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Human mobility and environmental change: a survey of perceptions and policy direction

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Abstract
Research concerning human mobility in the context of environmental change is primarily focused on analyses of the nexus itself. We have taken a less-travelled route, focusing on those who take an interest in the issue, engage with it professionally or seek to address the multitude of social, economic and political dimensions associated with it. We used an online survey to examine perceptions of the human mobility/environmental change nexus amongst those who work with or within it ($n = 262$ respondents), situating our findings within the policy development they often seek or help to propel. We outline respondents' overall characteristics, their conceptualisation of the human mobility/environmental change nexus and, finally, their policy preferences or priorities. We find, overall, that respondents are concerned with mobility approaches that promote equity as well as economic opportunity.

Keywords Environmental change · Climate change · Human mobility · Policy · Survey

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Introduction

Human mobility in the context of environmental change (both sudden-onset and slow-onset environmental changes, whether induced by, or linked to, natural hazards, climate change or some other form of environmental degradation or alteration), commonly understood in terms of migration, displacement and/or relocation, but also immobility, has merited an increasing amount of attention and debate in recent years, particularly in the wake of broader concerns about the impacts of climate change (Adger et al. 2015; Friedmann 2016). Attention to date has been on those who move, or those unable to move (i.e. 'trapped populations', see, e.g. Black et al. 2011a; Black et al. 2011b:449; Ayeb-Karlsson et al. 2018; cf Farbotko 2018a): who are they, why do they move (or not), where are they going, what are the consequences of their movement (or lack thereof) and ought something to be done about them? In this brief, we report on a survey conducted amongst those who work or engage with or within the human mobility/environmental change nexus. We have taken a less-travelled path (cf Moriniere and Hamza 2012), focussing not on the (im)mobile subjects, but on those who take an interest in understanding them and who are increasingly seeking to address a multitude of issues associated with their movement. Inroads into capturing and analysing the unfolding shape (and implications thereof) of narratives, discourses and framings emerging from those engaged with human mobility in the context of environmental change have been made in recent years (see Baldwin 2014; Mayer 2014; Ransan-Cooper et al. 2015; Nash 2018a, 2018b). Our contribution is to situate our survey participants' characteristics and perceptions within the context of policy preferences or priorities they propose or propel, directly or indirectly.

Policy does not develop solely on the basis of objective assessments of the world; 'out there', policy is also influenced by the knowledges, values, beliefs, assumptions, cultural contexts and activities of people involved in its development (Daniell 2014; Stehr and Grundmann 2011). For the purposes of this brief, we understand policy to be 'a series of documents and decisions, a set of processes, activities or actions' rather than 'one single, discrete decision' (Jones 2011:1; Neilson 2001). In other words, we conceive of the term broadly because a multitude of actors, including journalists, researchers, lobbyists, artists and activists, can stake a claim in policy issues, particularly at the issue conceiving stage. The views of these actors (such as our survey participants) matter because their knowledge, views, opinions, assumptions and actions shape (or will shape), through policy, some of the opportunities and barriers in the lives of those they are engaging with, lobbying for and/or studying. Understanding the views of our survey participants becomes even more important when we consider that many of those whose lives are directly affected by environmental change do not always have a direct path to shape and influence policy themselves. Rather, their voices get filtered through others. It is thus a valuable exercise to understand what those doing the filtering are thinking, doing and advocating.

We present our findings at what, arguably, amounts to a milestone or watershed moment where policy development concerning human mobility in the context of environmental change is concerned. The past decade or so, in particular, has seen much evolution in this policy space. Based on fieldwork in 2004, McNamara found 'very little action by the United Nations on the issue' at the time (McNamara 2007:20). Moriniere and Hamza (2012):795) were motivated to survey academics, policy-makers and civil society actors in 2009, given

there was 'little concrete evidence […] of efforts or policies that support the management of environmentally influenced mobility' then, despite the fact that debate and research in the arena had 'been increasing exponentially'. While much work, particularly research, had indeed been done in the area of human mobility in the context of environmental change since the mid-1990s (Hugo 1996; Foresight 2011; Black et al. 2011a, b), it was only from about 2010 onwards that the management or governance of human mobility in the context of environmental change emerged concretely in international and domestic public policy (Warner 2012; Nash 2018a).

