

Think Resilience Course From the Post Carbon Institute
Summary for Members of the Napa GPAC
August 2020

This course has some great information for anyone responsible for making local community decisions that will impact climate, which really is any local decision-maker. One of the premises is that in many ways, the greatest impact on our climate issues can be made locally. Here is the link to the course, which has about 20 lessons: <https://education.resilience.org>

Each lesson consists of a lecture of about 10-15 minutes, with grouped refresher quizzes. While it is worth listening to all the lessons, I am summarizing the key terms here, mostly collecting and compiling the introductory descriptions for each lesson. Most of the wording comes from the website and videos. Portions underlined and bold are my emphasis But it all really resonates for me, because it underscores how critical it is that:

- We have climate issues front and center in all decision making, and
- We understand local action, if taken everywhere, can really make an enormous difference.

At the end I have included a note on how this course gels with the considerable thinking that I have been doing in the context of our GPAC work.

If you don't want to skim this entire document, please skip to the end to the section entitled: **Meeting Essential Community Needs and Resilience in Major Sectors.** I have combined two of the last lessons that I think are the most relevant to local decision-makers.

Energy

Energy is key to everything. It's an essential driver of the natural world and of the human world, and it will also be pivotal to the societal transformations we'll be experiencing in the 21st century and beyond.

Population, Consumption, and Depletion

This lesson explores how adoption of tools, language, agriculture, and most especially fossil fuels allowed humans to temporarily overcome the carrying capacity of the planet to support our growing population and consumption, **and why those trends can no longer continue.**

How do we replace finite resources on a finite planet, where all our supplies are not so easily substitutable?

Pollution

The vast majority of pollution comes from human activities. That's because we humans are able to use energy and tools to extract, transform, use, and discard natural resources, producing wastes of many kinds and in ever-larger quantities.

Belief Systems

Every human society has a shared set of beliefs to encourage cooperative behavior. These beliefs may be religious or secular in nature. In either case, they provide what many anthropologists call the *superstructure* of society. Modern industrial society features the pervasive belief in inevitable material progress and economic growth—a superstructure very much suited to our particular, fossil-fueled *infrastructure*.

Biodiversity

As our human populations and consumption habits have grown, our destructive land use practices and environmentally harmful pollution have wiped out countless ecosystems around the world. As a result, the numbers of species of insects, fish, amphibians, birds, and mammals are declining—everywhere. Biologists call this widespread, rapid loss of biodiversity the Sixth Extinction, and some Earth scientists say we are creating a new era in Earth's history: the Anthropocene.

Collapse

Historians have long noted that civilizations appear to pass through cycles of expansion and decline. Underlying the factors that appear to contribute to the collapse of civilizations, there may be a deeper dynamic: the relationship between the ability of a society to solve problems and the amount of energy it has available to do work. Unfortunately, most energy production activities are subject to the law of diminishing returns. At what stage in the cycle of expansion and decline might our own civilization find itself today?

Systems Thinking

Understanding and responding intelligently to 21st century problems requires us to think systemically. All systems have: boundaries, inputs, outputs, information flows from and to the surrounding environment, and feedbacks. Systems thinking recognizes the roles of these components, and tries to identify leverage points where small shifts in one thing can produce big shifts in everything. We are reaching a point at which many of our problems are too huge and complex to be resolved by a single technical response.

Shifting Cultural Stories

Some cultural stories we tell ourselves help us make sense of the world around us, but they may also hinder our ability to foresee big social changes and to adjust our behavior accordingly. Therefore, some of these stories need to change: we may need to shift from the consumer economy to a conserver economy; from valuing things to valuing relationships and experiences; from inevitable growth to a steady-state economy; from a politics of mass persuasion to a politics of local engagement.

Culture Change and Neuroscience

Consumerism is a modern version of our biological drives for status seeking and novelty seeking, and makes use of how our brain chemistry develops addictions. We also have an innate tendency to give more weight to present threats and opportunities than to future ones; this is called *discounting the future*, and it makes it hard to sacrifice now to overcome an enormous future risk such as climate change. Fortunately we also have some inherited neurological tendencies that would be useful to encourage, like cooperation, empathy, and altruism.

What Is Resilience?

In ecology, resilience is seen as the ability of a system to absorb disturbance and still retain its basic function and structure. In other words, a system that's resilient can adapt to change without losing the qualities that define what it is and what it does—which together comprise that system's "identity." Resilience boils down to an ability to adapt to both short-term disruption and long-term change while retaining the system's essential identity. Building resilience starts with decisions about what we value about a system.

Community Resilience in the 21st Century

This lesson begins to sharpen the focus on the context of resilience in local community planning, with a particular focus on (1) ecological, (2) energy, (3) economic, and (4) equity dimensions. It clarifies the relationship between sustainability and resilience, and shows why a lot of the climate change resilience discussion—while necessary—doesn't go far enough. It also makes the case for why this course focuses primarily on building resilience at the community level, as opposed to the global, national, or household levels.

