Health promotion and climate change: exploring the core competencies required for action

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SUMMARY
Climate change poses serious threats to human health and well-being. It exacerbates existing health inequities, impacts on the social determinants of health and disproportionately affects vulnerable populations. In the Australian region these include remote Aboriginal communities, Pacific Island countries and people with low incomes. Given health promotion's remit to protect and promote health, it should be well placed to respond to emerging climate-related health challenges. Yet, to date, there has been little evidence to demonstrate this. This paper draws on the findings of a qualitative study conducted in Victoria, Australia to highlight that; while there is clearly a role for health promotion in climate change mitigation and adaptation at the national and international levels, there is also a need for the engagement of health promoters at the community level. This raises several key issues for health promotion practice. To be better prepared to respond to climate change, health promotion practitioners first need to re-engage with the central tenets of the Ottawa Charter, namely the interconnectedness of humans and the natural environment and, secondly, the need to adopt ideas and frameworks from the sustainability field. The findings also open up a discussion for paradigmatic shifts in health promotion thinking and acting in the context of climate change.

Key words: climate change; health promotion; competencies

INTRODUCTION
In the twenty-first century, climate change poses a profound threat to human health and well-being (Costello et al., 2009; McMichael, 2009). Climate changes affect the fundamental requirements for health—most famously set out in the Ottawa Charter for Health Promotion in 1986—namely: clean air and water, sufficient food and adequate shelter (Chan, 2008). The World Health Organization estimates that climate changes over the past 30 years have led to a loss of over 150,000 lives and ~5 million disability-adjusted life years (DALYs) per year throughout the world (WHO, 2002). Scientists predict that even with radical reductions in carbon emissions related to human activities, the concentrations of greenhouse gases in the atmosphere will remain excessive for 1000 years and, as a result, health consequences will be felt for generations to come (Solomon et al., 2009).

All population groups are vulnerable to climatic variability and extremes as well as to policies and strategies enacted to mitigate against climate change (such as carbon levies leading to increased costs in utilities and food). However, certain population groups will experience these impacts more acutely than others (Chan, 2008). Climate change exacerbates existing health...
inequities, adversely impacts the social determinants of health and disproportionately affects already vulnerable populations such as remote Aboriginal communities, Pacific Island countries, the elderly and people with low income [(McMichael et al., 2002), p. 4].

Climatic changes will have significant local and regional consequences for:

- health (e.g. injury, disease, respiratory problems),
- infrastructure (e.g. housing, transport, energy),
- agriculture and food security,
- economic development, income and employment,
- community resilience and connectedness, and
- social vulnerability, exclusion and inclusion [(Fritze et al., 2009), p. 9].

While Patz [(Patz, N.D), p. 3] notes that ‘the causes are collective and multifactorial’, in acknowledging that ‘the issues transcend local communities’, he also highlights that climate changes have local community impacts. This necessitates action from the local communities, including community-level health promotion practitioners.

The role of the health promoter

In 1986 the Ottawa Charter for Health Promotion (WHO, 1986) explicitly stated that any health promotion strategy should include protection of the natural and built environments and the conservation of natural resources. The Ottawa Charter proposed a socio-ecological approach to health that recognizes the interdependent relationship between people and the environment (WHO, 1986). Despite this powerful call for action over two decades ago, practice that addresses health and environmental degradation and deprivation, including climate change, has been slow to develop. Butler and Friel (Butler and Friel, 2006) posit that health promotion has focused on the pursuit of equity and largely ignored environmental and ecological issues. They believe that the field’s capacity to recognize and act on environmental challenges has been undermined by society’s norms, laws and customs (Butler and Friel, 2006).

According to Catford [(Catford, 2008), p. 107], ‘a core commitment of health promotion should be to address the growing health impact of climate change’. Given the centrality of the Ottawa Charter to health promotion, health promotion professionals should be well placed to take action, either through existing initiatives or through the development of new health promotion agendas that directly address climate change. Catford [(Catford, 2008), p. 106] separates the roles and responsibilities of public health—‘managing the public health consequences’—from those of health promotion—to ‘mobilize the capacity of the health sector in developing mitigation strategies and adaptive measures that concentrate more on the causes and determinants’. A health promotion practitioner’s role in a climate change context may entail strengthening partnerships between environmental groups and integration of climate change mitigation and adaptation strategies into existing programmes such as active and sustainable transport (Loft, 2010).

