Tompkins/Ithaca, NY Talanoa Dialogue Submission

October 29, 2018
In preparation for UNFCCC COP24, Katowice, Poland

A Talanoa Dialogue with the Ithaca and Tompkins County, NY Community about the Local Impacts of Climate Change, and What to Do About It

Organized by

Cornell Institute for Climate Smart Solutions
Cornell University Global Climate Change Science and Policy Course
Tompkins County Climate Protection Initiative
with Support of Engaged Cornell

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Introduction

In October 2018, the Cornell Institute for Climate Smart Solutions (CICSS) and the Tompkins County Climate Protection Initiative (TCCPI) held a Talanoa Dialogue in Ithaca, New York, USA. Initiated by the Government of Fiji at COP23, the purpose of a Talanoa Dialogue is to share stories, build empathy, and make wise decisions for the collective good. The process involves the sharing of ideas, skills, and experience through storytelling, with the goal of humanizing local climate change impacts. By humanizing these impacts we can all put pressure on governments and NGOs to increase their commitment to climate change action. The impetus to hold a local Talanoa Dialogue was largely driven by a newly developed course taught at Cornell University, entitled *Global Climate Change Science and Policy.*

Students from the course organized the local Talanoa Dialogue, a public event, on the evening of October 3, 2018. A group of twenty community members, students and faculty members from Cornell attended the event. During the process, Ithaca and Tompkins County community residents shared stories of how climate change has affected them. The team recorded the participant responses and took notes during the meeting. In addition to the in-person discussion, the student team circulated an online version of the Talanoa Dialogue questions. By providing the questions online, we were able to capture thoughts from individuals who were unable to attend the October 3rd event.

Community stakeholders were asked to provide their personal thoughts on the following three Talanoa Dialogue questions in order to tell our local climate change story:

Where are We?
Where Do We Want to Go?
How Do we Get There?

The Cornell students then analyzed the responses provided by community members. A majority of the participants are actively involved in climate action within their county and therefore may have a greater awareness of climate change and local impacts compared to the average citizen.

The responses, summarized in this document, have been submitted to the United Nations ahead of the COP24 Conference in Katowice, Poland through the Talanoa Platform.

Background on Tompkins County and the City of Ithaca

Tompkins County is located in the Finger Lakes Region of New York State, in the central part of the state. The region is known for its natural beauty, which consists of lakes, waterfalls, gorges, farms and the burgeoning wine industry. Tompkins County is 492 square miles with a population of 103,600 (2013). Roughly half of the county's population lives in the urbanized center, which is the City of Ithaca, surrounded by a small amount of suburban development. The remainder of the county is largely made up of rural towns, with farmlands, woodlands and several villages and hamlets.

The largest economic sector is education services, due to the presence of Cornell University, Ithaca College and Tompkins-Cortland Community College (TC3). This sector provides 45% of the jobs in the county. The next largest economic sectors include manufacturing and a growing high tech sector, followed by healthcare services (Tompkins County Economic Development Strategy 2015 - 2020). Agriculture (dairy, vegetables, fruits and wineries) play a significant role in the economy, as does tourism.

WHERE ARE WE?

Climate Change Impacts in Tompkins County

Community members expressed concerns regarding the extreme weather events that are increasing in both frequency and intensity. This includes heavy rainfall and short term droughts. There have been several recent high intensity rainfall events, that have caused massive flooding and damage to infrastructure, buildings, and houses.

Tompkins County has already experienced significant effects of climate change over the past few decades. Observed data supports this, as exemplified in the new online tool developed by the Cornell Institute for Climate Smart Solutions, entitled "Climate Change in Your County". The interactive tool provides observational data from1950-2013 on how precipitation, temperature and growing seasons have changed in the county. The tool further provides future climate change predictions under both a high emissions and low emissions scenario. Tompkins has seen a significant increase in average temperatures since 1950, with an average increase of 0.2 degrees Fahrenheit per decade since 1950, and an even greater increase since 1980, of 0.6°F per decade (see Figure 1).