Amongst many prominent policy examples that have emerged in recent years, it is worth highlighting a few: a provision concerning climate change–induced migration, displacement and planned relocation was included in the 2010 *Cancun Adaptation Framework* (Art 14(f)), a notable decision in the context of the *United Nations Framework Convention on Climate Change* (UNFCCC) (Warner 2012). The 2011 birth of the Nansen Initiative on Disaster-Induced Cross-border Displacement (presently continuing as the Platform on Disaster Displacement) culminated in the 2015 inter-governmental *Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change*. The *Sendai Framework for Disaster Risk Reduction* 2015–2030 (UNISDR 2015), adopted in 2015, also makes specific mention of the need to consider migrants as well as the knowledge of migrants in the design and implementation of disaster risk reduction and management. Amongst the decisions to give effect to the Paris Agreement, adopted by the parties to the UNFCCC in December 2015 (now in force), was a request to establish a Task Force on Displacement 'to develop recommendations for integrated approaches to avert, minimise and address displacement related to the adverse impacts of climate change' under the Warsaw International Mechanism for Loss and Damage (UNFCCC 2015:para 49). In 2016, the UN General Assembly agreed to the development of a *Global Compact on Safe, Regular and Orderly Migration* (as well as one concerning refugees), which includes a section dealing with the effects of environmental and climatic change, as well as disasters (UNGA 2018:para 18(h-l); not yet adopted).

At the domestic level, too, noteworthy developments have taken place with many countries now including environmental mobility-related issues in national adaptation and disaster risk planning (e.g. *Vanuatu: National Policy on Climate Change and Disaster-Induced Displacement* 2017). More concretely, the United States (US) Department of Housing and Urban Development announced in January 2016 that grants totalling one billion US dollars had been awarded for purposes of community adaptation to climate change (US Department of Housing and Urban Development 2016), including the facilitation of community relocation (Davenport and Robertson 2016). A newly appointed government minister in New Zealand announced in late 2017 that the development of a special visa category to facilitate the annual movement to New Zealand of small numbers of Pacific Islanders seeking protection in the face of the impacts of climate change was to be considered (Anderson 2017), though concrete policy on this has not presently emerged. Thus, the management and governance of human mobility in the context of environmental change have now emerged as a significant concern in multiple policy circles, with the period between 2010 and 2015 proclaimed as particularly prolific and 'a distinct era of policy making on climate change and migration' (Nash 2018a:54; also Warner 2018).

In addition to accelerating policy development, it is also worth noting that participants and experts who shape the field of human mobility in the context of environmental change are increasingly coming together in institutional settings or fora. This includes for example the South American Network for Environmental Migration (RESAMA, founded in 2010), the Asia-Pacific Migration and Environment Network (APMEN, initiated in 2012) and the UK's Climate and Migration Coalition. Furthermore, a scholarly association for the study of environmental migration was launched at 'The Hugo Conference: Environment, Migration, Politics' in Belgium in late 2016.

In this context, the goal of this brief is to further illuminate the emerging policy space as perceived by its participants. We present, first, the broad characteristics of our survey respondents. We also present how respondents broadly conceptualise human mobility in the context of environmental change, which references ongoing debates in the field. Finally, we present our findings with respect to respondent indications as to preferred pathways to address human mobility which arises in connection with environmental change. Our overall intent here is to provide a snapshot of participants and their understanding of this issue and policy priorities (Vlassopoulos 2013). Our analysis, we contend, provides a valuable tool for further policy evaluation and development, especially in terms of identifying where gaps in knowledge and stakeholder perspectives need to be addressed, reflected upon and captured by future research as this policy space continues to evolve.

Methods

In our study, an online questionnaire survey method was adopted, which included quantitative- and qualitative-oriented questions, to provide a relatively large sample size with global reach without considerable cost and the advantage of speed, timeliness and convenience (see Evans and Mathur 2005; McGuirk and O'Neill 2010). While surveys have limitations, these were partially countered by the fact that the design and implementation were driven by a group or researchers who are also members of the professional community engaged in the human mobility/environmental change nexus. Indeed, Pfadenhauer (2009:85) suggests that it is often advantageous for a researcher or research team to have a similar level of understanding in a particular field of expertise or knowledge as research subjects or respondents.

Our survey consisted of 29 questions. It was available online for four weeks (18 January–15 February 2016). At the beginning of this period, invitations were sent by e-mail to 595 potential respondents, with a follow-up e-mail two weeks later. A link to the online survey was also placed on a number of network websites (or their social media pages, or member e-mail lists), including the following: Population-Environment Research Network, Migrations Environnementales network, South American Network for Environmental Migrations and the UK Climate Change and Migration Coalition. Two-hundred and sixty-two survey responses were received in total (broadly 44% of individually identified potential respondents e-mailed, though we note that not all respondents answered all questions). Quantitative data was analysed using statistical analysis software SPSS. We analysed the qualitative data manually according to emergent themes.

