times outweigh the perceived risk of terrorist activities, or that the stability role of FDI may have been overestimated in developing countries (Steiner, 2010), suggesting a more complex relationship between terrorism and FDI.

3.1.4. Disasters and MNE responses

The analysis of MNE strategic response to the threat or occurrence of manmade and natural disasters has been relatively prolific too, especially in relation to terrorism. Research has explored the different strategic profiles adopted by the MNEs as a result of institutional, geographic, profitability, and business constraints that influence operations, pointing out a “low profile strategy” (Meyer & Thein, 2014), or “inert” strategy when MNEs appear insensitive to conflicts around their operations (Witte et al., 2017). Risk avoidance also often appears a common response from MNEs, as actively reducing the risk associated with terrorism may be outside of the scope of managers’ actions (Oetzel & Getz, 2012). Evidence shows that local stakeholder pressures influence direct responses to manmade disasters, while international stakeholder pressures influence indirect responses and MNEs’ options to work alone or collaboratively (Oetzel & Getz, 2012). MNE incentive to work in collaboration with other organizations depends mainly on the type of disaster (high-impact and low-frequency versus low-impact and high frequency), at least for natural disasters (Oetzel & Oh, 2021), and on how manmade disaster shocks disrupt existing ties and open prospects for new networks (Corbo et al., 2016). Based on inter-firm imitation literature, Liu and Li (2020) also suggest that MNEs tend to adjust their responses to manmade disasters by mimicking other MNE actions, in particular in relation to the decision to divest.

Strong evidence also shows that terrorism and increased uncertainty reduce MNE R&D investment, unless MNEs possess large resources (larger size, cash flows) and operate in a favorable environment, such as strong institutions, that moderate the uncertainty (Li et al., 2022). Natural disasters have not received equivalent IB attention, but the weight of organizational and political factors in each stage of the R&D development process in the context of planetary defense and priority-setting for global catastrophic risk preparation (e.g., asteroid or comet impacts; Janzwood, 2021) has been investigated. Notwithstanding, the topic of R&D is neither new nor peripheral to the research on climate change and MNEs (see Kolk & Pinkse, 2008 for discussion), and this is receiving increasing attention in the context of Covid-19. For instance, Corsini and colleagues (2021) conceptualized digital fabrication as a crucial frugal innovation enabler under conditions of high disturbance (e.g., “doing more with less”). Disasters also influence MNE strategic philanthropy. Donations are shown to be explained by the degree of connection with the event, the short-term profitability of the

firm, and the economic importance of the country to the firm (Crampton & Patten, 2008; Ballesteros & Magelssen, 2022; Muller & Whiteman, 2009), but also serve to mitigate the liability of foreignness (Mithani, 2017).

3.1.5. Disasters and MNE resilience

A large share of the research on disaster and IB relates to understanding what makes MNEs resilient to such shocks, in particular in the case of manmade disasters. Without providing an exhaustive list of the antecedents of resilience, and beyond the description of recovery or risk management strategies concerning the environment, disaster conditions, specific structures or requirements (see e.g., Manuj & Mentzer, 2008; Branzei & Abdelnour, 2010; Wan et al., 2022), MNE experience of prior disasters emerges as a dominant factor. While it is acknowledged that experience is an asset moderating the negative consequence of disasters by increasing investor confidence (e.g., Jiménez & Lupton, 2021), how recent, frequent, intense, and transferable (i.e., country-specific, risk-specific) such experience is can alter MNE’s decisions (Oh & Oetzel, 2017; Chen, 2017; Oh et al., 2021), calling for a disaggregated effect of experience quality and quantity. The level of engagement in the host country has also been shown to negatively moderate the role of experience on subsidiary profitability (Chen, 2017). Similar findings are found for natural disasters, showing that high-impact natural disaster MNE experience increases the likelihood of investing in preparedness (Oetzel & Oh, 2021). In addition, Puhr and Müllner (2022) discuss MNE experience in terms of internationalization, suggesting that although systematic risk is increased by multinationality through liability of foreignness, the process of internationalization also enhances resilience against disasters. Research further suggests that resilience is built through the ties created by MNEs before disasters (e.g., political violence) that help MNEs gain legitimacy (Darendeli & Hill, 2016), and in turn increase their likelihood of survival in times of political violence (Darendeli et al., 2020).

The likelihood of MNE survival is also tightly linked to the geographic factors they are embedded in. Space plays a critical role in disaster occurrence and yet has often been neglected. That is a critical omission since location appears as one of the core elements of mainstream IB research (e.g., Dunning, 2009; Nielsen et al., 2017). Dai and colleagues have made notable contributions to the field by highlighting the influence of place and space characteristics (e.g., conflict zone, concentration, and dispersion with other same home county MNEs and same MNE subsidiaries) on MNE likelihood of survival (Dai et al., 2013). This line of research shows how MNE survival in high-risk environments depends on both whether the organization is in the zone and with whom (Dai et al., 2017). Similarly, MNE entry into a region affected by a natural disaster is influenced by same MNE subsidiaries or other MNE subsidiaries from the same home country (Oh et al., 2020).

Due to their international scope and importance, understanding the challenges and ensuring the fast-response and non-disruption of supply chains during a crisis is also a critical topic that resonates with MNE resilience. Hence, global supply chain management has been examined more closely in the context of natural disasters, focusing on the major recovery challenges, resilience measurement tools, and the role of innovation in building resilience to disruptions (Pettit et al., 2013; Paul et al., 2021; Orlando et al., 2022).

MNE resilience also relies on the protection of its staff and expatriates in particular. MNEs traditionally shape, manage, and control their foreign operations through expatriates (Welch et al., 2009; Gannon & Paraskevas, 2019). Expatriates are the main liaisons between the headquarters and the subsidiaries, acting as agents of socialization, network, and control, and thus play an important role in the transfer of knowledge and practice “stickiness” (e.g., Dowling et al., 2008; Chang & Smale, 2013). As a result, extant research predominantly focuses on the HR practices adopted by MNEs in times of crisis from the organizational perspective. Such research includes the preparation and protection strategies in dangerous locations involving HR specialists (Gannon &

Paraskevas, 2019), HR practices to leverage expatriate rare knowledge used by MNEs in dangerous environments (Suder et al., 2019), and the legitimacy-seeking choices and institutional elements that determine organizations' safety and security practices in endangered countries (Fee et al., 2019). Others have investigated the resources and institutional factors leading to the decision to send expatriates to dangerous locations in the first place (Dickmann et al., 2019). However, this cluster of research is exclusively concentrated on manmade disasters. It may be expected that comparable research will emerge to evaluate MNE adjustment in their HR practices during the Covid-19 pandemic.

4. Disaster as an embedded phenomenon

A second stream of research emerging from our analysis goes beyond the MNE-centric approach to give a more central role to the disaster or other stakeholders affected by the disaster. This stream of research is less consolidated and more disconnected than the first stream, yet provides a more interdisciplinary perspective on the intersection of disasters and IB.

