**Climate Change: A Challenge to Human Rights, Justice, Equality, and Human Well-being**

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Climate change poses a cross-cutting challenge to human rights as it destabilizes social, political, and economic institutions on which human well-being depends. In this chapter, we address three domains of climate change implications for mental health, well-being, and human rights: (1) Individual and social vulnerability to impacts; (2) Conflict resulting from resource scarcity, social and economic injustice, forced migration, and political polarization; and (3) Psychological mechanisms that inhibit greater recognition of the moral and ethical implications of climate change. We discuss the human rights implication of climate change, consider how psychological insights can be used toward engagement with climate action, and discuss international efforts underway to mitigate and adapt to the changing climate.

**Vulnerability to Climate Impacts: Implications for Mental Health**

**Climate Change Impacts on Psychological Well-Being**

Climate change is exacerbating extreme weather, both in the short and long term, including heat waves, wildfires, and drought; hurricanes, storms, floods, and landslides; and weather instability. It is causing destruction of homes and communities; compromising resources necessary for maintaining well-being, such as access to clean air and water, food, medicine, and electricity; wiping out infrastructure; and destroying agricultural land and businesses. It endangers human health due to disasters, as well as the spread of disease to greater areas of the globe.

Across these impacts, people's psychological health and community well-being suffer. Deleterious effects have been broadly documented and will increase rapidly as the climate

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continues to change (Clayton et al., 2017). Traumatic experiences connected with climate impacts result in depression, distress, anxiety, post-traumatic stress disorder, addiction, and exacerbation of existing mental and physical health conditions. Injury, health challenges, and loss of loved ones have dire mental health implications that last long beyond the events that caused them. Losing one's home and community is a profoundly distressing experience, resulting in challenges coping with loss and grief, especially profound if people experience isolation and decay of social cohesion and support (Berry et al., 2018) as disasters destroy places of social interaction and of sacred connection and worship.

Evidence of the psychological impacts of climate change is accumulating. The UK flooding in 2000 resulted in a four-fold increase in community distress and psychological impacts still evident four years later (Reacher et al., 2004). Research on Hurricane Katrina showed that disasters result in acute trauma, exacerbated by proximity to the event and experiencing more impacts to self, family, and community. The mental health consequences include PTSD and a doubling of suicidality, with distress and mood disorders evident for up to half the exposed population, and lasting for many years (Kessler et al., 2008; Lowe, Manove, & Rhodes, 2013; Weems et al., 2007). Moreover, climate impacts exacerbate existing mental health conditions (e.g., heat waves interfere with ability to sleep and make psychoactive drugs less effective; Robotham, 2011).

Beyond disasters, endemic and pervasive impacts of changing environmental conditions decrease people's ability to engage in successful economic activity, resulting, for example, in rising suicides among farmers in India (Carleton, 2017), and because extensive trauma associated with losing one's home and homeland through forced migration. Disintegration of the social fabric is contributing to a rise in interpersonal and domestic, as well as ethnic and class, violence, which undermines mental health for generations (Harville, Taylor, Tesfai, Xiong, & Buekens,

2011). Long-term psychological impacts include loss of cultural identity due to changing access to environmental resources, and of attachment to place - both central to health and well-being (Clayton et al., 2017). Even indirectly, people, especially children, experience post-traumatic stress symptoms associated with anticipation of harm, uncertainty, and loss of control (Fritze, Blashki, Burke, & Wiseman, 2008).

**Climate Change Impacts on Social Justice and Human Rights**

Psychological well-being is also undermined through social injustice, and destabilization of communities and social institutions, brought about by climate change. Human-environmental interactions are plagues by pervasive social inequality, particularly in energy and economic production. From placement of extraction facilities and toxic waste sites, to environmental health hazards of work performed by the disadvantaged, marginalized populations pay the price of production, use, and disposal that enable consumer society. And while the costs of climate change are starting to catch up with the population at large, poorer communities have been suffering from the pollution generated by energy production, transportation, and waste since the beginning of industrialization.

Inequality is a key driver of poor mental health. The onset of climate impacts brings social inequality into sharp focus. The impacts will grow exponentially over the next century and will hit hardest and most frequently poorer countries and marginalized groups within nations. They will place vulnerable populations under increasing duress, including women, children, people living with a disability, and the social and economically disadvantaged, who will experience the worst mental health impacts (Trombley, Chalupka, & Anderko, 2017).

Communities are the site of people's lives, and provide services, support, and stability. Climate change undermines communities by destroying infrastructure and economies, and exacerbates extant disparities (Chapman, Trott, Silka, Lickel, & Clayton, 2018). Climate change

also places strain on governance and legal systems at national, state, and local levels. These include disaster response, resource use and competition, and conflict and coordination of multi-stakeholder decision making. Few systems will be resilient to such demands, but the more vulnerable systems will be undermined faster and more extensively, potentially leading to disarray, violence, and breakdown of society (Nachbaur, Feygina, Lipkowitz, & Karwat, 2017).

In sum, the strain posed by climate change at the individual, community, and societal levels will cause distress and degradation of mental health. As such, it portends to undo the gains in quality of life accomplished through development over the past century and shake the foundation for social justice and human rights. A central challenge of climate resilience, then, is protecting psychological well-being and responding to mental health challenges, and strengthening community and social resources in preparation for coping with impacts.

## Inequality and Conflict

Climate change poses the danger of exacerbating violent conflict (Hsiang, Burke, & Miguel, 2013; National Security Council, 2012). The link between climatic changes and specific global events (e.g., drought, floods, typhoons) is clear (Trenberth, Fasullo, & Shepherd, 2015); research is now focused on the link to outbreak of conflict, which is more complicated and controversial (e.g., Bernauer, Böhmelt, & Koubi, 2012; Cabot, 2017), and mediated and moderated by economic, political, and social processes which amplify pre-existing conflicts, vulnerabilities, and instability (e.g., Bernauer et al., 2012; Gleditsch, 2012; Hegre et al., 2016; Lewis & Lenton, 2015). We summarize findings on climate and conflict that bring together geophysical and psychological literatures, with a focus on resource scarcity/uncertainty, forced migration, and political conflict.