Potential respondents were identified through systematic searches in academic and general online databases, and other largely web-based sources. A combination of

environmental change and human mobility terms was used to identify respondents with online documented involvement in the human mobility/environmental change nexus, generally a paper, report or website. As has been acknowledged by others, 'words matter' (Venturini et al. 2013:136) in this field and different terminology is employed to reflect varying motivations and for different effects. We made subjective choices about search terminology based on the authors' combined expertise to arrive at as broad a list of search terms as possible which it was hoped would uncover a broad spectrum of relevant participants. The identified search terms were entered into *Web of Science*, then *Scopus* and *ProQuest*, and finally in the search engine *Google*. For each result in English (i.e. paper, report, book chapter, website, etc.), the title and abstract (or executive summary) were briefly examined to ensure the relevance of the author(s) before entering their details (name, e-mail, affiliation) into a database. This method of respondent identification is arguably biased towards English speakers and the identification of those who participate in or shape the field formally (in particular, researchers). That said, posting to various list servers and websites was intended to also reach those working in a variety of contexts, including outside research (activists, journalists, etc.). Nevertheless, assertions in this brief as to the influence or impact of a particular group of respondents need to be viewed in light of our survey limitations. We did also draw on our own ad hoc networks to include further respondents from government, NGO and other non-academic arenas from various regions of the world. We were least successful in identifying those working on human mobility in the context of environmental change in security and military arenas, and climate change/environmental activists. This shortcoming can be partly attributed to the fact that while many practitioners in areas, such as land planning, crisis management, territorial development and social care, may engage with issues surrounding population movement, settlement and distribution in relation to environmental risks or changes, they may not have adopted or institutionalised the lexical field associated with the environmental (im)mobility nexus. Hence, their activities and policies, while increasingly visible online, may not match the online search words used in this survey.

Results

Respondent characteristics

Table 1 provides a summary of key characteristics of the 262 respondents to our survey.

Asia, Africa and the Pacific/Oceania region—regions of the world which contain more developing countries—are the more popular regions for human mobility and environmental change work. However, those who work in these regions do not always reside there. Table 2 compares where respondents' focus of work is located compared to where they reside (*n* = 178). It shows that many of those working on issues in the Asia, Africa, Pacific/Oceania and Central/South America regions reside outside these regions. However, it also shows that 75–100% of respondents residing in each of these four regions do work in their own region. This differs markedly for those residing in Europe and North America, with less than one third residing there (30.2% and 24.4% respectively) also focusing on mobility and environmental change issues within their own region (also see Mayer 2013). However, we do note that the latter data is skewed by the fact that there was a higher proportion of survey respondents from Europe and North America overall.

Table 1 Characteristics of the survey respondents*

Variable	Description	% of respondents	Number of respondents
Gender (n = 182)	Male	57	104
	Female	43	78
Region of residence (n = 178)	Europe	48	86
	North America	25	45
	Pacific/Oceania	12	22
	Asia	7	12
	Africa	4	7
	Central and South America	2	4
	Middle East	1	2
Geographic focus of work (n = 207) (respondents could select all regions that applied, i.e. more than one answer was possible)	Asia	53	110
	Africa	49	102
	Pacific/Oceania	36	75
	Central and South America	25	52
	Europe	20	41
	Middle East	16	34
	North America	14	29
Length of time worked in the field (n = 203)	1–4 years	38	78
	5–9 years	42	86
	Over 10 years	19	39
Institutional affiliation (n = 261)	Research institutions or a university	72	189
	NGO sector	10	26
	Think tank	4	11
	Government	2	6
	News media	2	4
	'Other'	10	25

*Not all survey respondents answered all questions. The sample size for each variable indicates the number of survey participants who responded to that particular survey question

Respondents were provided with four options to consider in response to what they hoped to achieve through their work or engagement in the field. A majority of respondents (81%) indicated that they hoped to promote policy action through their activities (mostly professional work), followed by raising public awareness of the issue (75% of respondents), promoting on-the-ground action (49% of respondents) and reporting news (15% of respondents). These work aspirations differed according to respondent professional 'camps', which we grouped as those working in a research institution or university (75% of respondents), those working in the public sector (government, inter-governmental organisations) (7% of respondents), those working in the private sector (consultants, think tanks) (6% of respondents) and those working

Table 2 Comparison of survey respondents' region of residence against location of their work focus

Region of residence (n = 178)	Location of work focus*						
	Africa (%)	Asia (%)	Central/South America (%)	Europe (%)	Middle East (%)	North America (%)	Pacific/ Oceania (%)
Africa (n = 7)	100	14	0	0	0	0	0
Asia (n = 12)	8	100	17	8	8	8	17
Central/South America (n = 4)	25	25	75	25	0	0	0
Europe (n = 86)	62	58	24	30	21	13	34
Middle East (n = 2)	50	0	0	0	100	0	0
North America (n = 45)	44	33	29	7	13	24	27
Pacific/Oceania (n = 22)	9	50	5	0	0	0	82

*Percentages indicate proportion of respondents residing in a particular region whose work focuses on the region listed in the columns, e.g. 100% (n = 7) of respondents residing in Africa focus their work on Africa, but only 14% (n = 1) on Asia

for the NGO sector or news media (12% of respondents). Promoting policy action was the dominant activity across all professional 'camps' followed by promoting awareness. We therefore considered each activity separately and found that unsurprisingly, promoting on-the-ground action was favoured by NGO/media respondents (56% of NGO/ media respondents), promoting policy action was more favoured by public sector respondents (77% of public sector respondents), raising awareness was favoured by researchers (60% of researcher respondents) and reporting news was an activity most favoured by NGO/media respondents (34% of NGO/media respondents).