The average annual precipitation in Tompkins has increased 0.8 inches per decade since 1950 and 1.8 inches per decade since 1980 (see Figure 2). In addition to an increase in overall precipitation, there has been a 71% increase in heavy rainfall events (2 inches of rainfall in a 24 hour period) in the Northeast, as compared to other regions across the US (USGCRP, 2017).

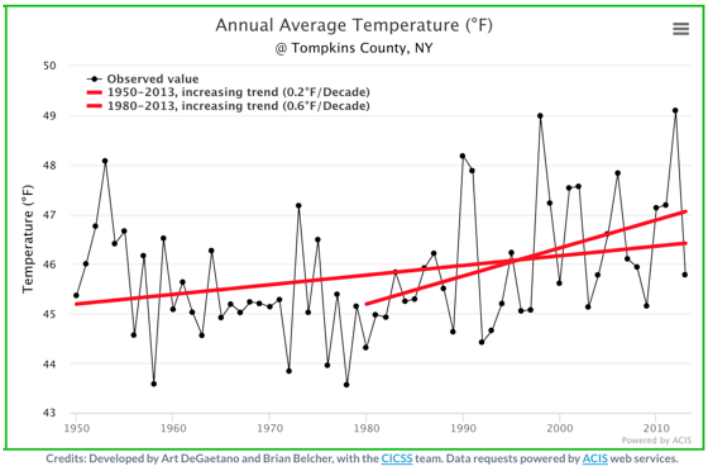

Figure 1. Temperature Change in Tompkins County, NY (1950-2013). Tool from CICSS.

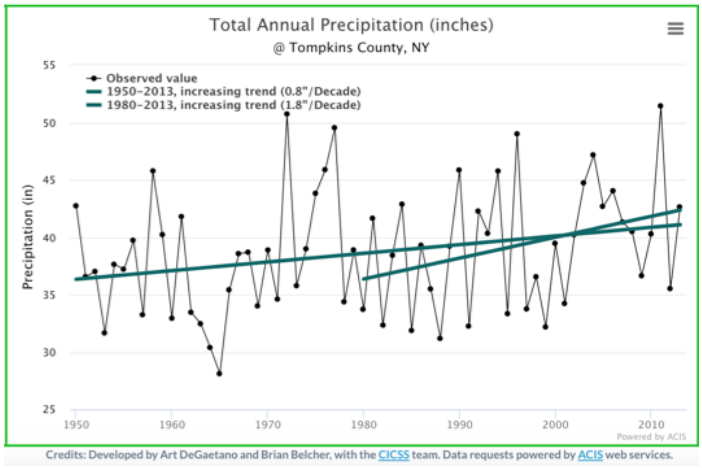

Figure 2. Precipitations Change in Tompkins County, NY (1950-2013). Tool from CICSS.

Evidence of the increase in extreme precipitation events is reflected by one local farmer:

"A normal season does not seem like it happens any more. It's either really dry, or really wet. It seems like when we get rain, it's apocalyptic…We got 5 inches of rain in about 1.5 hours, and I had a lot of soil loss…I see the impact for generations."

- *Farmer from Newfield, NY*

"It rained 8¾ inches that one night! That was terrifying, I'll never forget the sound, it was so relentless."

- *Farmer from Newfield, NY*

In addition to the extreme rainfall events, there have been several recent periods of severe short-term drought, including one in the summer of 2016. During this event, local streams ran dry, and crop yields were significantly impacted. Farmers struggled to bring in water to irrigate their crops, while residents in the area were required to adhere to water restrictions (see Figure 3).

Furthermore, Tompkins County residents have observed more subtle changes in the weather patterns, such as shifting seasons, reduced snowfall, invasive species and pests, as well as unseasonably warm winters followed by rapid winter freezes. These changes impact not only the agriculture in the region but also the tourist activities such as viewing the fall foliage and skiing.