4.1. Disasters and political and historical ties

While natural disasters are by design relatively difficult to anticipate, manmade disasters, in particular war, terrorism, and political violence, are often closely intertwined with economic, political, historical, and international relations at large. Yet, relatively little effort has been made to integrate international relations and antecedent literatures with IB research in the context of disasters.

Notwithstanding, some research has taken a more complex and interdisciplinary approach to disasters and IB. For instance, Arikan and colleagues (Arikan & Shenkar, 2013; Arikan et al., 2020) explored conflicts at the nation-dyadic level, examining how negative sentiments into social and collective memories and national identities, or the frequency and magnitude of nation-dyadic conflicts, influence MNE cross-border activities and decisions. This line of research contributes to integrating history into MNEs' decisions and thus brings a more temporal and dynamic view of IB activities in line with the current fast-changing environment. Moreover, this line of research also states the country effect of MNE choice (Shenkar & Arikan, 2009), thereby bridging cultural identity, country-of-origin effect, and directionality of causality with IB-related decisions. This provides evidence that while ongoing trade increases cooperation, historic antagonism between countries decreases the probability of forming cross-border alliances between these countries (Shenkar & Arikan, 2009). In the same vein, Li and Vashchilko (2010) show that military conflict decreases bilateral FDI in the high-income/low-income dyads, while security alliances promote bilateral FDI in the high-income/low-income dyads, thereby bridging the gap between IB and international political research. Yet, here too, similar approaches have not been explored in the context of natural disasters, such as historical country ties and collective climate change action.

4.2. Disasters and MNE responsibility

In comparison to the amount of research dedicated to how MNEs perceive and respond to disasters, MNE contribution to disaster relief, especially in the manmade disaster context, has been largely neglected. Yet, the current Covid-19 pandemic has led to significant supply chain disruptions impacting international trade and crippling entire industries due to what Kottaridi et al. (2021) called "liability of international connectivity". While the shortages of microchips or automobile parts may be devastating economically for both firms and countries, the shortages and logistical issues related to medicine including Covid-19 vaccines have great humanitarian implications worldwide (Singh et al., 2020). In this vein, a few notable exceptions have simulated post-disaster drinking water distribution in refugee camps (Smadi et al.,

2018), or examined contextualized strategies to accelerate the delivery of refugee shelter supply networks in disaster-relief situations (Copping et al., 2021). Yet, evidence from natural disasters proves that disaster recovery is substantially accelerated by firms' aid, strategic philanthropy, and involvement in humanitarian supply chain delivery (Ballesteros et al., 2017; Banomyong & Julagasigorn, 2017). Other research also investigated the critical success factors of humanitarian supply chain management in terms of socio-economic context, innovation, resources, management and administrative practices, training, stakeholder training, involvement, and cooperation (e.g., Damoah, 2021). Additional research looked into the supply chain restoration and reconstruction process in complex environments (Park et al., 2013), including weak management and coordination but also the combination of natural disasters (e.g., tsunami) and manmade disasters (here civil war, see Korja, 2009). Few exceptions aside, e.g., MNE explicit actions against money laundering (and as a consequence against human trafficking or terrorism financing) via the assistance of financial services and machine learning (Canhoto, 2021), empirical research on the role of MNE contribution to disaster prevention is almost non-existent.

In terms of natural disasters, sporadic research has examined the mechanisms of MNE engagement, especially towards climate change. Findings show that significant natural disasters can push MNE voluntary disclosure (Oesch & Urban, 2021) and disclosure of climate change strategies (Reid & Toffel, 2009; Comyns, 2016), but also influence their CSR strategies in emerging countries (Zhang & Luo, 2013). Evidence further shows that large MNEs play a key role in shaping the regulatory approach (in Canada and Germany) ex post-natural disaster (Eberlein & Matten, 2009), though research has mostly remained confined to the isolated rather than collective response of MNEs. However, research does suggest that such collective engagements can remain symbolic. For instance, Delmas and Montes-Sancho (2010) found no differences in gas emissions reductions between early entrants and non-participants to collective strategies aiming to shape environmental voluntary agreements policies. Moreover, through 40-year temporal analysis, Ansari et al. (2013) added a new conceptualization of climate change as a socially-constructed commons. They propose different mechanisms through which actors change their frame towards that commons logic linked with three conditions: the recognition of interconnected fate, the acceptance of responsibility by all, and the collective commitment to acting. Yet, exactly how those conditions and mechanisms are enacted in practice is still elusive as is the connection to natural disaster responses, preparedness, or MNE contributions to post-disaster aid.

Disaster and MNE questionable activities represent the last theme related to MNE responsibilities. While legitimacy has been studied as a factor of success for MNE resilience in endangered environments, only a handful of studies has examined ethically debatable MNE decisions. For instance, continuing operations in Syria in times of violent conflicts, based on short-sighted decisions and a lack of understanding of the danger or implications for the employees and the organization, resulted in financing terrorist groups (Belhoste & Nivet, 2021). Similarly, some foreign MNEs have decided to remain in Russia despite governmental guidance and moral pressure to leave in the wake of the war with Ukraine, often citing employee job security of simply strategic considerations as reason. More generally, research has shown a positive link between crime in host locations and investment from high-crime countries (Ramos & Ashby, 2013), the power imbalance between MNEs and the elite against workers in emerging countries leading to the organized violation of poor workers' human rights (Chowdhury, 2017), as well as organizations successfully promoting business interests over environmental protection (Cho et al., 2011). Still a very nascent area of research, the dark side of MNEs and disasters seems particularly ripe for future research..

4.3. Disasters and the global workforce

Although it is well-established that MNEs have an interest in taking

expatriates' wellbeing and safety seriously, the human side of crisis is often neglected compared to the focus on organizational performance (Fee et al., 2003). Going beyond the MNE level and the HR activities to prevent expatriate failure and turnover, or to train and manage expatriates' health and safety, the work of Bader and colleagues (e.g., Bader & Berg, 2013; Bader & Schuster, 2015) is particularly notable for its contribution to expatriates' wellbeing in hostile environments. Early work had already investigated expatriates' fears and frustrations in Saudi Arabia during the Persian Gulf Crisis (Feldman & Thomas, 1991), where they explained the main motivations to relocate (desire for novelty, autonomy, and large compensation package) and the difficulty of adjusting, focusing on the effects of war on the daily life of expatriates and how the important capabilities of expatriates may never be used due to surrounding dangers. Harvey (1993) also showed that although MNEs invested greatly in anti-terrorist programs, those tended to lack specific investments in training expatriates and their families.

In the 2010s, a series of articles provided a much wider picture of expatriates in endangered-environments, measuring the negative impact of terrorism-induced stress and safety-related intra-family tensions on expatriate attitudes, performance, and psychological wellbeing (Bader & Berg, 2013; Bader et al., 2015; Bader & Schuster, 2015). This research evaluated the perceived threat and stress mechanisms creating spillover effects between work and nonwork domains leading to expatriate withdrawal cognition (Bader et al., 2019). Bader (2015) also tested the impact of time spent in the host country, compensation, and social support on expatriate work attitudes and demonstrated that social support from peers and the organization is essential. Cultural distance has also been noted as a key barrier for military expatriates leading to poor collaboration and potentially life-threatening situations (Fisher & Hutchings, 2013).