Conceptualisation

Respondents were asked to choose one preferred term from a list of six (plus the category of 'Other') that they felt *should be used* to describe processes of human mobility in the context of environmental change. The most preferred term was 'migration' (38%), followed by 'displacement' (20%), 'mobility' (19%), 'refugee' (7%), 'relocation' (3%) and 'resettlement' (1%). 'Other' terms (e.g. 'victim', 'trapped population') were preferred by 11% of respondents. Those working in the public sector (60% of public sector respondents) and researchers (39% of researcher respondents) preferred the term 'migration', NGO workers and journalists preferred 'displacement' (32% of NGO/media respondents) and private sector respondents equally preferred 'mobility' and 'migration' (33% each for private sector respondents). The term 'refugee' was predominately chosen by NGO/media respondents (21% of NGO/media respondents).

Respondents were then asked to provide a reason for their response on the most preferred term. This revealed a fundamental tension between those who favour an all-encompassing term (purportedly 'migration' or 'mobility'—the latter is the term also

selected for this brief on account of its fairly broad applicability) and those who favour context-specific terminology on a case-by-case basis. Many respondents indicated that using qualifiers (e.g. 'environmental', 'climate', 'rapid-onset' and 'circular') with the terms provided would be preferred. Only some respondents indicated any importance on force as a predominant factor in describing human mobility in the context of environmental change, favouring terms including 'forced migration' and 'forced relocation', 'displacement', 'victims' and even 'genocide'. Some respondents indicated that appropriate terminology was that which involved or implied dignity or agency, acknowledging that much of the prevalent terminology in the field is politically loaded and frequently disparaging (this possibility was ascribed to essentially every term commonly used).

The survey also provided a series of statements to respondents capturing how they frame, or 'make sense of' human mobility in the context of environmental change. Nine statements were provided that corresponded with common framings or conceptualisations in the field as identified by Ransan-Cooper et al. (2015), i.e. victims, adaptable agents, security threats and political subjects. Two statements representing each frame were provided, plus one other which supported the framing of subjects in the field as indistinguishable from other mobile people. Significantly, there was very little support for framing those affected as a security threat (Elliott 2010; Farbotko 2018b). Eighty-five percent of respondents completely disagreed that human mobility in the context of environmental change required military solutions to protect sovereignty, and 57% completely disagreed that such mobility is a threat to global, regional, national or sub-national security. On the other hand, 92% agreed (moderately to very strongly) that those mobile in the context of environmental change are in need of assistance and protection against environmental change effects. Respondents working for NGOs/media and in the private sector (as consultants or for think tanks) agreed the most with the two victim framings, followed by researcher and public sector respondents. Those working in the public sector had the lowest levels of agreement with the two political subject framings, which resonated more with respondents from NGOs/media and to a lesser extent researchers.

Policy concern

A majority of our respondents (89%) expressed concern about the current management of (or response to) the human mobility/environmental change nexus at both global and national scales. Much concern related to the global or inter-country management of the human mobility/environmental change nexus, with a lack of international, coordinated or enforceable policy frameworks frequently noted. Many respondents mentioned gaps related to human rights, dignity and social justice, preventing suffering and empathy. When pressed further about 'how concerned' (on a scale of 0 = 'not at all' concerned to 4 = 'extremely' concerned) respondents are with how human mobility in the context of environmental change is managed, females had greater levels of concern than males (mean of 2.96 and 2.64 respectively). Respondents from NGOs/media were most concerned about the management of the human mobility/environmental change nexus (mean = 3.29), followed by researchers (mean = 2.67), those from the private sector (mean = 2.63) and lastly those from the public sector (mean = 2.50). Equally, those who conceived of the human mobility/environmental change nexus as a matter of

'refugeehood' and 'displacement' had much higher levels of concern about its management (mean of 3.45 and 3.08 respectively) than those conceiving of it in terms of 'mobility' and 'migration' (mean of 2.67 and 2.65 respectively), with the least concerned those conceiving of it in terms of 'relocation/resettlement' (mean = 2.29).

Preferred policy direction

As we have noted, a majority of our survey respondents (81%) indicated that they hope to promote policy action through their activities in the field. We asked respondents to indicate further how the human mobility/environmental change nexus could be best addressed. The survey specifically asked respondents to consider (from a list of options) how 'best' to avert or facilitate mobility and to protect those who move. The results from these questions are provided in Figs. 1, 2 and 3, and we further contextualised responses with various respondent characteristics.