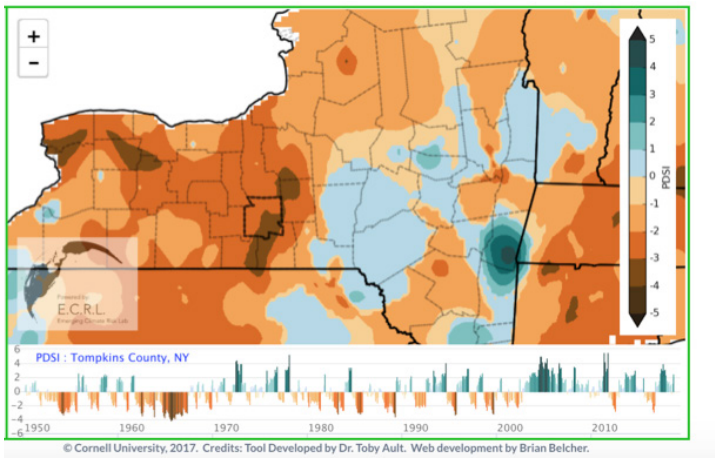

Figure 3. Periods of Short Term Drought in Tompkins County, NY (1950-present). Tool from CICSS.

"In 2016, it was incredible to see local streambeds that had no water flowing, and Taughannock Falls was dry."

- Resident of Ithaca, NY

Story from the Town of Newfield: Flash floods of 2015

Newfield is a small, rural hamlet located just ten miles outside of Ithaca. It experienced severe flash floods in June 2015 as a result of 4" rainfall in one night. A state of emergency was declared, many people had to be temporarily evacuated and homes were destroyed. The town lacked the capacity to handle the situation which caused further damage because of the stagnant water. Many of the affected houses were not in the designated floodplain and did not have flood insurance to support repairs. In addition to the private property damages, local officials estimated an approximate $1.5 million cost for the public infrastructure repairs in Newfield and the surrounding areas. This event not only posed a huge burden on the annual budget of the small town to reinstate the public services, but also left many homes devastated.

"The 2015 flood really affected Newfield. We were not prepared. There was a mobile home village where everyone had to be evacuated to the high school. One of my friends' houses was completely destroyed - there was four feet of water in their house. We need to shift our response to [these events]. The old structures that we have need to be updated, as well as the floodplain maps."

- Resident of Newfield, NY

Local Perceptions of Climate Change

It was clear in the Dialogue that Tompkins County stands out among neighboring counties in the region and nationally when it comes to perceptions about climate change. According to Yale's climate opinion maps, 81% of residents in the county believe that climate change is occurring. This is much higher than the national average of 70%. Furthermore, 67% of residents in the county believe that human activities are the main cause of climate change, which is again much higher than the national average of 57% of people.

Tompkins County is a progressive county and residents are passionate about mitigating climate change and reducing future climate change impacts. The map below, showing county beliefs in climate change (with darker red indicating a higher percentage of belief in climate change), demonstrates visually how Tompkins stands out from the remainder of the state and country (Yale Climate Opinion Maps, 2018). Strong belief in climate change can lead to stronger local climate change action.