**Climate Change, Weather Extremes, and Resource Scarcity/Uncertainty**

Weather extremes and vulnerability of agricultural production due to climate change will put a strain on resource availability and communities dependent on agricultural livelihoods (Clarke, Williams, Jahiruddin, Parks, & Salehin, 2015; IPCC, 2014; Kotir, 2011; Schlenker & Lobell, 2010), and potentially spur conflict. Climate-driven food shortages and agricultural unemployment contributed to recent events such as the Arab Uprisings (e.g., Johnstone & Mazo, 2011; Warrell, Femia, & Sternberg, 2015) and the protracted humanitarian crisis in Syria (e.g., Gleick, 2014; Kelley, Mohtadi, Cane, Seager, & Kushnir, 2015). Violence was considerably more prevalent in agriculturally dependent regions and in areas with a history of poverty and political exclusion of minority groups (von Uexkull, Croicu, Fjelde, & Buhaug, 2016).

Psychological research on majority-minority group relations and the effects of intergroup biases on decision making concurs that resource scarcity will promote conflict (Tajfel & Turner, 1979). Individuals align with many group identities, such as country, religion, ethnicity, and political party/ideology. Group belonging offers physical and evolutionary benefits (e.g., improved safety, mental health), and is essential for psychological well-being. This need to belong has a profound effect on human behavior and decision-making (Ashmore, Jussim, & Wilder, 2001; Dasgupta, 2004). When groups or their members are under threat—physical, existential, social, or *perceived*—the psychological power of group affiliation can promote aggression, violence, and prejudice toward other groups (Brewer, 2001; Riek, Mania, & Gaertner, 2006). Group polarization can emerge even when group identifications are of limited consequence (e.g., violence between fans of different sports teams; Branscombe & Wann, 1992) or arbitrarily created (e.g., assigned in laboratory experiments; Brewer, 1979). Conflict also emerges between groups as the product of real or perceived competition over resources (Sherif, Harvey, White, Hood, & Sherif, 1961), pointing to the mechanism by which resource scarcity is likely to influence conflict (Tajfel & Turner, 1979).

When majority groups in society (racial or ethnic) have social, cultural, and political dominance, they are likely to target minority groups and attribute undue blame and responsibility to them for emergent societal problems (Durrheim et al., 2011; Riek et al., 2006), including for resource strain actually due to climatic causes. Scapegoating is detrimental, especially when majority groups possess the political/military power to enact oppressive policies (Rothschild, Landau, Sullivan, & Keefer, 2012). It is unsurprising that political unrest emerges where poorer minority groups have a history of political exclusion.

Group identifications also provide psychological mechanisms to justify actions taken in defense of one's group, even when they are morally reprehensible (Leidner, Castano, Zaiser, & Giner-Sorolla, 2010). System justification is a psychological process of defending the status quo amidst changes in economies, politics, and resource availability (Cichocka & Jost, 2014). While climate change will be destabilizing for poorer sectors of society, advantaged groups may continue to defend the extant economic and political system (Napier, Mandisodza, Andersen, & Jost, 2006; Vainio, Makiniemi, & Paloniemi, 2014). The dismissal of the needs of vulnerable populations (e.g., agriculturally dependent minority groups, indigenous communities), or the perception by minority groups that those in power do not have their best interests in mind, may result in revolts.

Threat and group identifications increase the endorsement of zero-sum beliefs about resource availability — perceptions that in the competition over scarce resources there can only be one dominant party (Esses, Hamilton, & Gaucher, 2017). This may lead to exclusionary policies toward minority groups (Esses, Jackson, & Armstrong, 1998; van Setten, Scheepers, & Lubbers, 2017), or direct outbreaks of violence. An understanding of historical and current intergroup dynamics, and of political economies and legislative efforts (e.g., whether governing

bodies are enacting legislation to aid disadvantaged groups), may help predict the likelihood of conflict outbreaks.

Several individual-level psychological phenomena are also important to consider. First, there is a connection between temperature variation and acts of aggression: Physical violence is more common during summer weather and heat waves (Anderson, 2001; Anderson & Delsi, 2011). Second, experience of prolonged scarcity and resource uncertainty can generate biased and anti-social decision processes that reinforce instability and vulnerability (Krosch & Amodio, 2014; Prediger, Vollan, & Hermann, 2014), or provoke other tensions (e.g., overborrowing financially, Shah, Mullainathan, & Shafir, 2012; overharvesting of scarce resources, Gatiso, Vollan, & Nuppenau, 2015).

In sum, it is likely that conflict will emerge when extreme weather and resource scarcity due to climate change maligns areas with pre-existing histories of poverty and instability, areas experiencing excessive heat, and areas with high wealth disparities.

**Climate Change and Forced Human Migration**

Climate change also results in conflict through its effects on human migratory patterns. Resource scarcity, lack of sustainable employment, and extreme weather events lead to increased human mobilization within and across national borders (e.g., Black, Arnell, Adger, Thomas, & Geddes, 2013; Lilleor & van den Broeck, 2011). Violent conflict resulting from resource scarcity is likely to increase internal displacement and refugees. There is a clear evidence that environmental degradation leads to migration (e.g., Collins, 2013; Raleigh, 2011; Warner, Hamza, Oliver-Smith, Renaud, & Julca, 2010). Conflict is likely to arise as migrants flow from less to more developed countries. The host countries are likely to experience competition over resources, ethnic tensions, distrust between national groups, and exacerbation of pre-existing tensions resulting in intra- and inter-state conflict, as has already taken place in Ethiopia/Eritrea,

Somalia, South Africa, Sudan, and Bangladesh, among others (Reuveny, 2007). The influence of climate change on migration is of great concern to aid organizations and international governing bodies (e.g., Laczko & Aghazarm, 2009), and the term 'climate refugees' has entered the lexicon and spurred research questions, aid initiatives, and legal debates (Bettini, 2013; Ransan-Cooper, Farbotko, McNamara, Thornton, & Chevalier, 2015).

The intergroup dynamics and psychological mechanisms pertaining to resource scarcity are also likely to create conflict in the migration context (Esses et al., 2017). An influx of migrants or refugees into existing communities or nations creates a new minority group susceptible to prejudice and scapegoating by their new hosts. It may amplify concerns about resource scarcity, while inflaming tensions between ethnic groups (Esses, Jackson, & Armstrong, 1998; Pereira, Vala, & Costa-Lopes, 2010). Zero-sum beliefs can markedly increase due to concerns that the new migrant populations will detract from access to resources, motivating inflammatory rhetoric, prejudice, and aggression (Gorodzeisky & Semyonov, 2015; van Setten, Scheepers, & Lubbers, 2017). This inflammation of tensions is especially likely when migrants have different group identities from the current population along racial, ethnic, and religious lines (Esses et al., 1998).