In 2021 alone, 460 aid workers were victims of attacks; killed (140), wounded (203), or kidnapped (117), the most fatalities since 2013⁶. Yet, only a few studies have extended their scope of research to international NGOs and expatriate aid workers. Among this scarce literature, Fee and McGrath-Champ (2017) suggest that INGOs HR practices are more people-centered than their MNEs counterparts, promoting a culture of 'personal responsibility and empowerment' rather than focusing on security reinforcement, duty of care, or firm performance. These issues and domains of research are likely to expand, examining for instance corporate and INGO expatriates in war-torn Ukraine and Russia.

In comparison, expatriate-centered research and natural disasters is only emerging with the first articles on the effects of the Covid-19 pandemic on expatriate stress. For instance, Koveshnikov et al. (2022) show that intra-family concerns are powerful stressors for expatriate psychological wellbeing, increasing the likelihood of host country withdraw intentions. While it is expected that the pandemic may trigger a large amount of empirical research to come, other natural disasters have remained largely ignored, creating a strict separation between the issues faced by expatriates and the rest of the global workforce (e.g., migrants and refugees).

Notwithstanding the heavy focus on expatriates, the field of IB is broadening its scope to a more diverse global workforce, including various degrees of "privileges" (non-Western countries, different educational backgrounds) and a more complex profile of the global workforce in terms of gender, age, organizational position, motivation, and freedom to move to a host country (e.g., Nardon et al., 2021; Szkudlarek et al., 2021). Hence, the IB literature is slowly becoming more inclusive, integrating self-initiated expatriates, migrants, refugees, and international students. Moving away from the direct importance of the expatriates from the organizational point of view, the field has recently acknowledged more systematically the contributions these global actors bring in many ways to the wealth and development of the

host country (e.g., Cai et al., 2021; Hajro et al., 2021), but also the connection it builds between the home and host countries (see Dalgas, 2015). Such increased connections and contributions influence the impact of disasters on IB in important ways.

With a 56% increase since 2000 (United Nations, 2019), international migrations have become a hot topic with important implications at the national policy level in many countries. Coupled with the increased mobility of the workforce, violence, wars, natural disasters, and climate change have been important reasons to migrate over the last decades (Nagurney et al., 2021). The number of refugees is also increasing. The Covid-19 pandemic and the clear inequality in health outcomes (Berardi et al., 2022) are providing the opportunity to revive the literature on disaster and international actors such as migrants and refugees. For instance, early empirical research has looked at how the Covid-19 pandemic is pushing skilled immigrant women towards precarious forms of employment, lower-skilled jobs, or unemployment (Nardon et al., 2021). Other research has discussed the difficulty of coping during lockdowns (Dorothy Ai-wan et al., 2021), refugees' health during the pandemic (Allahi et al., 2021; De Nardi & Phillips, 2021), or the health and financial dilemma faced by women migrants, and more generally the intersection of gender and migration vulnerabilities through invisible work and ineligibility for government assistance (e.g., Coffey et al., 2021; Giordano, 2021). Yet, even before the pandemic, research also investigated disaster management practices and in particular those excluding migrants from receiving targeted aid based on their origin (e.g., Dalgas, 2018), pointing to the impact of remittances (resources transferred by the global workforce to their country of origin) as an important omission in the way we think about integrating the global workforce.

Research has also largely omitted to explore industrial disasters and the global workforce. As rare exceptions, the work of Reinecke, Donaghey, and Chowdhury (Reinecke & Donaghey, 2015; Chowdhury, 2017; Donaghey & Reinecke, 2018) brought crucial insights on the Rana Plaza collapse in 2013 in Savar, Dhaka, Bangladesh. Home of 31 MNEs, it is known as the deadliest industrial disaster and accounted for the death of 1135 workers and 2500 injured workers⁷. Focusing on the workers, Reinecke and Donaghey (2015) describe the process of labor governance in supply chains, the emerging power of production actors, and the growing pressure for MNEs to take responsibility for such disasters, ultimately leading to an unprecedented safety collective agreement signed by 180 MNEs. Donaghey and Reinecke (2017) then followed the implementation process and the mutual existence of industrial democracy-oriented (labor involvement, unions) and CSR-oriented initiatives, together with external intervention and the lack of institutional support. The coexistence of approaches created a dynamic system ensuring higher standards.

This last small cluster of studies constitutes a rare multidisciplinary approach to research in the intersection of IB and disasters. The phenomenon-driven, disaster embedded IB research that focus on non-traditional IB actors as well as MNE responsibilities before, during, and after disaster strikes, resonates well with the calls for more attention to grand societal challenges in IB (e.g., Buckley et al., 2017; George et al., 2016; Howard-Grenville, 2021). Yet, while our research has shown several important connections between disasters and IB, on the one hand, and disasters and grand challenges on the other, cross-disciplinary research focusing on how the intersection of IB and disasters influence grander societal challenges is missing. Hence, grounded in the findings from our review, we develop a cross-disciplinary research agenda in the final section that places IB at the center for connecting disasters to future societal challenges.

⁶ <https://reliefweb.int/report/world/aid-worker-security-report-figures-glace-2022>

⁷ Star Business Report, 2016

5. Discussion and future research

Our review has demonstrated an emerging focus on various connections between IB and disasters, amplified by the Covid-19 pandemic and its strong implications for IB. However, our review has also revealed a somewhat disjointed treatment of disasters in connection with IB within the literature more broadly. Most of the discussions take place either outside traditional IB journals or with a very MNE-centric view (Oh & Oetzel, 2022). Indeed, our analysis of the literature revealed somewhat of a bifurcation pertaining to the focal view. Not surprisingly, MNE-centric disaster discussions take place in IB journals and broader disaster-embedded discussions take place in non-IB journals with little cross-fertilization. This bifurcation has led to a disjointed debate about the nature and role of IB actors in relation to disasters with the majority of research being conducted on a relatively narrow subset of both IB dimensions and types of disasters. Taken as a whole, the literature on disasters and IB appears sporadic, unsystematic, and in need of a guiding framework to advance knowledge on the role of IB in relation to disasters.

Moreover, notwithstanding recent conceptual work (Montiel et al., 2021), very little attention has been paid to the connection between IB research, disasters, and grand societal challenges exemplified by the SDGs. While a few articles in our review may be classified as combining insights from IB and disaster research in relation to some of the SDGs⁸, this is mostly unintentional and unsystematic. Indeed, where such connections are made, articles are typically published in non-IB journals and with little explicit attention to the interactions between IB concepts and disaster or societal challenges literatures (for notable exceptions, see Kolk et al., 2017; Canhoto, 2021; Koveshnikov et al., 2022; Li et al., 2021; Nagurny et al., 2021). This provides ripe opportunities for future IB scholars to engage in cross-disciplinary research at the IB-disasters-grand challenges intersection.