Averting movement

Figure 1 summarises respondents' views on the types of policies or responses that were considered to be most helpful for averting human mobility in the context of environmental change. Respondents were able to select up to two of nine possible response options, along with the category 'Other', made available in case respondents did not want to choose one of the nine options provided. The distributions in Fig. 1 represent the options that were respondents' first and second preferences expressed as a percentage of all respondents ($n = 193$) who answered this question.

Just over 40% of respondents indicated that implementing risk reduction measures would be most helpful in averting human mobility in the context of environmental change. Increasing opportunities for remittances was considered to be the least likely or relevant option for averting movement (9.2%). Improving development planning (29%) and preventing environmental push factors also ranked highly amongst favoured responses (26%). Forty-eight of respondents (18%) selected 'Other'. In their description for why they selected this option, respondents suggested responses such as that there is no need for averting movement, since it is a useful form of adaptation,
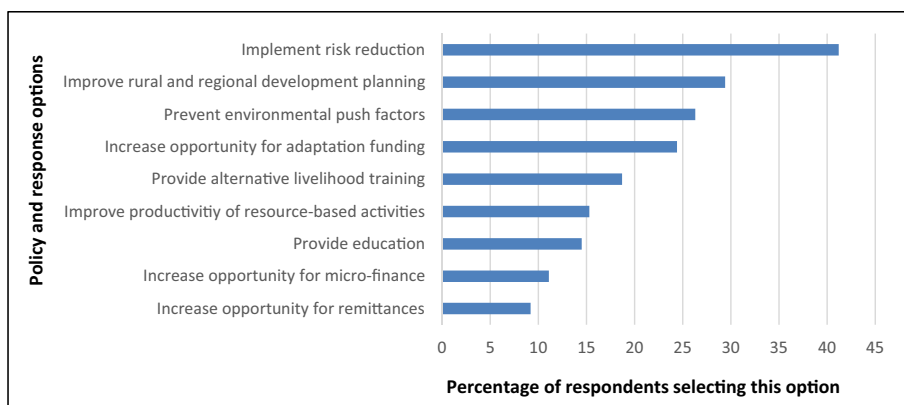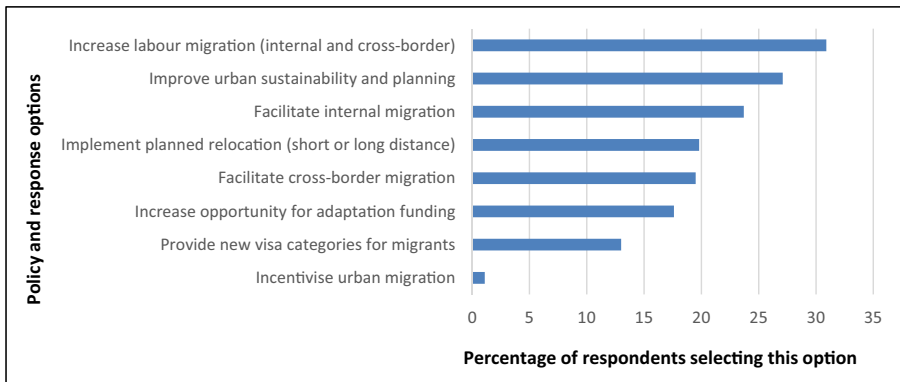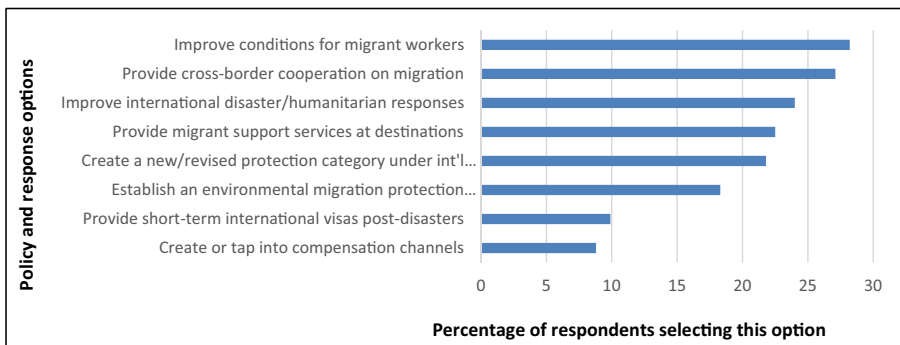

Fig. 1 Respondents' views on policy and response options for *averting* mobility ($n = 193$)

Fig. 2 Respondents' views on policy and response options for *facilitating* mobility (*n* = 188)

improving policy at national and regional level, making polluters pay, addressing global inequality, opening borders, making urban areas more resilient and population control, amongst others. While there was little variation in respondents' professional character-istics and policy preferences for averting movement, researchers and private sector respondents favoured risk reduction measures (43% of researcher and 44% of private sector respondents), public sector respondents placed greater emphasis on rural and regional development planning (41% of public sector respondents) while NGO/media respondents wanted to see more opportunities for adaptation funding and prevention of environmental push factors (31% and 38% of NGO/media respondents respectively). Furthermore, public sector respondents placed greater emphasis on livelihood training, productivity of resource-based activities, micro-finance and remittances compared with other respondents (35%, 26%, 18% and 24% of public sector respondents respectively).