These dynamics motivate support for and enactment of exclusionary policies, ranging from restrictions on access to public welfare programs to prejudicial immigration policies (Green, 2009; Louis, Duck, Terry, Schuller, & Lalonde, 2007). A prominent example is the flow of refugees fleeing the Syrian civil war, likely linked to climate change (Kelley et al., 2015), which has spurred intense debates around migrant policies in the U.K., U.S., and western Europe (BBC, 2015; Gambino, Kingsley & Nardelli, 2015; Griswold, 2016), as well as restrictive refugee screening policies resulting in the deaths of would-be refugees unable to flee violence. Far-right political movements have received a groundswell of support through scapegoating

immigrants for societal ills, fear mongering of mass migration, and drawing a (false) association between refugees and terrorism as a motivation for closing national borders to migrants (Gambino et al., 2015; Gorodzeisky & Semyonov, 2015; Sheehy, 2017). The debate over refugees, particularly through politicized terms such as 'climate refugees', has relegated large populations to victim status, and has licensed groups to use fears of widespread migration as a rationale for closing national borders (Bettini, 2013). Far-right political movements have been associated with a rise in hate crimes against minority populations, including the aftermath of the U.K.'s vote to leave the European Union (Langfit, 2016) and the election of Donald Trump in the U.S. (Southern Poverty Law Center, 2017).

Thus, immigration-related conflict is more likely to occur when migrants arrive in large numbers, possess easily identifiable differences from host populations, and come from regions that may invoke (unfounded) concerns about terrorism, resulting in hate crimes or oppressive policies.

**Climate Change and Political Conflict**

The third domain of conflict is political polarization over climate change management. Political dynamics may not directly manifest in physical violence, but nevertheless create conditions in which violence may become more likely. Climate change is profoundly politically divisive, especially in the U.S. and western Europe which are major carbon dioxide emitters (McCright, Dunlap, & Marquart-Pyatt, 2016). In the U.S., polarization has grown dramatically in spite of ever-increasing scientific evidence for climate change (McCright, Dunlap, & Xiao, 2013). The voting records of Republican and Democratic politicians on environmental issues is the most polarized in American history, and partisan identity is a consistently strong predictor of the public's climate change attitudes and support for policy action (Dunlap, McCright, & Yarosh, 2016).

The implications of polarization for conflict are considerable (Fritsche, Cohrs, Kessler, & Bauer, 2012). Political decisions on energy policy increasingly invoke heavy partisan gridlock, and polarization has stymied mitigative and adaptive responses to climate change, further increasing the potential of conflict. Republican politicians in the U.S. have advocated for the end of publicly funded climate research (Vinik, 2016), and some have gone as far as to endorse the closure of the Environmental Protection Agency (Zoppo, 2017), even though it primarily deals with air pollution, and food and water safety, rather than climate change. These actions could have considerable implications for health and human safety.

Polarization around decisions about new oil and gas pipelines have sparked mass protest mobilizations in the U.S., Canada, and elsewhere (Hersher, 2016; Kassam, 2016). The debate over the building of the Dakota Access Pipeline—whose location would interfere with indigenous land rights and water safety—resulted in year-long protests and land occupations, and the extensive use of state violence against the Standing Rock Sioux (Wong & Levin, 2016). The North Dakota legislature voted on (but failed to pass) a bill which would exempt vehicle drivers from liability for striking pedestrians and protestors in roadways, provided it was deemed 'accidental' (Levenson & Hassan, 2017). The broader implications of these pipelines for energy security have resulted in public support and opposition falling heavily along partisan lines (Suls, 2017).

In addition, climate change may have consequences for democratic electoral turnover, such that increases in temperature extremes are associated with lower electoral incumbency advantage (Obradovich, 2016). This increases political instability can have serious impacts for regions already undergoing political transitions. Thus, climate change's influence on mass polarization, discord and protests over environmental and energy policy, and the effects of weather variability on democratic turnover, could potentially lead to conflict.

Psychological research on motivated reasoning (Bolsen, Druckman & Cook, 2014; Kunda, 1990) and cultural cognition (Kahan, Jenkins-Smith, & Braman, 2010) offers insights into political polarization and its implications for policy making. Individuals have a predisposition to seek out, construe, and endorse information that aligns with their (personal or group) issue position (Ditto & Lopez, 1992; Hart & Nisbet, 2011). Attitudes about issues such as climate change become ideological "badges" utilized to signal support for one's dominant worldview, rather than positions arrived at through consideration of evidence (Kahan, Jenkins-Smith, & Braman, 2010). Greater knowledge about climate issues can amplify polarization rather than serve as an antidote by enabling partisans to engage in counter-arguing and dismissing inconvenient evidence (Kahan et al., 2012).

Motivated reasoning and group identity produce ever increasing polarization over climate change, fuel public discord and conflict, and impact how individuals perceive and respond to climate risks, with considerable consequences. Framing an Eritrean famine as due to climatic changes (vs. 'natural' causes) reduced intentions to donate to relief efforts and increased victim blame among Americans who are more skeptical of climate change (Chapman & Lickel, 2016). Concerns about the Zika virus became polarized along political lines when it was associated with climate change (Kahan, Jamieson, Landrum, & Winneg, 2017). Public acceptance of refugees also depends on whether they are framed as "climate refugees" or not.

Thus, understanding the extent of public polarization over climate change, as well as the current political leadership, in different nations, helps predict their responses to resource scarcity, migration, and conflict-associated topics in the face of climate change.

### The Human Rights Implications of Climate Change

The prior sections make clear the extent to which climate change will negatively impact human and societal well-being. From a human rights perspective, climate change is devastating.

It challenges access to most of the rights set forth in the articles of the UN Declaration of Human Rights, first and foremost the fundamental right to life, liberty and security of person. As it increases intergroup conflict, it exacerbates existing human rights violations to the right of freedom from exploitation, degrading treatment, arbitrary imprisonment, freedom of thought, conscience and religion, and freedom of expression. As it ramps up pressure on governance systems, it undermines access to legal systems and protection of the law, to participation in and influence of the government, to free education, and to seeking asylum as countries are overwhelmed by immigration flows. The impacts of extreme weather events threaten the right to own property and access public services, to social security, to gainful employment, and to a standard of living that ensures health and well-being, and the ability to sustain cultural and traditional practices.