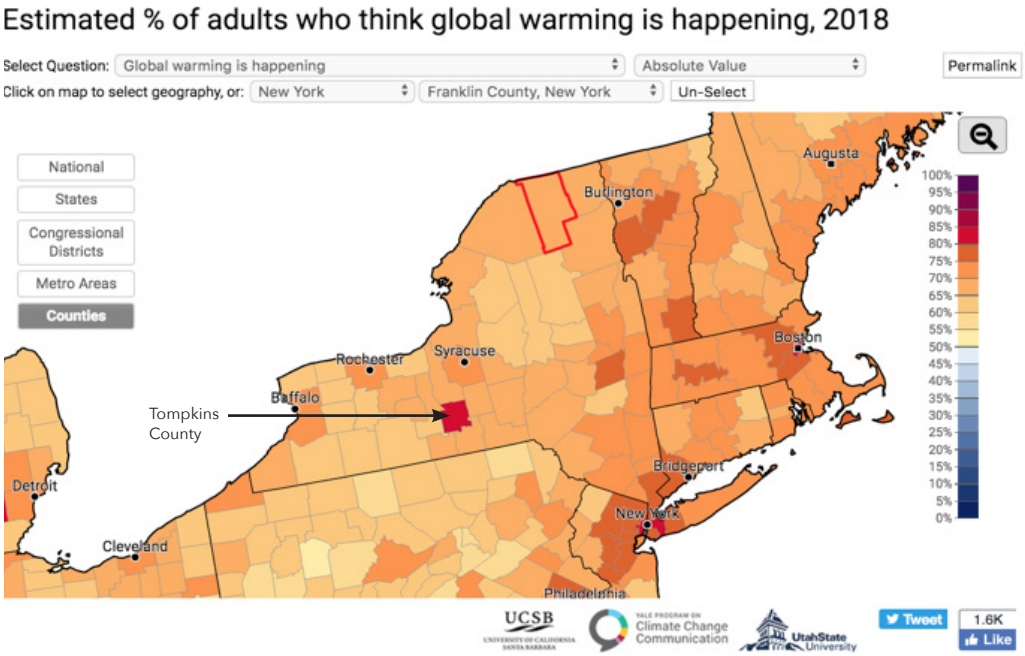

Figure 4. Tompkins County residents' views on Global Warming.

The Importance of Local Climate Change Actors

Local governments, universities and NGOs in Tompkins County have been actively engaged in working on climate change for several decades. Tompkins County, Ithaca and several other surrounding towns have made formal public commitments to reduce their greenhouse gas emissions by 80 percent, using 2008 as the baseline, by 2050. Indeed, many local governments within the county have taken the necessary steps to become designated as Climate Smart Communities, a program run by the State of New York that is designed to help local governments with climate change mitigation and adaptation. The county, City of Ithaca, and five of nine towns are all Climate Smart Communities.

Climate activism in Tompkins County rose to new heights in response to the threat of high volume, horizontal hydrofracking in a region known for its beautiful scenery, rural character, and educated populace. Activists and formerly-uninvolved residents pushed local government to act - both in opposition to fracking and to invest in renewable energy alternatives. Government at the county level and municipalities responded by weighing in with the relevant state officials and by instituting their own studies, programs, and inter-municipal activities. The Tompkins County Council of Governments supported a joint resident/government Gas Drilling Task Force whose six subcommittees generated detailed reports and model protective laws (most notably: road protection, assessment and land valuation). These, in turn, stimulated additional informed activism.

Higher education institutions have played a key role in promoting climate action. Cornell University, Ithaca College, and Tompkins Cortland Community College are all signatories to the American College and University Presidents Climate Commitment (ACUPCC). Cornell University's ambitious commitment to achieve carbon neutrality by 2035 sets it ahead of many comparable universities in terms of climate action. Moreover, Cornell was recognized by the United State's Environmental Protection Agency in 2018 with a Green Power Leadership Award for its environmental commitments and actions, and has committed to a variety of sustainability initiatives. Ithaca College is also a community leader in terms of climate action, engaged in various initiatives. Besides having been an early signatory of the ACUPCC (2007) and of the "We Are Still In" declaration, Ithaca College recently transitioned to an all-renewable electricity source, placing them on track to surpass their interim 50% greenhouse gas reduction goal and further encouraging them to consider strategically expediting their 2050 carbon neutrality date.

There are many active NGOs working on climate change in Tompkins County. Cornell Cooperative Extension of Tompkins County is heavily involved in energy and climate change work, and their programs provide significant educational and facilitative resources for local communities. Other NGOs such as the Tompkins County Climate Protection Initiative, Sustainable Tompkins, Fossil Free Tompkins, Get Your Green Back Tompkins, and Solar Tompkins also are facilitating meaningful dialogue and work in the county. See the most recent TCCPI report on the many efforts of organizations, institutions, municipalities and businesses in Tompkins County to reduce greenhouse gas emissions.

Figure 5. Members of TCCPI and CCETC work on a "Get your Green Back Initiative".