Foundations for Building Community Resilience

The Post Carbon Institute developed an easily understood framework that speaks directly to the challenges communities face regarding equity, group decision-making, and their complex social and economic contexts. They identified six foundations that appear necessary for community resilience-building

efforts to be successful. And these are: people, systems thinking, adaptability, transformability, sustainability, and courage.

How Globalization Undermines Resilience

Globalization is largely about the relentless pursuit of economic efficiency. And while there are benefits to efficiency (increasing profits, minimizing waste), as an economic strategy it has serious costs to community resilience. Wealthier countries lose jobs for higher-paid wage laborers, as well as the skill base and the infrastructure to produce goods and equipment. The offshoring of manufacturing to poorer nations reduces domestic pollution but increases pollution in the exporting nations (which often have less stringent regulations). Economic inequality increases, both within nations and between nations. And as regions specialize, there is an overall loss of local diversity in jobs.

Economic Relocalization

The local challenges created by globalization can be partly countered by economic localization. It starts with communities supporting local business rather than giving subsidies such as tax breaks and free utility hook-ups to large, non-local businesses, as is so often done. In fact, half of all private-sector U.S. jobs are still provided by small businesses, and almost all of these businesses are local. Moreover, local dollars have a multiplier effect—when spent within the regional economy, they increase local wealth, local taxes, jobs, charitable contributions, tourism, and entrepreneurship. Local economic development benefits everyone—except maybe big multinational corporations.

Social Justice

This is the huge problem our nation is struggling with now. Systemic inequality reduces the sustainability and resilience of society as a whole. Only some members of society are motivated or able to set aside money and goods for the purpose of capital accumulation. Inequality is also created, sustained, and worsened over time through institutionalized racism, which results in chronic conditions of poverty and lack of access. Ultimately, promoting equity will require strategies like cooperative ownership of business and expanding the commons—the cultural and natural resources that should be accessible to all members of a society, and not privately owned.

Education

Education—particularly early-childhood education—not only sets the foundation for who we become in later life, but also shapes society as a whole. If we want a more resilient society and more resilient communities, we have to plant the seeds today in students both young and old. We need education that trains people in both community and personal resilience building.

Meeting Essential Community Needs and Resilience in Major Sectors

Building community resilience ultimately has to come to grips with the infrastructure that enables any community to function. This lesson looks at *food, water, energy, and money* systems, and how these can be made more resilient. If any one of these essentials goes haywire, a community loses its support capacity very quickly.

Transforming these sectors requires finding ways to use less energy as we strive to provide for human needs for these purposes, and ways to use energy that use fewer material sources and that suit renewable sources. To this end we need to:

- Localize production
- Reduce the scale
- Design products thinking about repair and reuse, and
- Using recycled materials

Economic localization can reduce the need for regional, national and global **transportation**, particularly of goods.

Resilience and sustainability in **buildings** require us to reduce the amount of operational energy (required to operate them) and embodied energy (required to build them and transport the building materials to the site). **This involves using more local natural materials, building to last for centuries, building smaller homes and office buildings and relying on more multi-family housing.** Existing buildings can benefit from retrofitting to more sustainable energy sources.

Land use planning must think about cultivating resiliency. For example start with transportation to increase resiliency by rezoning density and encouraging mixed-use, **especially along corridor streets that are easy to walk and bicycle in.** Make sure zoning favors small business and discourages gentrification.

Sound public policies must be understood and supported by the community. For example, these may relate to food production, strengthening building codes that support renewable energy, and to disaster planning that accounts for climate change adaptation.

A climate element might include as it does in Vancouver BC:

- A goal of 100% renewable energy before 2050
- A climate change adaptation plan
- A green city operations plan
- A neighborhood energy strategy including green transportation, and

- A public education program to promote energy awareness.

Here is a link to the Vancouver plan. The Napa climate element could be just as thorough and ambitious; <https://vancouver.ca/files/cov/Greenest-city-action-plan.pdf>.

Audit your laws and ordinances to ensure that they cultivate rather than discourage resilience.

Review, Assess And Take Action

The variety and scope of challenges we face can seem overwhelming. The best place to challenge them is on the local level. Assess the areas most needing resilience and involve the whole community as you seek to encourage the community to adapt and transform. Address the areas of greatest vulnerability and consider the system elements that impact it, such as supply chains, opportunities, allies, governance, etc. Focus on one or more key project areas. Develop a resilience action plan to determine: what needs to be done, by whom and when, with what resources, and what are the expected results?

Note from John

Perhaps like so many of us, I have not given enough thought over my lifetime to the impacts that our society and my own actions have had on our planet. As a community inextricably connected to our environment in so many ways, the City of Napa has an opportunity to serve as a model for the countless people from around the world who visit us and who admire our wines and natural beauty.

More importantly, as the course stresses, we tend to discount future threats in favor of addressing current problems. Our reality is that the future is looming to the point that if we don't take strong action, the world and life that we leave for our children and grandchildren will be greatly degraded at best. Witness the wildfires and smoke that we currently experience. Our way of life needs to change, and let's make it better for everyone.

Let's really take seriously, not only our prospective climate element, but also the ways that our land use, environmental justice and other components can include front of mind thinking about environmental and climate issues.