Across all domains of climate impacts, vulnerable populations are impacted the most. Ethnic conflict targets minority groups, while domestic conflict targets women and children. Resource scarcity hits the economically disadvantaged the hardest. Extreme weather events, both precipitous and chronic, are most detrimental for less resourced communities, which have less capacity to prepare for and recover from impacts. Those who have contributed the least to climate change are impacted earlier and harsher. For many, their entire way of life will be decimated. Thereby, climate change creates ever greater inequality in access to human rights, placing fundamental rights to human dignity out of reach for vulnerable populations.

Taken in sum, the imperative is clear to confront climate change as a direct impediment to attaining inherent human rights, and as a profound moral challenge for humanity. In the subsequent section, we address barriers to tacking this challenge.

**Psychology of Perceptions and Moral Beliefs around Climate Change**

Given its dire ethical implication, and the massive negative and unequally distributed impacts climate change is already having globally, those interested in human rights and social justice must confront a deeply uncomfortable truth: failure to respond to climate change is, at its core, a failure of human morality. This recognition raises difficult questions: How are we able, both individually and collectively, to ignore the most pressing ethical challenge of our time? What features of human psychology allow so many of us, including those who know and accept the dire implications of unmitigated climate change for future generations, to continue our daily lives as if no impending existential threat looms? Can we leverage understanding of human moral judgment to promote proactive and just responses to climate change?

A large, multidisciplinary body of research on "climate ethics" has begun to reveal often disheartening answers. Without doubt, climate change is a moral issue (Jamieson, 2010), that involves questions of right wrong, inequality and responsibility, human rights and values, with a recent emphasis on ethical decision-making (e.g., Markowitz, 2012; Pope Francis, 2015). Yet, public opinion research suggests that, for the vast majority of people in the U.S. and other Western countries, responding forcefully to climate change does not carry the weight of a moral imperative (Leiserowitz et al., 2018).

How is it that most of us are able to largely ignore, downplay or dismiss the moral implications of climate-relevant actions in the face of mounting evidence regarding present and future impacts? Researchers (including ourselves) working at the intersection of ethics, social psychology, mass communication, and public opinion (for in-depth analysis see Markowitz & Shariff, 2012; Peeters et al., 2015) have used qualitative and quantitative methods (e.g., interviews, focus groups, large-scale surveys, messaging experiments) to reveal intra-(psychological, cognitive) and inter-individual (social, contextual) factors that inhibit moral engagement with climate change. Here we summarize these findings.

**Problematic Features of Climate Change for Moral Engagement**

Climate change possesses physical/ecological features that interact with psychological and social mechanisms to impede meaningful moral engagement with the issue (Gardiner, 2006). These include:

- Inherent and "deep" uncertainty regarding timing, severity, and location of present and future physical impacts;

- Abstract, complex, and statistical nature: climate change consists of disparate climatic, ecological and other phenomena, and entails probabilistic changes to complex natural and human systems;

- Long time-horizons and multiple feedback loops (i.e., connections between causes of climate change and impacts are discontinuous and affected by both negative and positive feedback loops embedded within interconnected planetary-scale systems);

- Economic, cultural and ecological path dependencies and costs of societal action (e.g., effectively responding to climate change requires massive coordination and cooperation across every scale of human decision-making and involves short-term "winners" and "losers").

**Moral Judgment Processes**

There is a mismatch between the above features of climate change and the human "moral judgment system" (Bazerman & Tenbrunsel, 2011; Markowitz & Shariff, 2012). While we are quick to recognize and react (affectively and behaviorally) to certain moral transgressions (e.g., intentional acts of harm involving observable victims and perpetrated by known actors), climate change lacks "triggers" that produce rapid and strong reactions to wrongdoing (Gardiner, 2006). Climate change is abstract and distant in space and time and is largely an unintentional side-

effect of modern life and the actions of billions of disconnected actors spread across the globe. Although there is a possible "villain" in the fossil fuel industry—their efforts to sow misinformation and uncertainty to slow forceful societal action are well-documented (e.g., Oreskes, 2011)—the connection between past and present actions and future harms feels tenuous, further depressing strong moral judgments. These and other factors (e.g., exposure to a near-constant stream of mediated information about other, non-climate change harms and transgressions committed both locally and globally) undermine recognition and conviction that climate change is a moral tragedy.

These barriers can be overcome. Issues once viewed as benign, appropriate or even beneficial (e.g., smoking, slavery, exclusion of marginalized groups from society) have become moralized, suggesting that climate change-related actions could undergo a similar transformation. But this shift requires active and sustained effort, and a combination of incentives and supporting conditions (including the development of new laws and regulatory regimes prior to majority public support). However, this effort is impeded by motivated reasoning and self-protective processes, which inhibit reasoned (vs. affect-driven) moral engagement with climate change.

**Motivated Reasoning and Self-Protective Processes**

At both the individual and collective levels, responding to climate change poses a profound challenge, requiring difficult, costly, and/or uncomfortable changes in common practices related to every aspect of modern life, from transportation decisions to consumption habits (Lucas & Davis, 2018). Treating climate change as a moral issue raises the stakes of choosing between engagement and disengagement, triggering "motivated reasoning" (as mentioned in the prior section). In her exhaustive review, Kunda (1990) defines motivated reasoning as a set of "strategies of accessing, constructing, and evaluating beliefs" that permit

individuals to arrive at desired (i.e., motivated) belief or action outcomes regardless of the information they encounter. These are universal mechanisms employed by people of all ideological commitments, which explain moral disengagement among both hardcore climate "skeptics" (who use them to discount the overwhelming scientific evidence) and committed "advocates" (who use them to explain away their inaction despite stated commitment to the problem).

Motivated reasoning processes in response to climate change include identity-protective cognition (e.g., Kahan et al., 2012), system justification (e.g., Feygina, Jost, & Goldsmith, 2010), and willful ignorance (e.g., van der Weele, 2014). These mechanisms allow people to avoid taking climate change seriously and incurring significant personal costs while maintaining a positive self-image (including through virtue signaling, single action biases, negative spillover). For example, when an important in-group is hostile towards action on climate change for self-interested reasons (such as Republicans in the U.S.), members of that group become adept at denigrating information and sources (e.g., mainstream scientists) that highlight risks posed by climate change (Kahan et al., 2012).

Moreover, through a process of moral disengagement (Bandura, 2007) people avoid overwhelming feelings of guilt through rationalization or moral justification of their carbon-intensive lifestyles (e.g., "flying to conferences is justified by the good I'm doing to advance climate mitigation efforts"), or in advantageous comparisons (e.g., "at least I use less energy than my neighbors"). And many displace personal responsibility by placing blame on other entities (e.g., corporations, governments). These mechanisms contribute to a vicious feedback loop of avoiding personal responsibility for responding to climate change.