A Success Story of Long-Term Local Climate Activism: The Ban of Hydrofracking in Dryden, NY

An important success story was shared from the town of Dryden, NY, in Tompkins County - which illustrates the power of local governments to make local decisions about climate change, after being pressured to act by their constituents (local town residents).

When gas company agents began seeking natural gas hydro-fracking leases from residents in Dryden, volunteers conducted an information-gathering "walking tour" among their neighbors. The purpose was to learn what Dryden residents knew and wanted to learn about "fracking." Following their survey, additional volunteers formed the Dryden Resource Awareness Coalition (DRAC) in 2009.

As the dangers of fracking to small, rural communities like Dryden became clear, DRAC circulated a petition calling on the Town's Board of Trustees to add a ban of fracking to the Town's zoning law. Despite threats of a lawsuit from large, national fossil fuel companies and their local allies, the Board voted to put a ban into Town law. In a Town Board election which followed shortly thereafter, DRAC members spearheaded the efforts to elect Board members pledged to defend the ban in court. The election cemented control of the Board in the hands of fracking opponents and assured defense of the ban.

A national fracking company sued to overturn the ban. Bolstered by the election results and prodded by DRAC, the Town accepted pro-bono legal representation from Earth Justice, a national environmental advocacy law firm. Over the next several years, the Town prevailed at trial and through two higher court appeals. The final result was a State-wide precedent reaffirming a local municipal government's right under the NY State constitution to control land use within its borders and to ban fracking.

At same time that the Town's ban was being tested in State courts, DRAC members, other Tompkins County residents, and citizens across the State persistently lobbied State agencies, the Legislature, and the Governor to declare a Statewide fracking ban. When a ban was finally declared, one of the reasons given by State authorities was the legal precedent authorizing local fracking bans initiated by DRAC and defended by the Town of Dryden, NY.

Challenges: Land Use and Development

Community members also noted concerns with the growing urbanization and changing land-use patterns that are contributing to climate change. The urban centers are characterized by a loss of green spaces that create heat islands. Community members pointed out that there is a need to change how we plan our neighborhoods and cities, and they advocated for "smart growth." Furthermore, they said that there is a need to conserve undeveloped land. Local residents expressed their belief that urgent actions are required to further ensure risk management and resilience through upgrading infrastructure, including culverts that manage rainwater. In fact, some community members have been working with researchers from Cornell and Cornell Cooperative Extension Tompkins County to collect data to ensure the culverts in the area have the capacity to manage stormwater runoff from the increasing number of extreme precipitation events. They would like local governments to build on the initiative and use the data to fix the culverts.

Challenges: Harmful Algal Blooms in the Finger Lakes

The geography of the region includes eleven long, deep "finger" lakes, with abundant streams throughout the watershed where water flows downstream to the lakes. Large farms and wineries dot the landscape of the surrounding towns. The region's economy is also driven by tourism, with visitors coming to hike and swim in NYS Parks and visit wineries. In the past few years, Harmful Algal Blooms (HABs) have occured in Cayuga Lake and other nearby lakes, that have affected ecosystems, recreation, health, and public drinking water supplies. According to the National Oceanic and Atmospheric Administration (NOAA), HABs are characterized by an overgrowth of algae in a water body due to the increase in water temperatures, and the increase in nutrient levels caused by runoff from septic systems or agricultural land use (livestock or fertilizers) exacerbated by extreme rainfall. The HABs in the summers of 2017 and 2018 were far worse and more toxic than previous blooms. The state was forced to close beaches for swimming, post warnings, and raise awareness. These events affected tourism in the region, and in turn, led to a decline in the local economy.

"Harmful Algal Blooms are affecting drinking water for some residents, have closed beaches to swimming, and made a lot of people and animals sick. It's scary to think that climate change can subtly affect our lake, by making the water warmer and increasing runoff of nutrients that cause algal blooms."