The formidable health challenges posed by climate change compel health promotion practitioners to re-engage with the tenets of the Ottawa Charter and consider their responsibilities (Butler and Friel, 2006). The recent International Union for Health Promotion and Education’s World Conference on Health Promotion Health, Equity and Sustainable Development was arguably a step in the right direction to galvanize support and mobilize the health promotion workforce. Opportunities for debate also exist within international competency and standard development initiatives such as the European CompHP project (Dempsey et al., 2011) and the Galway Consensus (Allegrante et al., 2009). The Galway Consensus has already reaffirmed core values and practices that can translate into action in the area of climate change and environmental sustainability. They include social-ecological model of health; equity and social justice; respect for cultural diversity; a commitment to sustainable development; and community participation in needs assessment, programme planning, implementation and evaluation (Allegrante et al., 2009).

As the field of health promotion seeks to define its principles and practices within public health, it could benefit from the ideas of ‘third wave’ advocates such as Hanlon and Carlisle [(Hanlon and Carlisle, 2008), p. 359] who:

Suggest a new ideology; one that emphasises the rights of global citizens while seeking a sustainable solution to current and future ecological challenges . . . . A
reprioritisation of society towards values which promote wellbeing, health and equity, while reducing inequalities and over-consumption.

Taken together, these emerging debates highlight the fact that health promotion practitioners have an important role to play in responding to the impacts of climate change on population health, and that there will be inevitable change in social structures and systems that will necessitate shifts in the health promotion practice, particularly but not exclusively, at a community level. Given the dearth of research on health promotion actions in response to climate change, a qualitative research project was undertaken to explore the question ‘What competencies will health promotion practitioners require to respond to climate-related health challenges amongst vulnerable population groups at a community level?’

This paper posits that, while health promotion practitioners possess a core set of competencies that equip them for taking action on climate change, owing to the scale, complexity and uncertainty of the issues, new ideas and frameworks are needed and changes to current practice will be required.

**METHODS**

The qualitative research project upon which this paper is based was undertaken by a health promotion research team from the School of Health and Social Development at Deakin University, Australia, between July and December 2008. The research was conducted with approval from the Human Research Ethics Committee of Deakin University (project number HEAG-H 104_08).

The study sought to explore public health/health promotion responses to climate change and the health and well-being of vulnerable population groups, with a focus on competencies required for community-level practice. A qualitative exploratory approach was deemed necessary for generating information and ideas about an under-researched problem (Babbie, 1989). The study was also informed by ethnographic methods as they provide thick description and involve an examination of a social group or system, and patterns of behaviour [Harris, 1968, cited in (Creswell, 1998), p. 58].

**Participants and recruitment**

Thirty participants were recruited in the study. Nineteen stakeholders from the health, environment, social services, consumer and government sectors were engaged in individual interviews. The other eleven participants—three postgraduate students who were researching climate change and health issues, and eight academic staff who taught units with a focus on health promotion and environment at Deakin University—took part in focus groups. All the participants were from Victoria, Australia. The study was conducted at a time when a significant amount of media attention and advocacy was targeted at climate change and social justice in Victoria (Alden, 2007).

Purposeful stratified sampling was used to select participants (Patton, 2002). In purposeful sampling, the researcher(s) intentionally select participants who have experience with the central phenomenon or the key concept being explored [(Creswell and Plano Clark, 2006), p. 112]. Participants for this study were selected on the basis of their seniority and their expertise in working with or on behalf of climate-affected population groups at a community level and/or their perceived capacity to clarify the implications of climate change for practice and workforce preparation. Interviewees represented diverse perspectives and included individuals involved in policy advice and development at state and local government levels, as well as managers and service providers in social service, community health and environmental organizations. In addition, the interviews and focus groups involved senior academic and research staff from five higher education institutions. Stratified sampling—a sampling procedure whereby informants ‘are selected from previously identified subgroups’ [(Rice and Ezzy, 1999), p. 45]—was used to generate data to illustrate the perspective of different subgroups.