In this closing section, we wish to connect these three topics and discuss how IB may serve as an important link between disasters and the SDGs. We take the view that IB research is much broader than MNEs as it encompasses both traditional “MNE-centric” topics associated with firm-level strategies, responses, and resilience towards disasters, as well as “disaster embedded” topics related to how disasters may trigger grander challenges to the international community. This latter topical area includes both how MNEs may serve as agents of change (both positively and negatively), but also greater societal issues such as migration, refugees, and overall sustainability. Hence, we close this review by developing a cross-disciplinary research agenda around the intersection of IB and disasters focusing on the grand societal challenges as set out by the SDGs.

5.1. Recommendations for Future Research: Disasters and the 17 SDGs

In order to develop such an agenda, we organize our discussion of the intersection of IB-disasters around the 17 SDGs. We start by grouping the 17 SDGs into the five overarching pillars (5Ps) often used by the UN and other organizations for clarity: People, Prosperity, Planet, Peace, and Partnership⁹. While many of the SDGs are (inter)related and multidimensional themselves (see e.g., Kolk et al., 2018 for discussion of poverty), grouping according to the five pillars provides meta-guidance for IB scholars and helps emphasize the cross-disciplinary nature of disaster-IB intersections. Next, we consider how each pillar gives rise to important future research topics at the intersection of disasters and IB by disaster type (natural vs. manmade) and in relation to the key IB

dimensions identified in our review (see Figure 1 below). Our aim is to provide guidance as to how future IB-disaster scholars may benefit from the 17 SDGs conceptually and empirically when designing their research.

5.1.1. People Pillar: SDGs 1-5

To address the diverse issues within the People pillar pertaining to the SDGs (1-5), IB research must engage in cross-disciplinary inquiry about how various types of disasters interact with key IB themes (see Figure 1 and Table 4) to achieve sustainable development. SDG1-3 speaks to the overall health and wellbeing of people by alleviating poverty, hunger, and disease. These health-related issues are greatly impacted by various natural and manmade disasters in ways that intersect with IB. For instance, natural disasters greatly exacerbate global poverty, hunger, and health both directly (e.g., via food shortage or disease) (Answer et al., 2020; Kawasaki et al., 2020) and indirectly (e.g., via job loss, migration, and global economic downturn) as poor people are more likely to live in hazard-prone areas (Hoeven et al., 2015). Indeed, natural disasters such as floods, hurricanes, tsunamis, and droughts often destroy critical agricultural assets and infrastructures, and may cause losses in the production of crops, livestock, and fisheries, leading to disruption of food availability, food accessibility, and stability of longer-term food security. This, in turn, may disrupt trade flows and cause losses in agricultural-dependent manufacturing subsectors such as the food processing and textile industries. More broadly, natural disasters often lead to increased food prices, decreased farm income, and unemployment, thus creating poverty, which in turn increases the prevalence of food insecurity and malnutrition. Such trauma may furthermore impact the health and well-being of the already impoverished and vulnerable population in disaster-stricken areas.

MNEs often own parts of the entire value chain (locally or globally) of food processing, including both the physical agricultural assets, processing, and distribution. Moreover, organizing and financing trade across value chain activities and national borders places MNEs and IB more broadly as central intermediaries in relation to reducing the negative consequences of natural disasters on poverty (SDG 1), food shortage (SDG 2), and general health and wellbeing (SDG 3). Future research may investigate how organization and governance of local and global value chains can be leveraged to reduce the negative effects of natural disasters on food shortage and poverty. What specific financial, organizational, or human capabilities can MNEs activate that may help (re)build critical agricultural assets and infrastructure both before disasters happen and in the aftermath? More broadly, how do MNEs engage with local and global communities to provide food, livelihood, and medical attention to affected people in the aftermath of a natural disaster? Such a research agenda may seek to combine IB with insights from agricultural economics and agricultural technology (e.g., De Haen & Hemrich, 2007; Suri & Udry, 2022) to address how land use planning, upgrading of agricultural infrastructures, and adoption of appropriate agricultural technologies can play a key role in hunger prevention and poverty reduction (see Table 4).

Similarly, while the Covid-19 pandemic wracked havoc on health and economics worldwide, its effect on poverty, hunger, and health and wellbeing for people in low-income groups (e.g., Sano & Mammen, 2022), developing countries (e.g., Nwosu et al., 2022), or migrants and refugees (e.g., Allahi et al., 2021; Beraradi et al., 2022; De Nardi & Phillips, 2021; Mengesha et al., 2022) are disproportionately large. While the impact of Covid-19 on MNEs and their global value chains is relatively well documented (e.g., Delios et al., 2021; Orlando et al., 2022; Hayakawa & Mukunoki, 2021), there is less research on the psychological implications of natural disasters and how MNEs and the IB community better cater to local needs in the aftermath of such disasters. For instance, deeper research into psychology of both post-disaster stress as well as long-term effects of poverty, hunger, and disease (e.g., long Covid) may provide important insights into how local and international

⁸ See Appendix 4

⁹ Note that while most categorizations list Planet second after People (due to it being related to the 6th SDG, we moved Prosperity into second spot because it seems more natural to from people via society to planet and because Prosperity is associated with SDGs 7-11).

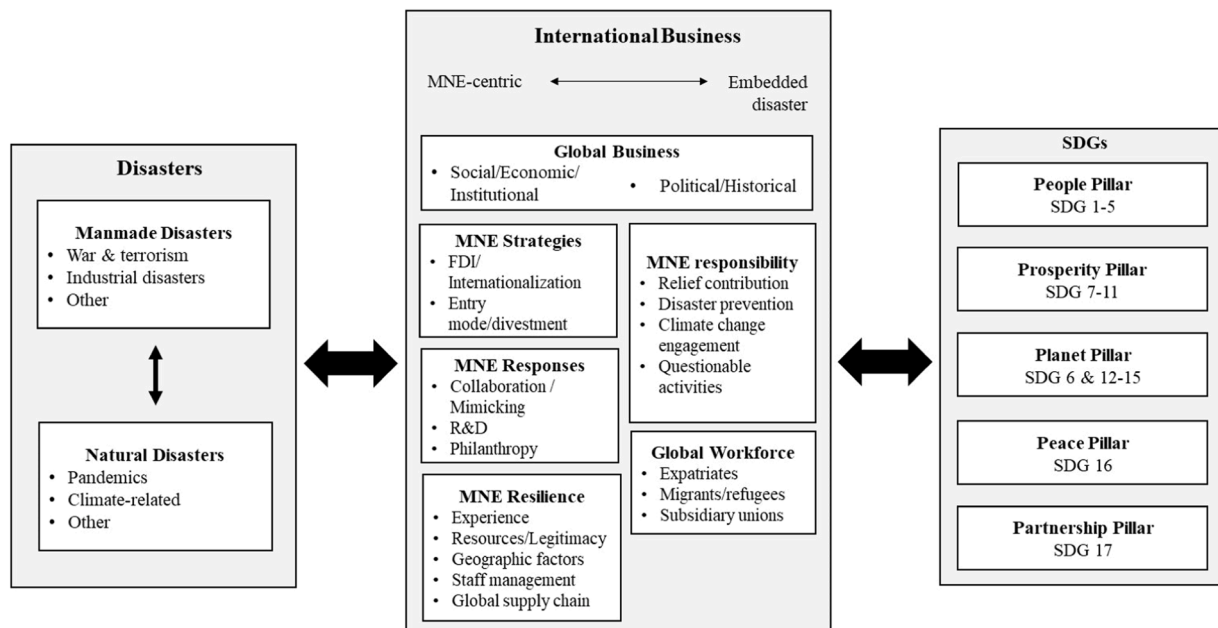


Fig. 1. Modeling the links between disasters, SDGs, and IB research.