– Resident of Ithaca, NY

Challenges: Transportation & Housing

Mitigation of greenhouse emissions from transportation is a challenge for the region. The sprawling development and the lack of adequate public transportation has created an acute dependency on automobiles for residents to get to work, shopping, and other daily activities. The Tompkins Consolidated Area Transit system (TCAT) provides busing within and surrounding Ithaca, NY. Cornell University encourages use of TCAT and carpooling. A local NGO (BikeWalkTompkins) developed a new partnership with the City and Lime Bikes to put in place a new new bike sharing system, and there is an Ithaca Car Share initiative. CCETC provides education on transportation options through its Way2Go Program. While commendable, these solutions are insufficient because the majority of county residents still rely on automobiles due to the lack of adequate public transportation options.

In addition, the lack of affordable housing in the City has further pushed residents towards the surrounding rural areas of the region, requiring them to drive

further to work. The housing stock in the region is quite old and inefficient, with funding needed for insulation and upgrades to lighting, heating, and renewable energy.

The community members that are most affected by climate change may be the lower income residents who live in energy-inefficient apartments or houses, often located near streams or floodplains. Many of these residents do not have the resources to adapt to climate change by moving their homes or buying air conditioners. These important environmental justice concerns need to be addressed.

"Regular workers...can't afford to live in the Ithaca area. It's very difficult to bike/bus into Ithaca if you can't afford to live here. [There is a need to focus on the] intersection of equity and environmental sustainability."

– Resident of Ithaca, NY

WHERE DO WE WANT TO GO?

Need for Stronger Action, Not just Greenwashing

While New York is considered a progressive state and Tompkins County and its municipalities have been taking more local climate action than other areas of the country, some residents think that the county, city and universities could be doing much more and that the pace of change is not fast enough. Many have lost their trust in the local politicians, and they are skeptical about the promises made to them. Furthermore, they believe that public funds should be used to build climate resilience and urge leaders to divest from investments in oil and gas industries. In addition, local residents strongly believe that the issues regarding climate change should be bipartisan and need greater attention - at a local, state, and federal level.

Ithaca has an engaged population that is more aware of climate change issues. There is a sense of urgency. Residents feel the need to push for greater efforts to address climate change issues, through adoption of a net-zero plan. They feel there is a need to act proactively rather than reactively to ensure resilience of the region to climate change impacts. The increases in energy consumption per capita is an important concern and is closely related to the lifestyle and calls for behavior change. An inter-regional and inter-generational collaborative effort in this direction is necessary.

As several community members noted:

"My impression is that the [local climate change] policies aren't being fully implemented and local politicians are reticent to move forward, despite the fact they are ostensibly supportive. Community members need to keep pushing the politicians for change."

– Resident of Dryden, NY

"The local policy changes have been too subtle. The politicians just want to look green. It is just greenwashing."

– Resident of Tompkins County, NY

HOW DO WE GET THERE?

The Way Forward

There were three key themes that came out at the dialogue.

1) Engage more communities and rural residents:

Only five of the nine Tompkins County towns are participating in the NYS Climate Smart Communities program (in addition to the County (Silver Certified); and City of Ithaca (Bronze Certified). The towns of Caroline; Danby; Dryden; Ithaca (Bronze Certified); and Ulysses (Bronze Certified) are Climate Smart Communities. The more rural towns of Enfield, Groton, Lansing, and Newfield so far have not signed onto the program.

Greater outreach and engagement with rural populations is especially important. Some individuals in rural areas of the community may be experiencing the impacts of climate change, but they may not attribute the changes to human-induced climate change because they see that as a partisan issue. There is an acknowledgement of the power of building personal relationships with other residents to motivate communities to adopt renewable energy and climate change planning. In some cases, public opposition has emerged to large-scale wind or solar farms that has prevented these projects from going forward. But the increase in renewable energy is needed to reduce GHGs in the region, not only in Tompkins, but throughout upstate New York.

"The debate over large-scale renewable energy development reflects the sharp divide between those who want to hold on to a nostalgic view of rural life and those who want to address the future challenges that we face. The climate continues to destabilize at a rate that is difficult to fathom, and is already having an effect locally."