To better detect overall trends in the responses, we further collapsed these nine policy options (excluding 'Other') into four thematic groups: (1) reduce risk and exposure (counter push factors, risk reduction); (2) improve productivity and planning (resource-based activities, rural and regional planning); (3) increase financial capital (adaptation funding, micro-finances, remittances); and (4) increase education and training (livelihood training, education). Overwhelmingly, the most popular policy theme by far for averting movement was to reduce risk and exposure with close to

Fig. 3 Respondents' views on policy and response options for *protecting and supporting* those mobile (*n* = 189)

90% of respondents choosing options which fell under this theme. Improving productivity and planning or increasing financial capital were also favoured policy responses with over half of respondents choosing options which reflect these policy themes. Less than half of the responses favoured increasing education and training as the preferred means for averting human mobility in the context of environmental change. Reducing risk and exposure was a policy preference for the majority of NGO/media, researcher and public sector respondents. These findings are reflected on further in the 'Discussion and Conclusions' section below.

Facilitating movement

Figure 2 summarises respondents' views on the types of policies or responses that were considered to be most helpful in facilitating human mobility in the context of environmental change. Respondents were able to select up to two of eight possible response options, along with the category 'Other', again made available in case respondents did not want to choose one of the eight options provided. The distribution in Fig. 2 represents the options that were respondents' first and second preferences expressed as a percentage of all respondents ($n = 188$) who answered this question.

The most favoured policy option for facilitating human mobility in the context of environmental change overall was to increase labour migration opportunities (internal and cross-border, 31%), followed by improved urban sustainability and planning (27%), and facilitating internal migration in general (24%). Twenty-one respondents (8.0%) chose 'Other', which included responses such as ensuring migrants' legal rights, mitigation of climate change, preventive relocation and addressing global inequalities. Incentivising urban migration was least favoured.

Comparing respondents' professions with favoured policy preferences for facilitating movement resulted in some divergence. Researchers and private sector respondents favoured an increase in labour migration opportunities (35% of researcher and 31% of private sector respondents), while improving urban sustainability and planning along with facilitating internal migration were favoured by public sector respondents (both 35% for public sector respondents). NGO/media respondents on the other hand pushed for the implementation of planned relocation and greater opportunities for adaptation funding (31% and 25% of NGO/media respondents respectively). Not surprisingly, there was divergence when comparing against preferred terminology, with those preferring the term 'displacement' favouring implementation of planned relocation (39% of respondents preferring 'displacement') and those preferring the term 'refugee' selecting cross-border migration (35% of respondents preferring 'refugee'). All others (preferred terminology) favoured increased labour migration.

We again collapsed these eight options (excluding 'Other') into four thematic groupings: (1) improve urban areas and access (urban sustainability and planning, urban migration); (2) provide internal opportunities (internal migration, planned relocation); (3) provide cross-border opportunities (migration, visas); and (4) increase labour migration and financial capital (internal and cross-border, adaptation funding). We found that the most favoured policy grouping for facilitating movement was to increase labour migration opportunities and financial capital with over two thirds of respondents selecting options that fell under this policy

response theme. This was closely followed by increasing internal migration opportunities, whereas cross-border migration opportunities and improving urban areas were policy themes that represented less than half of the policy options selected. Focusing on labour migration and financial capital was a policy preference particularly supported by researcher respondents.

Protecting and supporting those who move

Figure 3 summarises respondents' views on the types of policies or responses considered by our respondents to be most helpful for protecting and supporting those mobile in the context of environmental change. Respondents were again able to select up to two of eight response options, along with the category 'Other'. The distributions in Fig. 3 represent the options that were respondents' first and second preferences expressed as a percentage of all respondents ($n = 189$) who answered this question.

In alignment with the preceding section, the most favoured response related to migrant workers, in this case, improving conditions for migrant workers in the casual, informal and formal labour economy (28%). This was followed closely by providing cross-border cooperation on regional and international migration (27%) and improving international and disaster/humanitarian response (24%). Least favoured was creating or tapping into compensation channels (9%) or 'Other' options (7%) which included suggestions such as new international refugee categories, advocacy for migrants' rights, mainstreaming of environmental change in migration policies and vice versa and the better integration of migrants into host communities/countries.