business activities (i.e., consumer preferences, expatriate wellbeing, financial risks) develop as a reflection of psychological effects of disasters. Hence, combining e.g., international marketing, international HRM, and international finance theory with insights from international disaster psychology (e.g., Reyes, 2006) may provide novel insights into how IB can both respond to such disasters and facilitate recovery amongst multiple stakeholders, including employees, business partners, and customers.

By the same token, manmade disasters, such as war and terrorism, may cause a total loss of livelihoods, displacement, poor health, and food insecurity for people of low or no means (who cannot easily move or recover). The war in Ukraine is a stark reminder of how manmade disasters influence both developed economies and developing economies in a range of ways, including creating food shortage, energy shortage, poverty, and health issues, as well as destabilizing political, economic, social, technological, environmental, and legal systems throughout the world. Here MNEs may help with transportation and logistical issues across borders as well as putting political and economic pressure on any aggressor (i.e., many MNEs are pulling out of the Russian market, and trade restrictions are in effect).

Similarly, SDG 4 and SDG 5 promote quality education and gender equality, and natural disasters, such as climate-related disasters or pandemics, as well as manmade disasters emanating from war, terrorism, or industrial disasters, greatly exacerbate inequalities in both gender and educational quality with implications for global business. For instance, research has shown strong negative effects of Covid-19 on both gender equality (e.g., Giordano, 2021; Nardin et al., 2021) and overall quality of education (e.g., Allahi et al., 2021; Foley & Cooper, 2021; Reimers, 2022). Gender equality and access to quality education drives economic growth both locally and globally (Anggraeni et al., 2022; Duflo, 2012). Gender equality leads to more jobs occupied by women, which reduces poverty since women are generally affected by disasters (and poverty) more severely than men because of lower employment and salary prospects. Improved gender equality is expected to lead to an increase in GDP of about 12% by 2050 in the EU and far more in developing economies (EIGE, 2022). MNEs play a key role in promoting gender equality in the workplace both directly through employment practices in their foreign affiliates and indirectly through spillover in local labor markets. MNEs can also help relocate, educate, and employ refugees throughout their global value chains and possibly

assist in their return after the crisis. MNEs and transnational organizations may help build infrastructure to allow distant learning as well as integrate war-displaced immigrants in their new home countries. Future IB research may investigate how MNEs organize local and global value chains to promote equality across international operations to provide both workplace resilience and equal opportunities in the aftermath of a disaster.

Together, these examples show the interactions between the various types of disasters and IB in mitigating (or sometimes further exacerbating) the negative effects on people to help achieve SDG1-5. Yet, extant IB research on how IB activities can help with these fundamental people issues in the aftermath of natural or manmade disasters is scarce and unsystematic as discussed in our review (see also Kolk et al., 2018 and Montiel et al., 2021). Part of this void in the IB literature is possibly due to the complexity of the issues and the need to combine not only macro and micro domains (Kolk et al., 2018) but also insights from a range of disciplines. Focusing more specifically on the intermediary role of IB actors on the people's fallouts of disasters points to the importance of cross-disciplinary research to tackle these grand challenges in the future. For instance, combining research on workplace equality with global value chain governance embedded in political and institutional theory may provide insights into how MNEs can leverage local opportunities in their supply chains both during and after a disaster. Moreover, research on educational and crisis psychology may provide IB scholars with new insights into how the workforce – both local and expatriates – deal emotionally with disasters and what role MNE disaster management capabilities may play in the aftermath.

The intersection of IB and disasters in relation to the People dimension of the SDGs may thus lead to new research agendas involving MNE strategies, structures, and responses to poverty, hunger, health, gender equality, and education in the aftermath of disasters (natural vs manmade). Moreover, to solve international “people” problems, multinationals and international NGOs are also called upon either as partnering stakeholders who employ both their expertise and technologies or as financiers (Ahen, 2019), and hence future research may investigate how these IB stakeholders work in concert to ensure disaster relief is channeled ethically, equitable, and effectively to people throughout the world to combat poverty, hunger, and promote wellbeing, gender equality, and access to quality education. The key here is to link future research agendas to the specific role(s) diverse IB actors can play as

Table 4
Interdisciplinary SDG oriented future research avenues.

SDG Goals	Overarching Pillars	Illustrative Natural Disaster-IB Research Agenda	Illustrative Manmade Disaster-IB Research Agenda
SDG 1: Poverty SDG 2: Hunger SDG 3: Health & Well-Being SDG 4: Quality Education SDG 5: Gender Equality	People SDG 1-5	How can IB stakeholders play a key role in hunger prevention and poverty reduction by supporting land use planning, upgrading of agricultural infrastructures, and adoption of appropriate agricultural technologies (SDG1 &2) How can MNEs facilitate psychological recovery amongst key stakeholders, including employees, business partners, and customers in disaster aftermath (SDG3)	How can MNEs utilize their global value chain networks to ensure global transportation of food, medicine, and other necessities in times of war (SDG1-3) How can MNEs help refugees and war-immigrations with education and job placement throughout their global organizations and bringing them home after the crisis? (SDG1-4)
SDG 7: Affordable & Clean Energy SDG 8: Decent Work & Economic Growth SDG 9: Industry Innovation & Infrastructure SDG 10: Reduced Inequalities SDG 11: Sustainable Cities & Communities	Prosperity SDG 7-11	How IB stakeholders can enable, facilitate, and support distributed networks of innovation actors across borders to spur global entrepreneurship and innovation in times of crisis (SDG8-10) How can IB actors facilitate (re)building of sustainable cities and communities with affordable renewable energy in the aftermath of natural disasters (SDG7&11)	How can IB stakeholders promote gender equality by engaging with local governments and organizations on women's rights and setting examples post crisis? (SDG5) How does political embeddedness of international business networks facilitate economic growth, industry innovation, and reduce inequalities during and after disasters via GVC reorganization (SDG 8-10) How can MNE recruitment strategies utilize intellectual migration of skilled refugees and immigrants to advance national innovations systems in the aftermath of manmade disasters (SDG8&9)
SDG 6: Clean Water and Sanitation SDG 12: Responsible Consumption & Production SDG 13: Climate Action SDG 14: Life below Water SDG 15: Life on Land	Planet SDG 6, 12-15	How do IB stakeholders ensure local prioritization of resource allocation into environmental action post disasters (SDG 6&13-15) How can MNEs be incentivized to environmental citizenship by governments and environmental	How can MNEs leverage their sustainable value chains into post disaster markets to facilitate responsible production and consumption (SDG12) How can IB actors mitigate military pollution associated with armed conflict