– Resident of Tompkins County, NY

2) Build stronger connections between action at the local and state policies:

While the local authorities and residents of Tompkins County continue to take collaborative initiatives in response to the impacts of climate change, there is an evident gap between the local level and state level policies. This has been a cause of frustration amongst the climate activists in Tompkins County. There is a need to ensure support from state institutions to reinforce the progressive policies at the local level.

"Efforts at the community level are great, but they are too small in scale to have that much of an impact. We face barriers of financial constraints at a local level. We need advocacy on a local level, but we must also move up to the state level to support these local initiatives."

– Resident of Tompkins County, NY

3) Engage youth and minorities:

Many of the most actively-engaged citizens are retirees who have the time to volunteer for environmental NGOs. There is also a higher proportion of upper-middle class, caucasian individuals involved; whereas more minority or lower-income populations, who may be most directly affected by climate change impacts, do not have the time to become involved with volunteering for NGOs or working on local climate action. One resident suggested an idea for every regular TCCPI member to bring a new face to local meetings - a neighbor or someone not involved in the meetings to date. It is also important to engage high school and college students in this work and invite them to climate change events and meetings in their community, so they understand the local implications of a global problem, and that local solutions can have an impact.

"Young people are taking so much leadership in climate change today. We need this engagement to create a new normal."

– Resident of Tompkins County, NY

Key Takeaways: Local to Global Climate Action

Although Tompkins County and its residents have accomplished a lot on the climate protection front, there are many challenges remaining. Local community members strongly encourage the City of Ithaca, towns and the county to proactively reduce their greenhouse gas emissions in line with the Paris Accord. This will require greater education, investment in energy efficient buildings, and an improvement in public transportation options.

Community members feel that towns and local institutions, such as Cornell University, should do everything they can to reduce dependence on fossil fuels, and promote smart growth and local resiliency. Community members also encourage all Parties to the Paris Accord to reduce emissions as fast as possible to reach the goal of 1.5°C; and provide greater support to local mitigation and adaptation projects.

Appendix: Tompkins County and Ithaca, NY Talanoa Dialogue Online Survey

Introduction: Thank you for your interest in our Ithaca/Tompkins Talanoa Dialogue! Come share your story of how extreme weather and climate change is affecting you or your community. The purpose is to share stories, build empathy, and push governments to take stronger action on climate change. Please join us Wednesday, Oct. 3rd, from 7:00-9:00 pm, in the Borg-Warner Room at the Tompkins County Public Library. The event is free and open to the public, and refreshments will be provided – anyone with a Climate Change story to tell should attend!! During the process, Ithaca and Tompkins County community residents will share stories of how climate change has affected them. Our answers to Three Key Questions (Where are we? Where do we want to go? How do we get there?) will be collated and submitted to the United Nations ahead of the COP24 Conference in Poland.

The goal of the evening is to humanize local climate change impacts, and increase the pressure on governments and NGOs to increase their commitment to climate change action. Organized by the Cornell Institute for Climate Smart Solutions, CCE Tompkins County, and the Tompkins County Climate Protection Initiative, and supported by the Cornell Global Climate Change Science and Policy Course and Engaged Cornell. Please share this page and the event with colleagues and friends. If you could register below, we will have a better sense of preparing for the evening - and if you share your written story, we can more easily include it in the Talanoa Dialogue submission to the UN from Ithaca/Tompkins! We hope to see you there!

Please Fill out the Survey:
- Name (First and Last):
- Email address:
- Town/County:
- Organization/Affiliation:

Talanoa Dialogue Questions:
- Where are we (with climate change impacts, planning, or adaptation or mitigation projects in our community/region)? What story can you share about climate change to humanize it for the rest of the world?
- Where do we want to go (to reduce emissions or adapt to climate change in our community/region)? What goals do we (or should we have) in our organization, community or region?
- How do we get there? How can we achieve these goals? What success stories (or plans to overcome obstacles) can we share from our community?

For Further Information:

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