Climate Solutions Must Prioritize the *Human* Dimensions of the Crisis
Bob Doppelt

A year after Hurricane Maria ravaged Puerto Rico in 2017, many residents continue to struggle with mental illness. One suicide prevention hotline center, for example, has had over 4,500 calls, double those before Maria. That same year significant psychological problems also appeared in Sonoma County, California after historic wildfires destroyed entire neighborhoods.

Are these unique occurrences, experienced by just a small number of people? No. They are common human reactions to disasters and persistent overwhelming (toxic) stresses generated by rising global temperatures. Research has found that the psychological impacts often include severe anxiety, depression, PTSD, suicides, hopelessness, helplessness, moral distress, compassion fatigue, and other mental health disorders.

For example, 30 to 50 percent of people affected by Hurricane Katrina suffered from PTSD, severe depression, anxiety, or hopelessness, and suicides went up substantially. In the UK after the 2007 summer floods, 75 percent of the people directly impacted experienced severe anxiety, 50 percent experienced depression, and about 25 percent suffered from PTSD. Similar impacts have been found worldwide within people impacted by wildfires. After Superstorm Sandy pummeled the U.S. Northeast, more than 20 percent of residents reported PTSD, 33 percent reported depression and 46 percent reported severe anxiety. In 2017 the American Psychological Association concluded that hopelessness and helplessness are growing due to the "unrelenting day-by-day despair" of climate change.

Just as important, the harmful human reactions to rising global temperatures go beyond individual psychological problems to include intensifying psycho-social-spiritual maladies such drug and alcohol abuse, child and spousal abuse, aggression, extremism, crime, and violence. For example, research has found that hotter temperatures, on their own, can increase assaults, robberies, burglaries, larceny and vehicle theft. The Canadian Red Cross found that the risk of violence can increase by up to 300 percent after a disaster depending on the type and scope of individual and collective protective factors that are undermined.

One result of these troubles will be mounting economic costs. Workers traumatized by climate change-related disasters, for example, will experience declining income if they are less productive when they return to work. Businesses with traumatized employees will see a reduction in output and profits. Families will incur additional monetary costs from payments for counseling services. Students who are traumatized or living with a traumatized family member might perform less well in school, with negative impacts on their employability and earnings for

the rest of their lives. Communities with high levels of individual and collective traumas will struggle with degraded social capital; erosion of the relationships and trust that are essential to function efficiently and address problems. Many other costs can be expected if the psychological and psycho-social-spiritual impacts of rising global temperatures are left unaddressed.

Most importantly, atmospheric concentrations of carbon dioxide and other climate damaging greenhouse gasses are currently on a pace to double by around mid-century, which will increase global temperatures by at least 3.6 degrees Fahrenheit (2C) above pre-industrial levels, and possibly far higher. Unless substantial investments are made in preventative human resilience building, the psychological and psycho-social-spiritual impacts of rising global temperatures will undermine the safety, health, and wellbeing of individuals, groups, and entire communities everywhere.

Further, climate change-enhanced acute traumas and toxic stresses will also imperil efforts to reduce the climate crisis to manageable levels. That's because fearful people often retreat into a self-protective survival mode that leaves them uninterested in external issues like reducing greenhouse gasses.

These hazards are already visible around the globe. Yet, most organizations and professionals working on climate solutions have failed to see the urgent need to address them. They have also failed to realize that, by launching Transformational Resilience initiatives, these problems can be prevented, and individuals and groups can learn how to use climate change-aggravated adversities as catalysts to increase personal and social wellbeing as well as environmental conditions.

Rapid reductions in carbon emissions must be a top priority for all towns and cities, as is preparing human-built infrastructure and natural resources to withstand climate impacts.

Equally important, but almost completely unaddressed, is the urgent need to address the human dimensions of the climate crisis by rapidly launching preventative Transformational Resilience initiatives in communities worldwide.

The goal of these initiatives must be to ensure that all adults and youth have the opportunity to learn knowledge and skills that enable them to respond to many types of traumas and toxic stresses without harming themselves, other people, or the natural environment, and use those hardships as catalysts to learn about themselves and the world, grow as people, and find new direction and hope in life in ways that actually increase wellbeing.

Transformational Resilience is fundamentally different from disaster mental health and Psychological First Aid. These programs seek to stabilize people during and immediately after a disaster. However, many disaster mental health programs are already fragile and will be increasingly overwhelmed as climate change-enhanced disasters become more frequent and extreme. Further, many of the most harmful psychological and psycho-social-spiritual impacts of climate disruption are caused by ongoing toxic stresses, not acute disasters.

It is therefore important to strengthening disaster mental health, Psychological First Aid, and similar programs. However, this alone is woefully insufficient to address the growing array of adverse psychological and psycho-social-spiritual maladies generated by rising global temperatures.

We must also rethink what resilience means in the face of growing climate adversities. The common definition is the capacity to "bounce back" to pre-impact conditions. This notion, however, will become increasingly irrelevant as temperatures rise because it will be impossible to return to anything resembling previous conditions. Even if global society suddenly finds the political wherewithal to cut emissions far enough to slow or reverse climate disruption, there is convincing evidence that the psychological and psycho-social-spiritual impacts will continue to grow for a century or more, and be the slowest to recover.

The only response that makes sense is to launch initiatives that build widespread capacity to <u>prevent</u> harmful psychological and psycho-social-spiritual responses before they occur. This requires empowering <u>all </u>adults and youth with the knowledge, skills, and tools that build their capacity to:

- Think and act in healthy ways even in ongoing unhealthy conditions.
- Use climate change-enhanced; and many other, adversities as transformational catalysts to find new sources of meaning, purpose, and hope in life.
- Become actively involved in pro-social and solution-focused initiatives.