**Psychological Tools for Overcoming Climate Change Disengagement**

Efforts to overcome moral disengagement from climate change must be responsive to the underlying mechanisms at work and draw on proven psychological approaches. Communication about climate change has to shift from an information-focused approach, which is ineffective in light of motivated cognition, toward leveraging and deepening existing relationships and trusted messengers embedded in audience's communities, prioritizing people's needs and realities (which drive responses) rather than scientific findings, focusing on local experiences and impacts, and fostering conversations rather than one-directional knowledge flow. Communication practices need to move away from a one-sided focus on problems, which highlights threats, concerns, and impacts only, to a focus on solutions, which offers empowering pathways toward addressing the immense challenge, and engages the public directly by connecting with and drawing on their personal and group commitments. Engagement with solutions can be enhanced by providing information in timely, appropriate, clear, targeted, concise, and actionable ways, which align with the audience's realities.

Motivated cognition can be harnessed by aligning proposed climate solutions with protecting the socio-economic system (e.g. clean energy efforts that improve national security, climate adaptation that ensures economic stability), and upholding values that underlie people's worldviews (e.g. commitment to passing traditions and way of life to next generations). Identity-protective responses can be ameliorated by acknowledging that people's most fundamental need is to belong and be accepted by their social groups, and therefore validating and affirming core personal and group identities is needed to reduce defensive information seeking and processing triggered by challenges to the beliefs espoused by their groups or authority figures around climate change. Willful ignorance can be reduced by circumventing opportunities to avoid difficult information, while not overwhelming people with fear-inducing communication, and, importantly, offering meaningful, accessible action opportunities through which individuals can

reduce the distress caused by learning about climate change (and thereby prevent disengagement, shutting down, blaming the messenger, and hopelessness). Inaction and displacement of responsibility can be overcome by highlighting individuals' agency and efficacy and encouraging hope and sense of empowerment about individual and collective engagement with solutions to climate change.

These are some examples of how psychological insights can be drawn on to increase moral engagement with the threatening reality of climate change and fostering behavioral change that supports addressing this dire challenge.

## International Climate Action

Though slow and confronted by many personal and collective challenges, action on climate change is beginning to take root. After thirty years of warnings from the scientific community and pressure from social movements, action is happening. At the local level, climate adaptation is bringing together communities and diverse stakeholders to tackle impacts. Regionally, clean energy initiatives are growing rapidly. Nationally, investments are supporting a transition to a lower carbon economy and resilience in the face of impacts. International efforts are also taking root, most prominent of which are the International Panel on Climate Change, a highly collaborative effort that produces the definitive scientific synthesis of climate change research, and informs much climate-related decision-making; and the United Nations Framework Convention on Climate Change, which has ushered in, most notably through the recent Paris Agreement, an emerging global consensus on and commitment to combating climate change through reducing emissions, preparing for impacts, and providing funding (through the Green Climate Fund) to developing nations to enable these efforts.

Another important step is the centrality of climate change within the United Nations 2030 Global Agenda on Sustainable Development, addressing the conflict between climate action and

the needs for economic development. Goals include taking urgent action to combat climate change and its impacts (SDG13), with a focus on strengthening resilience and policy-level planning, education, and increasing funding and capacity for adaptation; as well as goals to achieve sustainability in agriculture (SDG2), water (SDG6), ocean (SDG14), and terrestrial (SDG15) use; energy production (SDG7), economic growth (SDG8), industrialization (SDG9), consumption (SDG12), and urban development (SDG11); and the building of physical and institutional infrastructure that is resilient to climate change (SDG9&16).

While there is great variability in the extent to which individual nations are moving forward on mitigation and adaptation planning and action, the international efforts described above are laying the imperative foundation for coordinated global action on climate change.

### Conclusion

Climate change poses a profound threat to human and societal well-being and to fundamental human rights though its detrimental social and psychological impacts. From severe trauma of loss and violence, to chronic stress of threat and anticipating impacts, to societal instability, perhaps the greatest price paid for climate change will be that of mental health and psychological well-being. To discuss the human rights implications of climate change without focusing on its psychological dynamics and implications is to neglect its most dire reality, and to miss its alarming ethical implications for undermining rights to life, liberty, security, equality, and inherent human dignity. Moreover, engaging the public and leaders with the challenge of climate change is not likely to succeed without drawing on behavioral insights and tools that can make the issue accessible, relevant to people's lives, consistent with social identities, empowering, and aligned with deeply seated psychological motives. In sum, climate change must be treated as the greatest human rights challenge in human history, and a psychological perspective offers an understanding of its dire consequences, ethical imperative, and pathways

toward building resilience in the face of increasing personal and national insecurity and conflict, and toward engagement with climate mitigation policy and action.

# References

Anderson, C.A. (2001). Heat and violence. *Current Directions in Psychological Science, 10*, 33-38.

Anderson, C.A., & Delsi, M. (2011). Implications of global climate change for violence in developed and developing countries. In J. Forgas, A. Kruglanski & K. Williams (Eds.), *The Psychology of Social Conflict and Aggression.* (249-265). New York, NY: Psychology Press.

Ashmore, R.D., Jussim, L.J., & Wilder, D. (2001). *Social identity, intergroup conflict, and conflict reduction* (Vol.3). Oxford, United Kingdom: Oxford University Press.

Bandura, A. (2007). Impending ecological sustainability through selective moral disengagement. *Internal Journal of Innovation and Sustainable Development, 2,* 8-35.

Bazerman, M.H. & Tenbrunsel, A.E. (2011). *Blind spots: Why we fail to do what's right and what to do about it*. Princeton, NJ: Princeton University Press.

Bernauer, T., Böhmelt, T., & Koubi, V. (2012). Environmental changes and violent conflict. *Environmental Research Letters*, *7*, 15601.

Berry, H.L., Waite, T.D., Dear, K.B.G., Capon, A.G., & Murray, V. (2018). The case for systems thinking about climate change and mental health. *Nature Climate Change, 8,* 282–290.

Bettini, G. (2013). Climate barbarians at the gate? A critique of apocalyptic narratives on 'climate refugees'. *Geoforum, 45*, 63-72.