Individuals identified as potential interview participants from among the researchers’ professional contacts were contacted via telephone to assess their interest in participating in the project. Subsequently, individuals who expressed interest in participating were sent a Plain Language Statement and Consent Form to be completed and returned to the principal researcher. Recruitment for the focus groups involved an email invitation targeted at staff
with experience in teaching in the area of health promotion and environment on the School of Health & Social Development’s internal email list, and personal invitations to postgraduate students undertaking research in the school in the area of climate change and health.

**Data collection and analysis**

The semi-structured interviews were undertaken face-to-face (or where deemed convenient by the participant by telephone: \( n = 6 \)) and were audio recorded. Open-ended questions centred on a schedule of topics including the nature of the interviewee’s practice and competencies required for effective action on climate change. The recordings were transcribed by the principal researchers and professional transcription services.

Focus groups can ‘test new ideas … and generate a range of ideas on a subject’ [(Hudelson, 1996), p. 14]. In this study, focus groups were used to highlight a range of beliefs and opinions held by the school’s academic and health promotion community, where the study findings were of particular significance. Focus groups were useful as a source of supplementary data, in that they were used to extend and verify particular themes that emerged in the individual interviews. The collection process involved a presentation of the preliminary interview themes followed by a set of probing questions: which of these skills, knowledge and values are we teaching? What else is required? How can we address the needs of the existing health promotion workforce?

The analysis technique was guided by Wolcott’s technique for data analysis and representation—‘description, analysis and interpretation of the culture sharing group’ [(Wolcott, 1994, cited in (Creswell, 1998), p. 152]. The descriptive stage involved developing a profile of the work of the participants, their settings and their programmes and practice(s) by manual grouping and then reading through texts, highlighting key words and themes and making margin notes (Creswell, 1998). The analysis stage highlighted specific themes based on ‘patterned regularities’ emerging from the various data sources, including competencies required to practise in this area [(Wolcott, 1994, cited in (Creswell, 1998), p. 152]. This process also resulted in the identification of several ‘rich points’ (Agar, 1999) which were considered in detail, and inform the findings presented in this paper. The final step was to interpret the data through the lens of its relevance to community-based health promotion in the context of climate change.

**FINDINGS**

The overarching theme identified by the participants was that all disciplines should be competent in and responsible for addressing climate change and environmental sustainability. Participants consistently identified competencies associated with team work, interpersonal skills and communication, critical thinking and analytical skills. General awareness and basic skills were deemed important:

They don’t need to be experts. They need to be aware of the current thinking. Aware of the latest research. And like any other issue for a professional, we need to keep up to date with further developments. It’s awareness and building it in to their everyday working pattern. (Government)

Participants also believed that multi-skilled graduates and professionals with generic and transferable competencies, i.e. those who can work across disciplines, are required. This emerged from the belief that, owing to the scale and complexity of the challenges, cross-discipline approaches are required for effective action. This quotation highlights the role of health practitioners:

I think public health and health promotion people are in a really ideal position to work with environmental scientists. . . People who have a very sound environmental science background and people who can bring human health to that. Health (15)

Personal responsibility and an understanding of the ecological footprint were seen as a springboard to understanding and addressing responsibilities at a community, organizational and discipline level. Some participants highlighted the need for all graduates and professionals ‘to be able to identify your impact on that particular issue’ Government (14).

In considering more specific core competencies of health promotion practitioners, this quotation highlights the sentiment of a number of participants:

If you have that really good basic set of health promotion core competencies and you know your target
group, you can do it [devise policy and programs to respond to climate change]. So I still don’t think there’s anything deeply special but it’s complex. You have to work across sectors. It’s all that we talk about in health promotion but it’s in quite a complex environment. Government (14)

This participant stated:

I think that if you’re going to have these professionals of the future, like really understanding working with communities, understand research, and understand what it means to build strong multidisciplinary teams. Programme logic. Revisiting solid health promotion and public health theory. Government (3)

However, and in contrast to the points made above, some participants stated or inferred that practitioners would require specific knowledge, skills and attitudes/values:

We have to acknowledge that the whole point with climate change is that the past will not predict the future. Therefore, we don’t have a readymade bag of solutions for any problem in regard to climate change. Therefore the types of the skills that we need in graduates are quite different to what we have previously needed and so before you would just learn the answers. Government (19)

A participant from the health sector noted that:

This is above the standard health promotion things, because I am presuming you would be holding onto those, which I should probably make it clear that you need to hold onto those. Health (9)

Both an understanding of resilience and systems thinking were identified as important ideas that should inform this work. Systems thinking was highlighted from a consumer perspective (16): ‘solutions will increasingly require integrated and systems type thinking, the use of scenarios and modelling, the precautionary principle’. From a social services (13) perspective: ‘understand of how the physical realm relates to the social and economic, the vulnerability of households and communities plus their capacities to adapt, you know resilience thinking’.