As seen in programs around the world that address one of more of these goals, achieving these ends requires collaborative efforts at the individual, organization, and community levels to help everyone learn what we call:

"Presencing" skills, which include:

- Basic knowledge about how trauma and toxic stress can affect their mind and body--and the thinking and behaviors of groups--everyone on the planet should become "trauma-informed."

- Simple, self-administrable, age and culturally appropriate body and mind regulation skills. These can range from body-based to breath-based and thought-based skills, music and dance skills.
- Simple skills and methods to build and maintain robust social support networks - connections with one or more people that can provide unconditional support and/or practical assistance when needed.

In psychology these proficiencies are often called "self-regulation" resilience skills.

Just as importantly from a climate change perspective are what can be called "Purposing" skills, which include:
- Information and skills that help people learn how to turn toward adversities, rather than denying or ignoring them, and use them as motivation to learn new things about the world and themselves.
- Values awareness skills that help people clarify what is truly important in life, how they want to live, and how they want treat others and the natural environment in the midst of ongoing adversity.
- Hope generation skills that help people use difficult experiences to find new sources of meaning, direction, and hopefulness in life.

In psychology these proficiencies are often called "adversity-based" or "post-traumatic growth" resilience skills.

Building widespread capacity for Transformational Resilience requires the participation of numerous areas of expertise, including but by no means limited to, people focused on:
- Civic and community leadership
- Business leadership
- Psychological trauma and resilience building
- Mental health
- Psycho-social-spiritual maladies
- Public health
- Climate, environmental, and social justice
- K-12 and other youth programs
- Higher education
- Communities of faith and spirituality

People from these fields can be brought together under the umbrella of a Transformational Resilience Leadership Council (TRLC) in their neighborhood or community. The TRLC can begin the process of building Transformational Resilience by gathering baseline information including:

- *Their areas existing levels of psychological and psycho-social-spiritual resilience*. This can be accomplished by assessing the levels of Adverse Childhood Experiences (ACEs), alcohol and drug abuse, crime and violence, along with how different populations responded to previous traumas in the community (such as violence or natural disasters) and the capacity of local leaders and organizations to quickly come together, and collaborate to constructively assist residents in disasters.

- *The norms and social narratives that dominate different neighborhoods and the community as a whole to determine which promote Transformational Resilience and which do not.* For example, through community meetings, personal interviews, and group surveys community can be asked where they get information and news from, what or who's perspective they trust the most, what message they hear most about key issues, and who or what local groups do they hear from most. From this the dominant existing social narratives can be identified.

- *The ability of residents to learn psychological and psycho-social-spiritual resilience information and skills*. This can be accomplished by assessing number and types of resilience information and skills building educational and training programs that exist, and the populations they serve. From this a gap analysis can be completed to determine who has access to age and culturally appropriate resilience education and skills training opportunities and which populations do not.

- *With this information in hand, the TRLC can develop a strategy to expand existing resilience education and training programs, and launch new ones.* The goal should be to ensure that within five years or so, every adult and child has the opportunity to learn Transformational Resilience information and skills. To support these efforts, it is important for TRLC members to regularly come together to promote new social norms and narratives focused on building Transformational Resilience to help residents continually hear how to constructively respond to adversities in ways that increase personal, social, and ecological well-being.

It is important to know that building widespread capacity for Transformational Resilience will people cope with <u>many</u> types of adversities, not just climate change related. For example, it will help adults and youth constructively respond to a wide-range of human-made disasters, such as

terrorists acts and school shootings, as well as non-climate change related natural disasters such as earthquakes in ways that also help people learn, grow, and enhance wellbeing. Learning Transformational Resilience skills will also help people successfully cope with a wide range of toxic stresses, including family and job-related stresses.

The short description of Transformational Resilience initiatives provided here is the outcome of a review of resilience building occurring in communities around the world to prevent Adverse Childhood Experiences, partner, interpersonal, and community violence, mental health and psychosocial impacts following natural disasters, and many other individual and collective traumas. Much of it is explained in my book *Transformational Resilience: How Building Human Resilience to Climate Disruption Can Safeguard Society and Increase Wellbeing* (Greenleaf Publishing 2016). The research is also described in the "ITRC Library" found on the website of the International Transformational Resilience Coalition.

Rapidly and dramatically reducing climate-damaging greenhouse gas emissions and preparing external physical infrastructure for the impacts of climate change must be top priorities. However, it will not be possible to reduce climate change to manageable levels unless the *human* psychological and psycho-social-spiritual aspects of the crisis are aggressively addressed. This requires rapidly building widespread capacity for Transformational Resilience worldwide.

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Bob Doppelt is the founder and coordinator of the International Transformational Resilience Coalition (ITRC) a network of over 350 trauma treatment, mental health, public health, education, climate, disaster management, faith, and other leaders working to build psychological and psycho-social-spiritual resilience for the impacts of climate change. For almost a decade he directed the Climate Leadership Initiative in the Institute for a Sustainable Environment at the University of Oregon. He is trained in counseling psychology and environmental management and has combined the two fields throughout his career. He is also a long time mindfulness teacher and is a Mindfulness-based Stress Reduction (MBSR) instructor. Bob has published numerous books on the human dimensions of environmental and climate issues. He most recent book is *Transformational Resilience: How Building Human Resilience to Climate Disruption Can Safeguard Society and Increase Wellbeing* (Greenleaf Publishing 2016).