When comparing across professions, respondents from the NGO/media sector expressed a preference for establishing an environmental migration protection agency (38% of NGO/media respondents) and creating a new/revised protection category under international law (34% of NGO/media respondents), which was also preferred by private sector respondents (31% of private sector respondents). Public sector respondents favoured cross-border cooperation on regional and international migration (47% of public sector respondents), while researchers favoured improving conditions for migrant workers in the labour economy and improving international disaster/humanitarian responses (33% and 28% of researcher respondents respectively). When comparing for preferred terminology, those who preferred the term 'refugee' also preferred creating a new/revised protection category under international law (41% of respondents preferring 'refugee') and it was strongly favoured (second preference) by those who preferred the term 'displacement' (39% of respondents preferring 'displacement').

The above eight policy options (excluding 'Other') to protect environmental migrants were thematically grouped as the following: (1) enhance protection (international law, protection agency); (2) invoke compensation and international responsibility (compensation challenges, cross-border cooperation); (3) improve migrant rights and services (conditions, support services); and (4) improve post-disaster responses (humanitarian/disaster responses, visas). The most popular policy for protecting those who move was to improve migrant rights and services and enhance protection, whereas less than half of the options preferred related to invoking compensation and international responsibility or improving post-disaster responses. Focusing on migrant rights and services was a policy preference particularly supported by researcher respondents.

Discussion and conclusions

Characteristics

Our results indicate no pronounced gender-based differences in participation in the field, though women appeared more concerned about managing environmentally motivated mobility. A majority of our respondents have worked in the field for less than ten years, aligning with the fact that the human mobility/environmental change nexus has gained prominence particularly within the last decade, or so. Its relative newness may also explain why engagement with or within the nexus has been seemingly dominated by researchers, who frequently assert that research-based knowledge production remains a key priority as a basis for policy production (see for instance Ionescu et al. 2016:16). Our results also show that knowledge produced in the field is most commonly shared in typical research fora, such as academic conferences, journal articles and reports. A degree of circularity is therefore perhaps inevitable: one professional group or 'camp' shapes priorities, which it shares amongst itself to shape future priorities related to its core endeavour (but note here also the limitations inherent to our respondent pool stated in the 'Methods' section above).

There is a marked difference between the location of residence of respondents we surveyed (more likely Global North) and the geographic and demographic focus of the work they conduct or consider important (more likely Global South). Piguet et al. (2018) identify a similar bias, though they note that the focus on Southern locations for research is not necessarily problematic per se, considering that the vulnerabilities and inequities particularly stemming from climate change disproportionately affect those who have least contributed to it. However, they also note that greater funding and publication opportunities for Southern researchers should be a priority, as well as some focus being paid to the North as a potentially under-examined space of environmental change/human mobility. We add that the North-South binary needs to be unsettled in multiple ways, and this may entail new conceptual development attending to multiple sites, modes and migration channels simultaneously (e.g. Farbotko et al. 2018). Geographical unevenness, furthermore, means more concerted effort is needed to seek out, interview, listen to and document the perspectives of those less studied. Reflexive engagement is needed, addressing divides between those who seemingly study, enquire and shape policy and those that are studied and governed (see also Farbotko 2010; Ransan-Cooper et al. 2015).

Conceptualisation

The majority of respondents belonging to the majority of professional 'camps' seemed to overall (a) prefer broader terminology, (b) encourage terminology cognisant of human dignity, (c) reject terminology which advances ulterior motives (securitisation, etc.) and (d) reject overly simplistic description of the links between human mobility and environmental change. That said, almost every preferred term was ascribed the possibility of fulfilling various desired functions. Thus, a distinct way forward on terminology or conceptualisation did not necessarily emerge from our study (nor perhaps ought it to). Differences in conceptual, normative or political aspirations inherent in various 'projects' or professional 'camps' operating in the human

mobility/environmental change field (e.g. Mayer 2014; Ransan-Cooper et al. 2015) may continue to prevent consolidation of a unified terminology, at least in the short term, though an apolitical (neutral) discourse appears generally aspired to (also Friedmann 2016). Nash (2018a:58f) notes a coordinated narrative emerging in the UNFCCC context, not least around the terminology employed in the Cancun Adaptation Framework (Art 14(f): 'displacement, migration and planned relocation'), but wonders whether this represents a 'façade of consensus'. Beyond preoccupations with terminology, we found an overall preferred framing of those who move in response to environmental change as, prima facie, in need of assistance and protection, which to us suggests a strong overall appetite for support of humanitarian-, aid- and protection-type policy responses.