Black, R., Arnell, N.W., Adger, W.N., Thomas, D., & Geddes, A. (2013). Migration, immobility and displacement outcomes following extreme events. *Environmental Science & Policy, 275,* 532-543.

Bolsen, T., Druckman, J.N., & Cook, F.L. (2014). The influence of partisan motivated reasoning on public opinion. *Political Behavior, 36*, 235-262.

Branscombe, N.R., & Wann, D.L. (1992). Role of identification with a group, arousal, categorization processes, and self-esteem in sports spectator aggression. Human Relations, 45, 1013-1033.

Brewer, M.B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin, 86*, 307-324.

Brewer, M.B. (2001). Ingroup identification and intergroup conflict. *Social Identity, Intergroup Conflict, and Conflict Reduction*, *3*, 17-41.

British Broadcasting Company (BBC). (2015). Migrant crisis: UK's Syria refugee plan 'not enough', says Labour. https://www.bbc.com/news/uk-politics-34183150.

Cabot, C. (2017). Causal linkages between environmental change and conflict. In *Climate change, security risks and conflict reduction in Africa* (pp. 45–62). Berlin, Germany: Springer.

Carleton, T.A. (2017). Crop-damaging temperatures increase suicide rates in India. *Proceedings of the National Academy of Sciences, 114,* 8746-8751.

Chapman, D.A., & Lickel, B. (2016). Climate change and disasters: How framing affects justifications for giving or withholding aid to disaster victims. *Social Psychological and Personality Science, 7*, 13-20.

Chapman, D.A., Trott, C.D., Silka, L., Lickel, B., & Clayton, S. (2018). Psychological perspectives on community resilience and climate change: Insights, examples, and directions for future research. In Clayton, S. and Manning, C., (Eds.) *Psychology and Climate Change: Human Perceptions, Impacts, and Response,* 267-288.

Cichocka, A. & Jost, J.T. (2014). Stripped of illusions? Exploring system justification processes in capitalist and post-communist societies. *International Journal of Psychology, 49,* 6-29.

Clarke, D., Williams, S., Jahiruddin, M., Parks, K., & Salehin, M. (2015). Projections of on-farm salinity in coastal Bangladesh. *Environmental Science: Processes & Impacts*, *17*, 1127-1136.

Clayton, S., Manning, C.M., Krygsman, K., & Speiser, M. (2017). *Mental health and our changing climate: Impacts, implications, and guidance.* Washington, DC: American Psychological Association and ecoAmerica.

Collins, A.E. (2013). Applications of the disaster risk reduction approach to migration influenced by environmental change. *Environmental Science & Policy, 275,* S112-S125.

Dasgupta, N. (2004). Implicit ingroup favoritism, outgroup favoritism, and their behavioral manifestations. *Social Justice Research, 17*, 143-169.

Ditto, P.H., & Lopez, D.F. (1992). Motivated skepticism: Use of differential decision criteria for preferred and nonpreferred conclusions. *Journal of Personality and Social Psychology, 63*, 568-584.

Dunlap, R.E., McCright, A.M., & Yarosh, J.H. (2016). The political divide on climate change: Partisan polarization widens in the US. *Environment: Science and Policy for Sustainable Development*, *58*, 4-23.

Durrheim, K., Dixon, J., Tredoux, C., Eaton, L., Quayle, M., & Clack, B. (2011). Predicting support for racial transformation policies: Intergroup threat, racial prejudice, sense of group entitlement and strength of identification. *European Journal of Social Psychology*, *41*, 23-41.

Esses, V.M., Hamilton, L.K., & Gaucher, D. (2017). The global refugee crisis: Empirical evidence and policy implications for improving public attitudes and facilitating refugee resettlement. *Social Issues and Policy Review*, *11*, 78-123.

Esses, V.M., Jackson, L.M., & Armstrong, T.L. (1998). Intergroup competition and attitudes toward immigrants and immigration: An instrumental model of group conflict. *Journal of Social Issues, 54*, 699-724.

Feygina I., Jost, J.T., & Goldsmith, R. (2010). System justification, the denial of global warming, and the possibility of "system-sanctioned change." *Personality and Social Psychology Bulletin, 36*, 326-338.

Fritsche, I., Cohrs, J. C., Kessler, T., & Bauer, J. (2012). Global warming is breeding social conflict: The subtle impact of climate change threat on authoritarian tendencies. *Journal of Environmental Psychology*, *32*, 1-10.

Fritze, J., Blashki, G.A., Burke S., & Wiseman, J. (2008). Hope, despair and transformation: Climate change and the promotion of mental health and well-being. *International Journal of Mental Health Systems, 2*(13).

Gambino, L., Kingsley, P., & Nardelli, A. (2015). Syrian refugees in America: Separating fact from fiction in the debate. *The Guardian.* Retrieved from: https://www.theguardian.com/us-news/2015/nov/19/syrian-refugees-in-america-fact-from-fiction-congress.

Gardiner, S.M. (2006). A perfect moral storm: climate change, intergenerational ethics and the problem of moral corruption. *Environmental Values, 15,* 397–413.

Gatiso, T.T., Vollan, B., & Nuppenau, E-A. (2015). Resource scarcity and democratic elections in commons dilemmas: An experimental test on forest use in Ethiopia. *Ecological Economics, 114,* 199-207.

Gleditsch, N.P. (2012). Whither the weather? Climate change and conflict. *Journal of Peace Research*, *49*, 3–9.

Gleick, P.H. (2014). Water, drought, climate change, and conflict in Syria. *Weather, Climate, and Society, 6*, 331-340.

Gorodzeisky, A. & Semyonov, M. (2015). Not only competitive threat but also racial prejudice: Sources of anti-immigrant attitudes in European societies. *International Journal of Public Opinion Research*, edv024.

Green, E.G. (2009). Who can enter? A multilevel analysis on public support for immigration criteria across 20 European countries. *Group Processes & Intergroup Relations*, *12*, 41-60.

Griswold, E. (2016). Why is it so difficult for Syrian refugees to get into the U.S.? *The New York Times* Retrieved from:. https://www.nytimes.com/2016/01/24/magazine/why-is-it-so-difficult-for-syrian-refugees-to-get-into-the-us.html.

Hart, P.S. & Nisbet, E.C. (2011). Boomerang effects in science communication: How motivated reasoning and identity cues amplify opinion polarization about climate mitigation policies. *Communication Research, 39*, 701-723.

Harville, E., Taylor, C., Tesfai, H., Xiong, X., & Buekens, P. (2011). Experience of Hurricane Katrina and reported intimate partner violence. *Journal of Interpersonal Violence, 26,* 833–845.