Table 4 (continued)

SDG Goals	Overarching Pillars	Illustrative Natural Disaster-IB Research Agenda	Illustrative Manmade Disaster-IB Research Agenda
		organizations (SDG6 & 12-15)	to prevent environmental impact (SDG 6&13-15)
SDG 16: Peace, Justice, & Strong Institutions	Peace SDG 16	How can IB stakeholders leverage trade and business networks to promote peace and justice in aftermath of disaster (SDG16)	How can corporate governance act as a mechanism between MNEs and society in promoting peace in face of disaster (SDG16)
SDG 17: Partnerships	Partnership SDG 17	How can new business models and governance modes rooted in the circular economy better align MNE strategies with government priorities in relation to disaster management, response, and prevention (SDG17)	How can IB stakeholders engage in public-private-media partnerships to facilitate disaster relief pertaining to the SDGs (SDG17)

intermediaries between various types of disasters and the SDG goals. Table 4 below presents some concrete examples.

5.1.2. Prosperity Pillar: SDGs 7-11

The Prosperity pillar pertaining to the SDGs (7-11) focuses on ensuring that all human beings can enjoy prosperous and fulfilling lives via economic, social, and technological progress in harmony with nature. Inherent in these prosperity goals is the critical importance of the sustainability side to economic development directly related to SDG 7, clean and affordable energy. Attaining green energy sources and energy utilization are important for reaching sustainable prosperity. SDGs 8-11 speak to the issues involving fair and justice systems both in public and private communities and national entities to promote sustainable economic growth. These goals suggest that such prosperity can be achieved through innovative approaches for sound and reliable economic foundation while highlighting the importance of reducing inequalities in society. Yet, these goals are harder to accomplish when disaster strikes. For instance, recent events have demonstrated how both natural, climate-related disasters (e.g., hurricanes, earthquakes, and floodings) and manmade disasters (e.g., war, terrorism, and industrial disaster) can destroy critical energy infrastructure (Sarma & Zabaniotou, 2021; Zohuri et al., 2022). Indeed, most of the critical infrastructure upon which economic development and prosperity are built, including essential urban services such as energy, transportation, telecommunication, water and food supply, and health care, is vulnerable to disasters of various kinds (Touili, 2021). Moreover, such disasters also serve to destabilize social, economic, and political institutions and thus perpetuate inequalities (Barbera, 2022; Smith et al., 2022).

The link between prosperity and IB is in many instances direct as globalization and international cross-border economic activities are greatly impacted by disruptions to the global value chains. The belief that increasing international trade and global value chains would secure not only economic prosperity but also a peaceful world has been one of the underpinnings of the globalization of the last decades, but recent disasters – both natural and manmade – have shown how volatile these foundations are. Depending on the scale and type of disaster, the macroeconomic implications of disasters can be far-reaching and of long duration, not only due to the destruction of countries' production capacity but also due to the destabilization of public finance and the deterioration of their trade position. Covid-19 and the war in Ukraine

expose the risks associated with the interconnected nature of global trade (e.g., Kottaridi et al., 2021). While international trade plummeted in 2020 due to Covid-19, it has somewhat recovered in 2021–22 but the effects on developing economies as well as shifts in global industry structures are still felt. The reliance on foreign input producers can lead to the disruption of production when source countries experience a negative shock, such as a war that leads to economic sanctions. The war in Ukraine is directly influencing global prosperity by stifling trade in key commodities from both Russia (e.g., rare metals and fertilizers) and Ukraine (e.g., coal, chemicals, and grain) with wide-ranging impact on supply chains and manufacturing throughout the world. The recent incidents with the Nord Stream pipes further show how prosperity in many countries is directly linked to specific vulnerable infrastructure.

As geopolitical risks have increased in several countries, MNEs may respond to shocks by reorganizing their supply chains away from countries perceived as riskier. Hence, war-induced reshaping of global value chains will affect different sectors and products differently as MNEs make use of reshoring or nearshoring to balance between efficiency and security (e.g., Posen, 2022). For instance, sectors with higher fixed costs and sophisticated intermediate products are less likely to relocate in response to higher geopolitical risks – unless policy intervenes. Future research may look closer into how policymaking at local and regional levels influences GVC reorganization in the aftermath of disasters, and the subsequent impact this may have on international trade flows, industry innovation, and infrastructure. MNEs may actively help create new legislation (and markets) in countries where war or civil unrest has created institutional voids (Casson, 2021; Li, 2006), and the role of political embeddedness of IB networks before, during, and after war, terrorism, and political violence needs further examination (Welch & Wilkinson, 2004). Moreover, the reshaping of GVCs in response to manmade disasters may also address workers' rights, underpayment, child labor or modern slavery, and other inequalities as MNEs increasingly develop sustainable, fair, and equitable supply chains in pursuit of both legitimacy and competitiveness. This opens up possibilities for IB research at the macro level in the intersections between state policymaking and GVCs (see De Marchi & Alford, 2022 for recent review), as well as the micro level on social upgrading and worker power in GVCs (Marslev et al., 2022).

While our review revealed a renewed emphasis on these linkages in the wake of the Covid-19 pandemic (e.g., Handfield et al., 2020; Paul et al., 2021), less research has devoted attention to more complex ways in which macro-IB phenomena, such as global workforce migration or national innovation systems, and micro-IB phenomena pertaining to e.g., MNE sustainability and governance policies, may partially prevent disasters that impact prosperity, such as disease spread (Sharma et al., 2021), equity in disease prevention (Dorothy Ai-wan et al., 2021), and pollution prevention (Elijido-Ten & Clarkson, 2019) and help mitigate the negative impact of disasters on prosperity goals. For instance, a new research agenda may involve the short- and long-term implications of manmade disasters such as war or terrorism on global flows of human, capital, and technological resources in relation to innovation. Such disasters may lead to significant displacements of important innovative resources and capabilities with important implications for both firm and national innovative capacity over time. The immigration of Jewish scientists (intellectual migration) to the US from Europe (notably Germany) strongly influenced American science and propelled the American industrial revolution and innovation capability ex-post WW2. At the same time, Germany saw a steep decline in scientific output (e.g., patents and Nobel laureates) after 1933, partly because so many Jewish scientists left Germany due to persecution, but many non-Jewish scientists also fled war-torn Europe (to the US) since financing and working conditions were poor (Moser et al., 2014). Hence, a promising new research agenda for IB scholars is at the crux of intellectual migration (e.g., skilled refugees and immigrants), MNE recruitment strategies, and national innovation systems in the aftermath of manmade disasters such as war, terrorism, and political instability. Related, frugal innovation