Skills, values/attitudes and knowledge

The participants identified specific skills, values/attitudes and knowledge that are required to address issues associated with climate change, health and vulnerability.

Skills

The participants consistently spoke of programme planning, needs assessment, implementation and evaluation skills. Table 1 summarizes the main themes, highlighting these elements with quotations from participants.

Values, attitudes and personal attributes

The participants also referred to the personal attributes, values and attitudes that graduates and professionals would require to work in this domain. Personal qualities identified included ‘empathy’, ‘flexibility’, ‘initiative’, ‘self-motivated’, ‘resilient’ and ‘positive attitude’: ‘A good positive attitude, not all doom and gloom everywhere, but can pick themselves up and who are pretty resilient’. Consumer (16).

Further, a participant said this from a social services (20) perspective: ‘Empathy. Empathy, understanding…maturity and understanding and empathy and not to be bummed out at the same time’.

With regard to the values and attitudes required for action on climate change and social vulnerability, several commented that [health promotion practitioners] would be able to respect different perspectives, have a strong social justice, equity and human rights value base, and commitment to whole-population and/or community development approaches:

What they need is respect. They need graduates and practitioners to actually respect them [low income people] and listen to their stories, and not pass judgments on what they’re doing, whether it’s good or bad…. A community development approach. Social Services (20)

Knowledge

Perspectives varied on what specific knowledge was required to work in the area of climate change and health, although common themes were centred on understanding climate change as a determinant of health. Table 2 shows the major themes and is supported with participant quotations.

Finally, most participants referred to the three foundation practice areas of the Ottawa Charter for Health Promotion—advocate, enable and mediate.

Advocacy is really important in relation to climate change. Again if we’re going to be working with
vulnerable communities, it’s those really good people skills, they are important foundations for advocacy. Health (2)

Further, ‘Mediating the interests of environmental, business and community groups, using their ability to form new partnerships is really valuable in this arena’ Focus Group (2).

**DISCUSSION**

The participants in this study confirmed the role of health promotion in addressing the impact of climate change on health, specifically among vulnerable population groups. Their stance mirrors the current perspectives of leading climate change, environmental sustainability and health promotion advocates, including Brown et al. (Brown et al., 2005), Catford (Catford, 2008), McMichael (McMichael, 2009) and Kickbusch (Kickbusch, 2010), who believe that the remit for health promotion practice must include action on climate change. However, the main point of contention was whether professionals practising in this area, particularly health promotion practitioners, have adequate frameworks and paradigms to ensure effective practice. The ensuing discussion will explore three main arguments around health promotion competencies related to climate change: current preparedness, the need for new ideas and frameworks and the requirement for a major paradigm shift.

The study indicated that generic professional competencies combined with core health
promotion competencies put practitioners in a good position (assuming they are sufficiently motivated and concerned) to respond to climate-related health issues. An analysis of the study findings in relation to the nine core competency domains for health promotion identified in the European CompHP project—advocate, enable, mediate, leadership, communication, needs assessment, planning, implementation and evaluation and research—confirms this (Dempsey et al., 2011, p. 7). For example, the competency of assessment is defined as the ability to:

Conduct assessment of needs and assets, in partnership with stakeholders, in the context of the political, economic, social, cultural, environmental, behavioural and biological determinants that promote or comprise health. ([Dempsey et al., 2011], p. 11)

This highlights many of the skills and values and knowledge identified in the study. These include the ability to develop partnerships and work in collaboration and to conduct a needs assessment based on knowledge of the interaction of the socio-ecological determinants of health. With regard to the first point, Keleher [(Keleher, 2007), p. 34] confirms this ability in ‘applied understanding of intersectorialism—to work with and create connections across dual or multiple sectors’ in health promotion.