Hegre, H., Buhaug, H., Calvin, K. V., Nordkvelle, J., Waldhoff, S.T., & Gilmore, E. (2016). Forecasting civil conflict along the shared socioeconomic pathways. *Environmental Research Letters*, *11*, 54002.

Hersher, R. (2016). Protests disrupt pipelines across the northern U.S. *National Public Radio.* Retrieved from: https://www.npr.org/sections/thetwo-way/2016/10/12/497673866/protests-disrupt-pipelines-across-the-west.

Hsiang, S.M., Burke, M., & Miguel, E. (2013). Quantifying the influence of climate on human

conflict. *Science*, *341*, 1235367–1235367.

IPCC Climate Change. (2014). Synthesis report. *Contribution of Working Groups I, II and III to

the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC,

Geneva, Switzerland, 151.

Jamieson, D. (2010). Climate change, responsibility, and justice. *Science, Engineering, and

Ethics, 16*, 431–445.

Johnstone, S. & Mazo, J. (2011). Global warming and the Arab Spring. *Survival: Global Politics

and Strategy, 53*, 11-17.

Kahan, D.M., Jamieson, K.H., Landrum, A. & Winneg, K. (2017). Culturally antagonistic

memes and the Zika virus: An experimental test. *Journal of Risk Research, 20*, 1-40.

Kahan, D.M., Jenkins-Smith, H., & Braman, D. (2010). Cultural cognition of scientific

consensus. *Journal of Risk Research, 14*, 147-174.

Kahan, D.M., Peters, E., Wittlin, M., Slovic, P., Ouellette, L.L., Braman, D., & Mandel, G.

(2012). The polarizing impact of science literacy and numeracy on perceived climate

change risks. *Nature Climate Change, 10*, 732-735.

Kassam, A. (2016). Kinder Morgan pipeline: Canadians intensify huge opposition to expansion.

*The Guardian.* Retrieved from: https://www.theguardian.com/world/2016/dec/03/canada-

kinder-morgan-pipeline-expansion-protest.

Kelley, C.P., Mohtadi, S., Cane, M.A., Seager, R., & Kushnir, Y. (2015). Climate change in the

Fertile Crescent and implications of the recent Syrian drought. *Proceedings of the

National Academy of Sciences*, *112*, 3241–3246.

Kessler, R., Galea, S., Gruber, M., Sampson, N., Ursano, R., & Wessely, S. (2008). Trends in mental illness and suicidality after Hurricane Katrina. *Molecular Psychiatry, 13,* 374–384.

Kotir, J.H. (2011). Climate change and variability in Sub-Saharan Africa: A review of current and future trends and impacts on agriculture and food security. *Environment, Development and Sustainability, 13*, 587-605.

Krosch, A.R. & Amodio, D.M. (2014). Economic scarcity alters the perception of race. *Proceedings of the National Academy of Sciences, 111*, 9079-9084.

Kunda, Z. (1990). The Case for Motivated Reasoning. *Psychological Bulletin, 108*, 480–98.

Laczko, F. & Aghazarm, C. (2009). *Migration, environment and climate change: Assessing the evidence.* Geneva, Switzerland: International Organization for Migration.

Langfit, F. (2016, October 10). New data reveal increase in hate crimes after U.K. Brexit vote. *National Public Radio.* Retrieved from:
https://www.npr.org/2016/10/10/497423606/new-data-reveal-increase-in-hate-crimes-after-u-k-brexit-vote.

Leidner, B., Castano, E., Zaiser, E., & Giner-Sorolla, R. (2010). Ingroup glorification, moral disengagement, and justice in the context of collective violence. *Personality and Social Psychology Bulletin*, *36*, 1115-1129.

Leiserowitz, A., Maibach, E., Roser-Renouf, C., Rosenthal, S., Cutler, M., & Kotcher, J. (2018, March). *Climate change in the American mind.* Yale Program on Climate Change Communication.

Levenson, E. & Hassan, C. (2017). Proposed laws would crack down on protesters who block roadways. *CNN*. Retrieved from: https://www.cnn.com/2017/01/25/us/nd-protest-driver-bill-trnd/index.html.

Lewis, K.H., & Lenton, T.M. (2015). Knowledge problems in climate change and security research. *Wiley Interdisciplinary Reviews: Climate Change*, *6*, 383–399.

Lilleor, H.B., & Van den Droeck, K. (2011). Economic drivers of migration and climate change in LDCs. *Global Environmental Change, 215,* S70-S81.

Louis, W.R., Duck, J.M., Terry, D.J., Schuller, R.A., & Lalonde, R.N. (2007). Why do citizens want to keep refugees out? Threats, fairness and hostile norms in the treatment of asylum seekers. *European Journal of Social Psychology*, *37*, 53-73.

Lowe, S.R., Manove, E.E., & Rhodes, J.E. (2013). Posttraumatic stress and posttraumatic growth among low-income mothers who survived Hurricane Katrina. *Journal of Consulting and Clinical Psychology, 81,* 877–889.

Lucas, C.H. & Davis, A. (2018). Not 'getting on the bandwagon': When climate change is a matter of unconcern. *Environment and Planning E: Nature and Space*, *2*(1), 129-149.

Markowitz, E.M. (2012). Is climate change an ethical issue? Exploring young adults' beliefs about climate and morality. *Climatic Change, 114*, 479-495.

Markowitz, E.M. & Shariff, A.F. (2012). Climate change and moral judgment. *Nature Climate Change, 2*, 243-247.

McCright, A.M., Dunlap, R.E., & Marquart-Pyatt, S. T. (2016). Political ideology and views about climate change in the European Union. *Environmental Politics, 25*, 338-358.

McCright, A.M., Dunlap, R.E., & Xiao, C. (2013). Perceived scientific agreement and support for government action on climate change in the USA. *Climatic Change, 119*, 511-518.

Nachbaur, J., Feygina, I., Lipkowitz, E., & Karwat, D. (2017). *Perspectives on Governance for Climate Change Resilience: Status Quo and Reforms.* Arizona State University Consortium for Science, Policy & Outcomes.

Napier, J.L., Mandisodza, A.N., Andersen, S.M., & Jost, J.T. (2006). System justification in responding to the poor and displaced in the aftermath of hurricane Katrina. *Analyses of Social Issues and Public Policy, 6*, 57-73.