has emerged as an important strategy in crisis response in both developed and emerging markets as do-it-yourself innovators (i.e., makers) have started to use innovative solutions to produce critical items. For instance, Covid-19 turned many countries into resource-constrained environments due to scarcity of products like face masks, face shields, and ventilators, and individual innovators filled this gap via digital fabrication tools. These bottom-up communities were mobilizing as part of a global movement to produce innovative solutions (Corsini et al., 2021). Future research may further study how IB stakeholders can enable, facilitate, and support distributed networks of innovation actors across borders to spur global entrepreneurship and innovation in times of crisis. Moreover, disasters (e.g., earthquakes, hurricanes, flooding, war) sometimes destroy entire cities and communities and IB actors may assist urban developers in the rebuilding of more sustainable communities with access to affordable renewable energy in the aftermath (see Table 4 for examples of disaster-prosperity-IB research agendas).

5.1.3. Planet Pillar: SDGs 6 & 12–15

The Planet pillar (SDGs 6 and 12–15) is concerned with protecting the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources, and taking urgent action on climate change. SDG 6 ascribes access to clean and safe water and sanitation for all and SDG 12 asserts appropriate and proportionate consumption and production for ensuring sustainable development. SDG 13, 14, and 15 directly address the efforts towards protecting our planet, including climate-related environmental impact on various ecosystems. The relationship between disasters and the goals within the Planet pillar may seem straightforward: disasters exacerbate the destruction of our planet and its many ecosystems and environments. Indeed, the very definition of a disaster is its far-reaching destructive consequences to life – not only human but all biological life. For instance, climate-related natural disasters may destroy both underwater habitats and/or arable land and ecosystems. By the same token, manmade disasters including eco-terrorism, industrial disasters, and war often destroy life on land or below the water.

In addition to these direct effects, there are also other negative externalities to the planet associated with disasters. For instance, both natural and manmade disasters may in the short-term shift resources away from climate action as governments and MNEs focus on rebuilding critical infrastructure. For example, while the recent Nord Stream gas pipe leaks not only may serve as the single worst methane outpour into the atmosphere in modern time, it also has caused the halt to several planned conversions of traditional energy sources (e.g., coal and nuclear) into green energy. Similarly, the Covid-19 pandemic put global health and vaccines at the forefront of priorities potentially at the expense of other goals within the Planet pillar. Moreover, when faced with more immediate environmental disasters such as hurricanes, tsunamis, forest fires, or industrial spillage (e.g., oil, chemical, or nuclear), the tendency may be to prioritize basic necessities such as food, water, and shelter rather than longer-term planetary goals. Many of these planetary goals are the result of such climate-related disasters in the first place and thus there is likely a longer-term “positive” effect (to some extent) of these disasters as they provide the basis for governments to politically push the SDGs.

Our review revealed some attention to the Planet goals in terms of MNEs directly providing humanitarian help during natural disasters (e.g., Banomyong & Julagasigorn, 2017) or increasing CSR and corporate disclosures to specifically include attention to Planet goals such as climate change (e.g., Comyns, 2016; Eberlein & Matten, 2009; Reid & Toffel, 2009; Zhang & Luo, 2013). Yet, most research focus on MNE-centric strategic responses to such disasters in relation to CSR and corporate reputations. As reaching the Planet pillar sustainable goals are impeded by disasters, various IB activities may play important roles in both directly mitigating the environmental impact as well as driving long-term political, economic, social, and technological change. Indeed, protecting our planet and its critical resources involves collaborations

among many different stakeholders within the IB community, including national and supranational political and economic organizations, MNEs, and non-profit organizations. Future research may seek to unpack the role of IB stakeholders in the local post-disaster prioritization of resource allocation, for instance by integrating the rich literature on emergency logistic management (e.g., Kundu et al., 2022). Moreover, new ESG principles and regulations in particular industries (i.e., resource extraction) may influence how MNEs develop capabilities and competences in both preventing and mitigating adverse effects of environmental and industrial disasters (e.g., Litvinenko et al., 2022).

Disasters often lead to openness to try new approaches and MNEs may team up with other national and international stakeholders in developing sustainable solutions to protect the ecosystems and help shift attention and resources (the political discourse) toward Planet pillar goals in the wake of disasters. Most existing research is focusing on how policy and management of resources can help protect vulnerable ecosystems but the active role of MNEs is often neglected beyond labeling them as the “bad guy” causing the destruction. In fact, MNEs often hold the key to developing sustainable technologies and innovative solutions to many of the climate-related problems, and more research into how such collaborations can be incentivized (e.g., environmental citizenship) and facilitated by environmental and government organizations is needed.

Similarly, manmade disasters also provide avenues for the active involvement of IB stakeholders to help mitigate environmental impact. For instance, environmental considerations are often set aside during war, but multinational actors can collaborate with military entities to ensure minimal impact and appropriate cleanup. Indeed, environmental impact starts well before war breaks out as military build-up and mobilization increases CO₂ emissions dramatically. Military training further causes disruption to landscapes and terrestrial and marine habitats and creates chemical and noise pollution from the use of weapons, aircraft, and vehicles. Other environmental impact includes deforestation, waste dumping, and burning, as well as a host of post-war cleanup of remnants of war. Yet, addressing the environment during and after conflicts can also create opportunities for helping to transform societies through sustainable recovery. Unpredictable energy supplies during conflicts can encourage a transition to solar power, while the devastation conflicts cause can be an opportunity to build back greener or create new domestic legal frameworks to sustainably manage resources, and IB actors play a pivotal role here as political influencers, financiers, and providers of technological solutions. Furthermore, MNEs may leverage their sustainable value chains (e.g., organic farming) into post-war markets to facilitate responsible production and consumption (see Table 4 for research agendas pertaining to disasters-IB-Prosperity).

5.1.4. Peace Pillar: SDG 16

The Peace pillar (SDG 16) is preoccupied with fostering sustainable development through peaceful, just, and inclusive societies which are free from fear and violence. Recent events in Ukraine as well as other conflicts (e.g., Myanmar, Afghanistan, Ethiopia, US-Mexico drug war) and terrorism around the world are all examples of manmade disasters that fundamentally undermine peace. In addition, weak institutions can become targets in times of crisis be they manmade or natural in nature. According to the 2021 Global Peace Index (GPI), published by the Institute for Economics and Peace (2021), the average level of global peacefulness deteriorated by 0.07 percent. This is the ninth deterioration in peacefulness in the last thirteen years, with 87 countries improving, and 73 recording deteriorations. With the war in Ukraine, 2022 and 2023 are likely to show even further deterioration in a world in which the conflicts and crises that emerged in the past decade have begun to abate, only to be replaced with a new wave of tension and uncertainty as a result of the Covid-19 pandemic and rising tensions between many of the major powers.

