

## PART III: RESILIENCE, THE BASICS

### Community Resilience in the 21st Century

In this video, we're going to bring resilience, which we defined and discussed in the last video, into the context of this century's simmering and complex **"E4" crises**, with (1) ecological, (2) energy, (3) economic, and (4) equity dimensions. We'll clarify the relationship between sustainability and resilience, and show why a lot of the climate change resilience discussion—while necessary—doesn't go far enough. And we'll explain why this video series focuses primarily on building resilience at the community level, as opposed to the global, national, or household level.

Let's start by exploring the relationship between **sustainability and resilience**. Sustainability was a watchword for environmentalists during the last four decades—it has even become a common marketing buzzword—but in recent years resilience is often lauded as a worthy or even superior goal. Well, there is no conflict or competition between these two concepts. Sustainability could be described as a condition in which human society doesn't degrade ecosystems, thereby undermining its own long-term viability. That goal is more relevant than ever. Resilience, on the other hand, is about adaptability in the face of disturbance. Society needs to develop both qualities at this moment in time—and fast. Society needs to be both sustainable *and* resilient.

Not only is there no conflict between sustainability and resilience, there is a mutual support between the two. A major factor in building resilience in human systems is making them less likely to produce future disturbances—in other words, making them more sustainable. If we reduce reliance on fossil fuels today, society becomes more sustainable because we reduce future climate impacts, and it also becomes more resilient because we reduce the economic fallout from oil, gas, and coal depletion and the boom and bust

cycles that increasingly characterize fossil fuel markets. In reality, sustainability is not a steady state, because nothing in nature persists unchanged. A sustainable society must be able to adapt to new conditions—and that means resilience.

A great deal of discussion about resilience these days is geared specifically to the impacts of climate change. This discussion is often narrowly focused on projects like building sea walls and installing pumps to keep out impending flood surges, although in some cases it touches on adaptability in broader dimensions of society. For example, in 2013 New York City approved a \$15 billion resilience plan with 250 specific recommendations, including the building of levees and floodwalls, as well as ways to help homeowners deal with flooding. But New York's planners are also looking at the broader dimensions of urban sustainability. The city's climate action task force includes regional transportation providers who manage subways, buses, and railroads. Planners are considering how extreme droughts and inland floods could affect the watershed that supplies New York's drinking water. Connections between energy, water, transportation, telecommunications, sanitation, health, food, and public safety, and connections with international supply chains are all being investigated.

Moreover, resilience is needed not just in coastal cities. Many if not all communities will have to deal with impacts to water and food systems, and with worsening wildfires as well. And, as we saw in our first few videos, the impending threats to our current status quo come from more than just climate change: we also have to consider the impacts of resource depletion, financial instability, economic and social inequity, other kinds of environmental pollution, loss of biodiversity, overpopulation, and still more ongoing and entirely foreseeable trends. This means that current climate resilience efforts are necessary but far from sufficient. We need to be thinking much more broadly and deeply.

This raises questions about the scale and scope of resilience-building efforts. Since our challenges are multi-dimensional and global, should we therefore focus our resilience-building efforts at the global level? Recall from video 13 the concept of **panarchy**, which describes how events at one hierarchical level of systems affect others at higher or lower levels in the system. That suggests interventions in the system can be made at any level—from the individual to the global.

We need to think in terms of all the levels of hierarchy—from the global ecosystem and the global economy down to the household. It's important to take action on global issues in the national arena, such as by supporting carbon taxes or bans on extreme methods of fossil fuel production like fracking, and in our personal lives, such as by driving and flying less. However, there may be a sweet spot, in terms of maximizing the impact of our actions, in working at the community level—at least in the United States.

There are two reasons for this. First, in the U.S., community-level resilience building makes practical sense because of how our political system is structured. By design, new ideas typically come to fruition very slowly at the federal level. In contrast, local and state governments often have great flexibility in making public decisions, as well as significant regulatory and investment power over the issues that most affect everyday life: social services like health care and police; public goods like utilities; civic institutions like schools and courts; land use and transport planning; and so on.

That's why our cities and states are traditionally the country's laboratories for social and economic innovation. One community's experiment can inspire thousands of others--providing insights and best practices and ultimately building support for larger-scale change. During the last decade, while national and international climate efforts mostly languished, cities across the country followed early leaders like San Francisco and Seattle and started their own initiatives to fight climate change.

Local innovation works as well as it does is because it's at the community level where we most directly interact with the people and institutions that make up our society. It's where we're most affected by the decisions society makes: what jobs are available to us, what infrastructure is available for our use, and what policies exist that limit or empower us. And critically, it's where the majority of us who do *not* wield major political or economic power can most directly affect society, as voters, neighbors, entrepreneurs, shoppers, activists, and elected officials.

That brings us to the second argument for building resilience at the community level: it's both *ethical* and *practical* for community members to be at the heart of community resilience building work. Everyone in a community is a stakeholder—and stakeholders need the opportunity not only to participate in resilience building, but to have some responsibility for it. That may sound self-evident, but really it isn't. It's easy to imagine a very different approach in which a central government attempts to direct the resilience-building efforts of thousands of communities remotely, relying on uniform indicators, outside managers, and centralized resources.

Decades of research underline how important it is for local stakeholders to have real power in decisions that affect them. Some of the central concepts of resilience science tell us why this particularly applies to communities. For example:

- As we saw in the previous video, ***identity*** is the touchstone of a system. In a democratic society the members of a community have an inherent right to self-determination, and hence the identity of the community emerges from its members.
- Then, ***social capital*** is a community's collective relationships, wisdom, and capacity to organize. It's what gets things done in human systems, and it's richest at the local level.

- And **feedback loops** are how parts of a system learn and respond to what's happening in other parts of the system. If feedbacks are too weak or too slow, the system can be overwhelmed by change before it has a chance to respond. Well, personal relationships, local knowledge, and shared local culture all tend to make feedback loops stronger at the community level than at higher levels.

We humans are social animals, and so our personal and collective identities are tied to community: to our relationships to other people and to a place; our sense of shared experience, history and culture; the smells and sounds and even the soil that we associate with “home.” How else can community members recognize themselves as stakeholders if not by seeing themselves as part of a larger whole?

In the next video we'll discuss six foundations that appear to be essential for community resilience—no matter where or how community resilience efforts are undertaken, or which challenges are of most concern locally.