The use of ‘culturally and ethically appropriate assessment approaches’ ([Dempsey et al., 2011], p. 11) resonates with the values of social justice, community engagement and participatory and community development approaches, which were clearly identified in the study. This finding is also consistent with the United Kingdom’s National Institute for Health and Clinical Excellence (National Institute for Health and Clinical Excellence, 2008) guidelines for climate change initiatives, which recommend that practitioners ‘acknowledge the
skills and knowledge in the community by encouraging local people to help identify priorities, and contribute to the commissioning, design and delivery of services’ [(cited in Griffiths et al., 2009), p. 249].

The ability to ‘use a variety of assessment methods including qualitative and quantitative research methods’ [(Dempsey et al., 2011), p. 11] resonates with the importance of strong research skills identified in the study. It is also indicative of the specific CompHP competency of evaluation and research, defined as the ‘use of appropriate evaluation and research methods, in partnership with stakeholders, to determine reach, impact and effectiveness of health promotion action’ (Dempsey et al., 2011, p.12). As Leonardi [(Leonardi, 2009), p. 347] points out in The Health Practitioners Guide to Climate Change, ‘evaluation is a key component of the planning cycle for adaptation’.

The CompHP core competencies related to enable change, advocate for health and mediate through partnerships were consistently identified in the study (Dempsey et al., 2011). Under enable change, community development, partnerships and collaboration as well as facilitation skills were identified. Under advocate for health, raising awareness of and influencing opinion on health issues were counted as behaviour change and community engagement. Mediation and the ability to work across disciplines and sectors was a particularly strong theme, indicating that health promoters with these core competencies are well placed to facilitate partnership development in relevant sectors.

Overall, the above results are consistent with the view that ‘climate change should be integrated into existing frameworks, rather than being addressed as a separate issue’ [(DHS, 2007), p. 21]. In their study of public health nutrition’s role in addressing climate change, Sulda et al. (Sulda et al., 2009) found that expansion of the practice was required and that health promotion frameworks can be adapted to support work in this area. This expansion would necessitate improvements in health promotion and public health education in relation to the impacts of climate change, as well as adaptation and mitigation strategies (DHS, 2007).

In terms of the need for new ideas and frameworks, the study found that action on climate change is above and beyond standard health promotion. This view was highlighted by Brown et al. [(Brown et al., 2005), p. 25] in the proposition that ‘in the emergent field of sustainability and health, practitioners are working with unpredictable outcomes and as yet largely unspecified practices’. Hence,

Under these circumstances of change and uncertainty, the creative design of new ideas and strategic thinking, and new possibilities for practice can well be of greater effectiveness than continuing to follow precedents of established practise. [(Brown et al., 2005], p. 26]

Baum (Baum, 2008) supports this view, arguing that complexity and uncertainty should not be a basis for continuing with standard practice.

The study identified a number of ideas and frameworks that could be viewed as new to or emergent in the field of health promotion and necessary in the context of climate change. They included understanding of: ecological footprints, environmental justice, resilience and systems thinking, the health impacts of climate change and mitigation and adaptation strategies.

The ability to understand and interpret ecological footprints—a way to measure the Earth’s capacity to regenerate as well as to encourage innovation towards one-planet living (EPA and CES, 2008)—is increasingly being recognized as an important competency in health and sustainability, particularly in the area of food security and healthy eating (Albrecht, 2007). The food system is a significant contributor to global greenhouse gas emissions and climate change as well as the broader set of problems associated with environmental degradation (Roberts, 2009). Kickbusch [(Kickbusch, 2010), p. 22] suggests that ‘the environment impacts of different dietary patterns are significant’. Diets low in meat, high in plant foods and low in processed foods are not only healthier but better for the environment (Roberts, 2009; Kickbusch, 2010). Therefore, an ability to understand and incorporate footprint thinking into the design and implementation of food security/healthy-eating programmes would be a necessary capability.

The need for an understanding of the notion of environmental justice was also identified in the study. Environmental justice is a concept that links environmental health science to debates around rights, justice and equity (Stephens, 2007). It is a movement based on evidence illustrating that some communities, including indigenous and low-income groups,
are disproportionately affected by the effects of climate change, environmental pollution, toxic wastes, contaminated food and water supplies and unequal enforcement of environmental laws (Lee, 2002; Agyeman, 2005). Knowledge in this area would enable health promotion practitioners to participate more effectively in interdisciplinary endeavours that promote the right of all people to a healthy environment.