Policy

With regard to practical steps for facilitating human mobility and supporting and protecting those on the move in environmental change contexts, the most favoured responses amongst respondents were to increase internal and cross-border labour migration opportunities and to improve conditions for migrant workers. However, we should note that in terms of professional 'camps', this was heavily favoured by those working in research or academic settings, comprising our largest respondent pool. Place-based policy implementation (urban sustainability planning, funding of adaptation initiatives etc.) as well as international governance or cooperation initiatives was more regularly noted by the other (smaller) professional 'camps' (i.e. public sector and NGO/media respondents) from which we sampled. The emphasis on labour migration which dominated in our dominant participant 'camp' is of interest, highlighting that resilience and adaptive capacity, chiefly at the individual level, are considered important. Typically, such approaches attempt to emphasise mobility as a positive phenomenon in a changing environment (see, e.g. Tacoli 2009). Critiques elsewhere of policies favouring this 'adaptive agent' approach, however, consider whether a neoliberal agenda is primarily being supported, with a flexible and cheap labour supply serving the interests of global capital, rather than those of potential migrants (Felli 2013; Ransan-Cooper et al. 2015). While many respondents favoured labour migration, the individualist and economistic limitations of such an approach were arguably recognised in qualitative responses, which featured emotive and humanitarian concerns such as protecting human rights, maintaining dignity and preventing suffering. Such empathetic responses suggest support for culturally and politically appropriate policies in addition to economically focussed ones. These are, of course, not necessarily mutually incompatible. Kiribati's Migration with Dignity (Office of the President Republic of Kiribati n.d.) concept, to some extent, captured this type of thinking, attempting to cement the dignity of migrants as central to its labour migration as adaptation policies (Farbotko et al. 2015; McNamara 2015).

In relation to policies that are helpful in averting human mobility in the context of environmental change, we see a notable overall preference for strategies that require significant collective, if not state, input. Here, policies such as improving development planning (favoured by all professional 'camps'), improving rural and regional planning (particularly favoured by researcher and public sector respondents) and adaptation funding (particularly favoured by NGO/media respondents) were seen as important,

which cannot be pursued on an individualistic basis. Overall, survey respondents were concerned with economic opportunity for mobile people and policy that humanises mobility whilst promoting equity and social justice. Whether or not these priorities are finding firm footing in the governance frameworks now emerging domestically and globally is of course a different matter.

When considering thematically grouped preferred policy preferences of survey respondents, we note that for averting movement, a focus on reducing risk and exposure appears to be self-evident as a required measure and relatively uncontroversial, given it is certainly echoed in both domestic and international policies concerning human mobility in the climate change context. For example, the agreed (though not yet adopted) text of the *Global Compact for Migration* commits states to implement 'adaptation and resilience strategies to sudden-onset and slow-onset natural disasters, the adverse effects of climate change, and environmental degradation' (2018:para 18(h)). Equally, Vanuatu's *National Policy on Climate Change and Disaster-Induced Displacement* (National Legislative Bodies/National Authorities 2017) makes significant commitments to risk reduction in the context of climate change– and disaster-related human mobility in the national context. With respect to facilitating movement, we find less developed, but emerging, policy commitment internationally and globally to enhance labour migration opportunities or financial capital (thematically grouped policy preference amongst survey respondents). The *Global Compact for Migration* recognises that existing mobility channels, such as for labour migration or family reunification, are used in a warming world and that such processes can present adaptive pathways as well as exacerbated risks. But beyond a general recognition of this dynamic, it remains to be seen if it can enable concrete action (see also Warner 2018). In the meantime, there *are* some labour migration schemes which may increasingly be linked to addressing climate change and other environmental concerns in vulnerable countries, e.g. New Zealand's and Australia's seasonal labour migration schemes in the Pacific (Campbell and Warrick 2014; Bedford et al. 2017; Dun et al. 2018), and which may be expanded elsewhere. Some least developed countries, in particular, have also successfully accessed financial mechanisms tied to international adaptation commitments (e.g. National Adaptation Programmes of Action (NAPAs)) to enhance financial capital available for activities related to human mobility in the context of climate change. That said, the policy space is continually hampered by underfunding of the relevant financial instruments (Thornton 2018). Finally, concerning protection for those on the move, we find at least the language of improved migrant rights and services (thematically grouped policy preference for our survey respondents) echoing through some relevant emerging policy. The aforementioned Protection Agenda, arising from the Nansen Initiative, for example, rests substantively on rights-based and humanitarian goals, though it is of course not binding. Emerging national policy, including Vanuatu's national policy noted above, is also situated in an overall rights framework. That said, concrete or binding commitments in this sphere are rare.

To conclude, generally speaking, the policies preferred by our respondents cut across a multitude of policy spaces, including development, urban planning, labour migration, social protection, humanitarian response, environment and resource management. The different professional camps involved in these policy spaces—in our survey: research, public sector, NGOs and media, and private sector—emphasise different strategies,

with only some overlap evident. More integration across these camps strikes us as timely. We suggest that the apparent research domination in the field urgently needs to be supplemented by expanding the partnering with participants from other camps, as well as other relevant actors, including communities, local authorities and national governments. We furthermore propose that all camps work together towards an integrated and coherent suite of tools that apply to policy development and application in the field.

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