IB plays a growing role in world peace via collaborations across borders and engagement in the local communities where they conduct

business. Investments in business development, healthcare, infrastructure, and education in developing countries help reduce corruption, inequality, and violence and build more peaceful communities. Indeed, consistent with the ‘peace through commerce thesis’ (Witte, 2022), IB is good for peace and peace is good for IB. There is strong evidence to suggest that violence and the fear of violence may reduce incentives for IB activities to take place. With greater levels of violence comes higher risks and lower levels of employment and economic productivity over the long-term, which discourages FDI (Bauer et al., 2009). The strength of economic conditions as well as the formal institutions that support the operation of the private sector promotes business competitiveness and economic productivity, which are both associated with the most peaceful countries (McConaghy, 2012). At the same time, MNEs respond to growing contentiousness between various movements and their counter-movements, such as #Blacklivesmatter and #Alllivesmatter, #Metoo and #Himtoo, globalization and antiglobalization, and pro- and anti-immigration by building a sustainable “contract” between businesses and society by emphasizing accountability and transparency from corporate boards to society (Clark, 2020). Research on international corporate governance provides only a limited understanding of how corporate executives manage the diverse and often conflicting interests of various organizational stakeholders (Tihanyi et al., 2003), especially when they require big adaptations in times of crisis. The impact of disasters on the sustainable goal of peace is likely to be informed by a responsible governance perspective (Zaman et al., 2022) and such investigations may also equip organizations with the tools and processes needed to deal effectively with global disruptions. Hence one important future research direction for IB scholars is to examine how governance as a mechanism can advance the relationship between corporations and society in the pursuit of peace. For instance, indigenous corporate governance mechanisms, such as local or state-ownership, may help build trust and peace both locally and regionally. More specifically, in some (violent) environments, the role of business in peace-building (and keeping) is a complex interactions between government, local actors, MNEs, and often the military where governance play an important role (e.g., Miklian & Barkemeyer, 2022). Moreover, global economic governance systems, such as the WTO, are likely to influence peace-keeping both regionally and globally and research into the role of various multilateral governance mechanisms in the relationship between global trade and crisis prevention holds promise for IB scholars interested in macro-governance issues.

In addition, as discussed above under the Planet pillar, addressing the environment during and after conflicts can also create opportunities for building and sustaining peace. Shared natural resources can provide the basis for dialogue between warring parties, as can common environmental threats that extend across human boundaries and borders. IB actors may play an important role in facilitating such peace efforts both via humanitarian help and infrastructure rebuilding for both parties, as well as through trade liberalizations and concessions (e.g., the reverse of trade restrictions) to assist economic recovery in the aftermath of disasters. For instance, research suggests that public-private customs-trade partnerships against terrorism may improve the security exchange (Voss & Williams, 2013) and such partnerships can be extended globally to help with peace (see Table 4 for examples of disaster-IB-Peace research questions).

5.1.5. Partnership Pillar: SDG 17

The final pillar of sustainable goals (SDG 17) is about mobilizing the means required to implement the SDGs through global partnerships with the participation of all countries, all stakeholders, and all people. Indeed, partnerships constitute an important factor in all the 17 SDGs as achieving these sustainability goals necessitates broader collaborations between various stakeholders across borders. These stakeholders include governments, non-government agencies, industry groups, MNEs, non-for-profit organizations, domestic firms, as well as in principle all people on the planet. The necessity for cross-sectorial and

intergovernmental cooperation toward systemic change toward sustainability is widely recognized in the literature (e.g., [Salvia et al., al., 2019](#)).

Collaboration between global stakeholders may become more difficult in times of crisis e.g., due to logistical issues, however, there is also a tendency to pull together resources as a global community to help where disasters strike. Collaborate efforts to provide refugees from Ukraine temporary homes in Europe is one such example. Refugee and immigration efforts more broadly around the world are becoming a coordinated effort involving both nation-states, LNOGS, INGOs, and MNEs ([Al Adem et al., 2018](#)). At the same time, the growing use of social media and celebrity engagement (i.e., Elon Musk) influence how MNEs legitimate and organize humanitarian logistics in the aftermath of manmade crises such as war (e.g., [Maghsoudi & Moshtari, 2020](#)), putting a premium on future research into public-private-media partnerships in relation to disasters.

Recent high-magnitude climate-related disasters (e.g., hurricanes, flooding, and wildfires) have also brought together both local and global communities to help with everything from food and water supply to rebuilding critical infrastructures. The Covid-19 pandemic illustrated both the importance and willingness to collaborate globally to save lives, but also the inherent weaknesses in fragmented global value chains within the medical field that lead to misalignment between government priorities and MNE strategies (e.g., [Gereffi, 2020](#)). Thus, IB is deeply intertwined in accomplishing all 17 SDGs via global partnerships and disasters increase both the necessity and motivation for IB stakeholders to collaborate.

There is an increasing need to reconceptualize and reconfigure MNEs in the face of global challenges such as disasters towards multi-stakeholder collaborative actions ([Petricevic & Teece, 2019](#)). Some scholars argue that a transition into a circular economy may facilitate many of the SDGs via innovation and explicit focus on sustainable business models ([Dantas et al., 2021](#); [Awan et al., 2022](#)). Such a transition would require fundamental changes to business operations involving high degrees of partnerships with multiple stakeholders in virtually all value chain activities and subsequent redistribution of profits amongst these to better align MNE short-term strategies with government and societal long-term priorities (see [Gereffi, 2020](#)). For IB scholars, an explicit focus on multi-stakeholder partnerships at the intersection of disasters and the SDGs provides an impetus for multi-disciplinary research that relaxes the underlying assumptions of the theory of the firm, as MNE boundaries and global value chain governance become more modular, fluid, and transient (see [McWilliam et al., 2020](#)) to better match the characteristics of a world of disasters embedded within a circular economy.

6. Conclusion

Our review article took stock of the state-of-the-art of IB-disasters research and provided examples and guidance for future IB scholars in this embryonic cross-field. Our categorization into manmade versus natural disasters illustrated the differential impact of a variety of disasters on IB actors. We concluded that most existing research in this field is treating disasters as exogenous shocks and focus primarily on disaster management from an MNE-centric perspective. Yet a more inclusive view of disaster embeddedness expands the definition of IB to encompass a broader scope and set of actors that engage in cross-border multidisciplinary activities to address grand challenges, such as the 17 SDGs. Hence, to conclude we call for IB researchers to focus on how disasters - natural and manmade - are driving (or exacerbating) many of the grand challenges facing society, and what critical role(s) IB actors can play as intermediaries to help accomplish SDGs. We believe that the intersection of IB and disasters opens many exciting new avenues for research that have hitherto been neglected. Such a research agenda will likely push the boundaries of the firm and its place in local and international communities and facilitate cross-disciplinary research to help

build a better world.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.jwb.2023.101458](https://doi.org/10.1016/j.jwb.2023.101458).

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