

Summary of Ag and Eco Subcommittee Priority Strategies and Actions

Pathways for Adaptation and Building Resilience in Natural and Working Lands

Pathway B: Adaptation: Sustain, restore, and enhance the health and function of Vermont's natural and working lands to help both natural and human communities adapt to climate change

1. **Increase technical assistance, capacity, education, and resources to support private and municipal farm and forestland owners, planners and managers for climate change adaptation.**
 - a. Enhance and support funding for technical assistance to farmers (e.g. fully fund UVM Extension to support climate adaptation training for agriculture), landowners (e.g. fund climate adaptation training through FPR's Forests & Climate program), and municipalities (e.g. fully implement Act 171)
 - b. Increase funding to Regional Planning Commissions (RPCs) to hire and support natural resource staff.
 - c. Develop & fund climate adaptation planning and training for all farmers and foresters.
2. **Promote and incentivize Climate Adaptation Forest management practices.**
 - a. Develop education/outreach materials and training regarding climate adaptation forestry specific for Vermont forest types and conditions
 - b. Where appropriate, promote planting future climate adapted tree and crop species
 - c. Make the state guide to maintaining and creating resilient forests more usable¹
Develop a 'pay-for-practice' incentive program and explore state tax policy incentives for forest landowners to adopt climate-adaptive management practices.
3. **Promote funding for nature-based solutions and traditional ecological knowledge efforts and incorporate into state funding and planning efforts.**
 - a. Complete a statewide audit of technical assistance, funding, and regulatory programs to review support for NBS and TEK and assess the degree to which they support or hinder climate adaptation, and use the findings to create planning and/or funding prioritization criteria that better align state programs,
 - b. Develop financial mechanisms (e.g., a revolving loan fund, green bank, loan guarantees, pension fund investments, etc.) to de-risk capital investment in and support for NBS and TEK projects.
 - c. Elevate the role TEK plays in climate adaptation and resilience and incorporate TEK into state-led climate assessments, planning efforts, and prioritization frameworks,

¹https://fpr.vermont.gov/sites/fpr/files/Forest_and_Forestry/Forest_Health/Library/Climate%20change%20report_final_v6-18-15a.pdf

- d. Incentivize NBS and TEK in state regulatory processes and funding programs,
 - e. Include local indigenous people, TEK and Vermont's youth in state, regional and municipal resource management planning.
4. **Manage natural and working lands for biodiversity, forest health, and climate resilience.**
- a. Fund increased investment in healthy soils education and implementation of practices.
 - b. Enhance resilience funds to support the financial capacity of land managers to respond and adapt to natural hazard and climate impacts.
 - c. Fund support for local academic institutions, researchers, and applied research to evaluate best climate management practices for natural and working lands.
 - d. Support research efforts to better understand forest ecosystems, local climate change, and impacts to farms, wetlands, forests and ecosystem services.
 - e. Incentivize and provide appropriate support for invasive species control efforts, specifically where populations threaten the perpetuation of forest cover.
 - f. Protect forest health and biodiversity through direction to VT Fish & Wildlife programs and promotion as a primary objective of state lands, municipal lands and parcels in UVA.
5. **Plan and regulate for climate resilience and adaptation.**
- a. Establish "climate resilience zones" informed by existing data, bolstered with new research/science, to identify locations that have high resilience potential for both the natural and built environments and use to inform land use development and regulations
 - b. Develop and implement a Statewide Land Use Plan
 - c. Per the formula in statute, fully fund Regional Planning Commissions (RPCs)
 - d. Revive the State's Central Planning Office to better, more comprehensively address land use and land use changes that support healthy natural and human communities and align state programs. *
 - e. Create an Interagency Office of Climate to coordinate implementation of climate change action across agencies. *
- *This is an important topic that the subcommittee has outstanding disagreements about and will continue discussions in November to work out details of the final recommendation.*
6. **Increase flood resilience of the natural and built environments.**
- a. Incentivize water storage in natural areas to promote flood resilience and biodiversity through expansion of wetland easements that better compensate landowners/managers.
 - b. Ensure opportunities for floodplain reconnection and nature-based solutions are considered a high priority in the Statewide Conservation & Buyout Program through incorporation of multi-stakeholder developed prioritization criteria.
 - c. Invest transportation funding in improving flood resilience and aquatic and terrestrial connectivity.
7. **Increase vegetative growth in riparian areas.**
- a. Expand support for riparian buffer enhancements to easements.
 - b. Support and fund research and design to strategically invest in floodplain and river corridor reforestation efforts.
8. **Promote healthy, connected river corridors and floodplains.**

- a. Develop an inventory of priority/critical headwater and floodplain storage areas, prioritize investments for restoration and protection in these areas, and use to inform Compact Settlement planning efforts.
9. Increase support for wetland restoration and protection.