National Security Council. (2012). *Climate and Social Stress: Implications for Security Analysis*. Retrieved from: https://www.nap.edu/catalog/14682/climate-and-social-stress-implications-for-security-analysis.

Obradovich, N. (2016). Climate change may speed democratic turnover. *Climatic Change, 140*, 135-147.

Oreskes, N. (2011). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. New York, NY: Bloomsbury Press.

Peeters, W., Smet, A.D., Diependaele, L., Sterckx, S., McNeal, R.H., & De Smet, A. (2015). *Climate change and individual responsibility: Agency, Moral Disengagement and the Motivational Gap*. New York, NY: Springer.

Pereira, C., Vala, J., & Costa-Lopes, R. (2010). From prejudice to discrimination: The legitimizing role of perceived threat in discrimination against immigrants. *European Journal of Social Psychology*, *40*, 1231-1250.

Pope Francis. (2015). *Laudato Si': On Care for Our Common Home* [Encyclical].

Prediger, S., Vollan, B., & Hermann, B. (2014). Resource scarcity and antisocial behavior. *Journal of Public Economics, 119*, 1-9.

Raleigh, C. (2011). The search for safety: The effects of conflict, poverty and ecological influences on migration in the developing world. *Global Environmental Change, 215,* S82-S93.

Ransan-Cooper, H., Farbotko, C., McNamara, K. E., Thornton, F., & Chevalier, E. (2015).
Being(s) framed: The means and ends of framing environmental migrants. *Global Environmental Changes, 35,* 106-115.

Reacher, M., McKenzie, K., Lane, C., Nichols, T., Kedge, I., Iversen, A, Hepple, P., Walter, T., Laxton, C., Simpson, J., & Lewes Flood Action Recovery Team. (2004). Health impacts of flooding in Lewes: A comparison of reported gastrointestinal and other illness and mental health in flooded and non-flooded households. *Communicable Disease and Public Health, 7,* 39-46.

Riek, B.M., Mania, E.W., & Gaertner, S.L. (2006). Intergroup threat and outgroup attitudes: A meta-analytic review. *Personality and Social Psychology Review*, *10*, 336-353.

Reuveny, R. (2007). Climate change-induced migration and violent conflict. *Political Geography, 26,* 656-673.

Robotham, D. (2011). Sleep as a public health concern: Insomnia and mental health. *Journal of Public Mental Health, 10,* 234-237.

Rothschild, Z.K., Landau, M.J., Sullivan, D.L., & Keefer, L.A. (2012). A dual-motive model of scapegoating. *Journal of Personality and Social Psychology*, *102*, 1148-1163.

Schlenker, W., & Lobell, D.B. (2010). Robust negative impacts of climate change on African agriculture. *Environmental Research Letters, 5*, e014010.

Shah, A.K., Mullainathan, S. & Shafir, E. (2012). Some consequences of having too little. *Science, 338,* 682-685.

Sheehy, A. (2017). The rise of the far right. *Harvard Political Review.* Retrieved from: http://harvardpolitics.com/world/rise-of-far-right/.

Sherif, M., Harvey, O.J., White, B.J., Hood, W. & Sherif, C.W. (1961). *Intergroup Conflict and Cooperation: The Robbers Cave Experiment* (pp. 155–184). Norman, OK: The University Book Exchange,.

Southern Poverty Law Center. (2017). *Hate groups increase for second consecutive year as Trump electrifies radical right*. Retrieved from: https://www.splcenter.org/news/2017/02/15/hate-groups-increase-second-consecutive-year-trump-electrifies-radical-right.

Suls, R. (2017). Public divided over Keystone XL, Dakota pipelines; Democrats turn decisively against Keystone. *Pew Research Center.* Retrieved from: http://www.pewresearch.org/fact-tank/2017/02/21/public-divided-over-keystone-xl-dakota-pipelines-democrats-turn-decisively-against-keystone/.Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational identity: A reader*, 56-65.

Trenberth, K.E., Fasullo, J.T., & Shepherd, T.G. (2015). Attribution of climate extreme events. *Nature Climate Change*, *5*, 725–730.

Trombley, J., Chalupka, S., & Anderko, L. (2017). Climate Change and Mental Health. *American Journal of Nursing, 117,* 44–52.

Vainio, A., Mäkiniemi, J.P., & Paloniemi, R. (2014). System justification and the perception of food risks. *Group Processes & Intergroup Relations*, *17*, 509-523.

van der Weele, J. J., (2014). Inconvenient truths: Determinants of strategic ignorance in moral dilemmas. https://ssrn.com/abstract=2247288.

van Setten, M., Scheepers, P., & Lubbers, M. (2017). Support for restrictive immigration policies in the European Union 2002–2013: The impact of economic strain and ethnic threat for vulnerable economic groups. *European Societies*, 1-26.

Vinik, D. (2016). Why the GOP is trying to stop the Pentagon's climate plan. *Politico.* Retrieved from: https://www.politico.com/agenda/story/2016/06/republicans-trying-to-stop-pentagon-climate-plan-000149.

von Uexkull, N., Croicu, M., Fjelde, H., & Buhaug, H. (2016). Civil conflict sensitivity to growing-season drought. *Proceedings of the National Academies of Sciences, 113*, 12391-12396.

Warner, K., Hamza, M., Oliver-Smith, A., Renaud, F., & Julca, A. (2010). Climate change, environmental degradation and migration. *Natural Hazards*, *55*, 689-715.

Warrell, C.E., Femia, F., & Sternberg, T. (2015). Did we see it coming? State fragility, climate vulnerability, and the uprisings in Syria and Egypt. *SAIS Review of International Affairs, 35*, 29-46.

Weems, C.F., Watts, S.E., Marsee, M.A., Taylor, L.K., Costa, N.M., Cannon, M.F., Carrion, V.G. & Pina, A.A. (2007). The psychosocial impact of Hurricane Katrina: Contextual differences in psychological symptoms, social support, and discrimination. *Behaviour Research and Therapy, 45,* 2295–2306.

Wong, J.C. & Levin, S. (2016). Standing rock protestors hold out against extraordinary police violence. *The Guardian.* Retrieved from: https://www.theguardian.com/us-news/2016/nov/29/standing-rock-protest-north-dakota-shutdown-evacuation.

Zoppo, A. (2017). Meet the four republican lawmakers who want to abolish the EPA. *NBC New.s* Retrieved from: https://www.nbcnews.com/news/us-news/meet-4-republican-lawmakers-who-want-abolish-epa-n717061.