Resilience thinking is another feature of work in the area of climate change, health and social vulnerability. Resilience refers to ‘the ability of a system, from individual people to whole economies, to hold together and maintain their ability to function in the face of change and shocks’ [(Hopkins, 2009), p. 2]. It is increasingly being accepted as a way to think about adapting to uncertain futures (and scenarios) arising from climate change (Walker and Salt, 2006). Therefore, an understanding of resilience will be required in community-based health promotion practice.

Wiseman and Edwards [(Wiseman and Edwards, 2009), p. 14] believe that:

Health researchers and practitioners have a key role to play in researching and communicating appropriate strategies for responding to climate change in ways which, alongside emissions reductions, also have health and wellbeing benefits.

Having an understanding of the health impacts of climate change as well as the effects of mitigation and adaptation decisions will enable health promotion practitioners to maximize the co-benefits of their practice. This perspective is supported by the study findings and reflects the need for systems thinking. ‘The capacity for systems thinking is a necessary attribute of competent health promotion practitioners’ [(Keleher, 2007), p. 36]. Systems thinking in health promotion is understood at the level of settings and organizations within the socio-ecological approach to health (Keleher, 2007). The World Health Organization’s Healthy Cities project is an example of the involvement of health promotion in systems thinking for sustainable development and health. However, systems thinking in the context of climate change and sustainable development will require health promotion practitioners to broaden their perspectives and develop new capabilities. Verrinder et al. [(Verrinder et al., 2005), p. 205] believe that ‘to act for sustainability and health we need to reflect on our perspectives and consider the human-planetary systems and the relationship between its subsystems’. They suggest a broader meaning of systems thinking and capabilities than those that are traditionally accepted in health promotion systems thinking. Indeed ‘the ability to develop and use scenarios’ and ‘the ability to create ‘what if’ analysis and systems approaches’ are considered planning essentials in this area of work [(Verrinder et al., 2005), p. 214].

The third issue that emerged from this study is that the current health promotion practice—be it at a community or international level—is insufficient in the context of climate change, and a complete paradigm shift is required (Capetola, 2008; Hanlon and Carlisle, 2008; McMichael, 2009). As Brown et al. [(Brown et al., 2005), p. 5] state, what is required is a ‘new generation of public health [health promotion] workers to recognize the connections between the health of the ecosystem and the health of the population’. Brown et al. [(Brown et al., 2005), p. xx] believe it is not just a case of ‘promoting the learning of new knowledge and skills but much more’. They call for ‘a major change in mindset, the taking on of a new world view; the adoption of a whole alternative paradigm … a social revolution’ in the field of public health and health promotion. Fortunately, for the field of health promotion, the ability to facilitate social change and lead major paradigm shifts is an inherent feature of work in this field (Keleher, 2007). As Labonte (Labonte, 1994) points out, health promotion also incorporates theory and practice from a diverse range of disciplines and benefits from vague disciplinary boundaries, and it is currently considered the way forward for action on climate change and sustainability. Health promotion’s foundation for practice, which is based on the principles of enable, mediate, and advocate, was born of its own major paradigm shift in the Ottawa Charter and places practitioners in good stead for participating in action to address climate change and major environmental challenges.

A strength of the study was the engagement of stakeholders from outside of the health sector, because of which cross-disciplinary perspectives were gained on generic and specific competencies for action on climate change and health at a community level. However, the fact that data collection was limited to a Victorian sample and featured one-off interviews compromised the
breadth and depth of the analysis. The findings therefore represent a narrow view of practice and perceptions of desirable competencies.

In the introduction to this paper, it was clearly established that climate change directly and indirectly affects health. This evidence, along with fact that the socio-ecological approach to health—famously articulated in the blueprint for health promotion—mandates that ‘any health promotion strategy should include the protection of the natural environmental and conservation of resources’ [(WHO, 1986), p. 5], is a compelling basis for action. The field of health promotion needs to re-engage with these central tenets of the Charter and step up to the challenge of rethinking practice. This study demonstrates that health promotion practitioners have a set of competencies that are highly transferable to action on climate change at a community level and offer a foundation for a practice suitable to actively participating in social change processes necessary for healthier, sustainable and low-carbon living. Arguably what the field of health promotion needs at this point is a sense of urgency and a clear vision for health promotion practice in the context of a climate-affected world.

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