Pathway D: Viability: Support and empower Vermont’s natural and working lands owners, managers, and caretakers to enhance farm and forest viability and to make informed decisions to increase resilience and adaptation to climate change

1. Support and enhance local food markets for greater viability, mitigation, and resilience benefits:
2. Foster partnerships at all levels (state, federal, nonprofit, and private sector): essential to recognizing, capacitating, and building strategies for landowners to address climate change and enhance community resilience
 - a. Dedicate funds to support Vermont Natural Resources Conservation Districts and farmer watershed organizations with the specific objective of allowing them to reach other farmers, foresters and landowners, with education about climate resilient practice implementation.
 - b. Maintain the Ag & Ecosystems Subcommittee through development and implementation of the Global Warming Solutions Act (GWSA) and the Carbon Action Plan (CAP) to cultivate, build and reinforce state, federal, nonprofit, and private sector collaborations.
 - c. Fund a research project to fully understand household food insecurity in Vermont and how to invest in its elimination. The design and implementation of the research project should engage academics, advocacy groups, and impacted individuals, and include research on geographic spread, root causes, and costs to the health care, educational, and emergency response systems (as written in the 2021-2030 F2P Strategic Plan pg. 158). (Collaborate with Hunger Free Vermont, Vermont Foodbank, VT Releaf Collective).
 - d. Work closely with USDA NRCS’s 2021 Action Plan for Climate Adaptation and Resilience to leverage resources and increase efficiencies of practice education and implementation.
3. Expand funding for existing programs dedicated to farmland access and conservation, and leverage this funding to increase land access through flexible and new ownership financing mechanisms, policies, and models
 - a. Investigate innovative funding mechanisms which increase farmland access and conservation and will assist with implementation of climate smart agricultural practices, crop insurance for diversified Vermont-scale farms, and emergency recovery following extreme weather events, to better respond when climate change related events occur.
 - b. Assist food and farm businesses with navigation of municipal and state permit requirements and regulations. This will create a more supportive environment for business growth and diversification, especially as it relates to on-farm accessory businesses, farm employee housing, and development of off-farm distribution, and storage infrastructure (as written in the 2021-2030 F2P Strategic Plan pg. 33).

PATHWAY E – Economies: Grow and connect local and sustainable natural and working lands’ economies, markets, and food systems while ensuring and providing equitable access to said economies, markets, and food systems for Vermont's people.

1. Develop, expand, and sustain local markets specifically for food, agricultural, and forest products in ways that ensure food sovereignty and security and provide for all Vermont’s peoples.
 - a. Support robust funding for Working Lands Enterprise Initiative and prioritize funding to businesses that have climate/low carbon goals.
 - b. Develop a strategic plan for the forest economy, modeled on the Farm-to-Plate strategic plan but improved to better incorporate impacted stakeholders and principles of equity, as well as examining our current language and approach to forest management.
 - c. Develop supply chain substitutions which better support local products.
 - d. Support research and development efforts, and expansion of new markets and opportunities for local wood products processing and manufacturing in Vermont.
 - e. Develop alternative markets for low-grade wood, focusing on cellulose insulation, bioplastic composites, or biofuels.
 - f. Research the efficacy of food hubs as public infrastructure (e.g libraries and public infrastructure).
 - g. Map Vermont’s agricultural land base and production capacity, including geographic data about predicted climate change impacts, aggregation and distribution infrastructure, and regional dietary needs (as written in the 2021-2030 F2P Strategic Plan pg. 32).
 - h. Provide additional support for critical programs that help Vermont’s agricultural sustainability and ability to address climate issues
2. Promote workforce development in all working lands sector along all points of the supply chain
 - a. Develop, endorse, and implement fair trade and equitable labor practices and just livelihoods for the natural and working lands sector
 - b. Better resource state programs to support landowners’ personal and professional development, and where needed, develop additional affordable and accessible training programs such as apprenticeships, certificates, stackable credentials, and concurrent degrees. Provide training to natural land managers in securing, retaining and supporting employees.
3. Strengthen all aspects of working lands’ supply chains and the associated infrastructure to support them:
 - a. Make significant investment in storage, processing, and distribution infrastructure in order to enhance product innovation and quality across all Vermont food products.
 - b. Support product-specific value chain development through facilitation of producer, distributor and buyer matchups and supporting producer-driven aggregation, distribution, and marketing enterprises.
4. Ensure equitable access to local foods, culturally relevant foods, land, funds, grants, and technical assistance for people who have been historically marginalized and come from impacted communities

- a. Build out and utilize TEK to build out connections to our Tribal and Indigenous communities in the development and utilization of traditional products, e.g. birch syrup, sumac spices, etc.
 - b. Uplift and resource the work of the Vermont Releaf Collective and other BIPOC led organizations
 - c. Improve funding opportunities and create equitable access for BIPOC organizations and BIPOC owned businesses by developing multi-year, unrestricted BIPOC centered grants and loan programs.
 - d. Build out and utilize TEK to build out connections to our Tribal and Indigenous communities in the development and utilization of traditional products, e.g. birch syrup, sumac spices, etc.
 - e. Uplift and resource the work of the Vermont Releaf Collective and other BIPOC led organizations
 - f. Improve funding opportunities and create equitable access for BIPOC organizations and BIPOC owned businesses by developing multi-year, unrestricted BIPOC centered grants and loan programs.
5. **Develop a Vermont food security and sovereignty plan, centered around a thriving food system, and inspired by community-based responses to food insecurity and disruptive events:**
- a. Involve food insecure individuals as well as farmers in the planning, and investigate questions including, but not limited to, affordable housing, health care, transportation, siting of retail grocery stores, food distribution, and ensuring the continued production of food in Vermont.
 - b. Work to adopt state and regional level policies, procedures, and plans to ensure that the Vermont food supply is sufficient to withstand global or national food supply chain disruptions caused by climate change and other disasters.

PATHWAY F – Land use: Shape land use and development that support carbon sequestration and storage, climate resilience and adaptation, and natural and human communities for a sustainable and equitable future

- 1. **Promote and incentivize compact settlement and reduce forest fragmentation**
 - a. Provide enhanced technical assistance and support to municipalities and regions, including outreach and education for landowners and community members, to develop and implement town plans intended to maintain forest blocks and connecting habitat as authorized by Act 171, and effective zoning and subdivision bylaws to maintain forest blocks and connecting habitat.
 - b. Update Act 250 to include criteria that better address climate change, forest fragmentation and forest loss, to incentivize growth in the state’s designated centers and better address the specific challenges to working lands enterprises; revise Act 250 governance, staffing, public engagement, and the role of State Agency permits in the Act 250 process to create the enterprise capacity necessary to implement new climate related criteria and respond to future land use pressure from climate change and in-migration of climate refugees.
 - c. Amend Act 250 to encourage housing development within certain state designated centers in order to incentivize compact, dense settlement in areas with adequate local

land use laws and existing infrastructure, reducing development pressures on open spaces such as greenfields and forested locations.

- d. Reduce regulation of development in downtowns and village centers to cluster development. Remove barriers to clustered development (i.e., Act 250, local zoning, aging infrastructure, etc.), provide statewide guidance, and incentivize housing in village centers and existing built areas to encourage development away from open fields and forests, and river corridors.
 - e. Incentivize, prioritize, and/or require development in growth areas and town centers to achieve compact settlement (must include investment in water/wastewater infrastructure planning and siting).
 - f. Develop required climate-based framework and/or criteria for state grant and regulatory programs.
2. [Include biodiversity and resilience goals in the planning and management of natural and working lands \(both public and private\).](#)
- a. Improve statewide forest planning efforts on State and Federal Lands, including development of an action plan by ANR for how State Lands will help accomplish Vermont Conservation Design targets by 2030 and 2050, and collaborate with the U.S. Forest Service (Green Mountain National Forest) planners for more unified forest planning across the state.
 - b. Support efforts to research and implement practices informed by traditional ecological knowledge such as using fire to promote regeneration and coppicing, where appropriate for Vermont's forests and ecosystems.
 - c. Adopt a state policy of no net-loss of natural and working lands (including active and passively managed forests, agricultural lands, and wetlands) accounting for the transitions of lands within and between these conditions, with aspiration for a net gain. As part of this effort, track land use trends to quantify degree of no net-loss, including aggregating data on subdivision, land transfers, and the loss and/or fragmentation of forests, agricultural lands and wetlands to inform progress and state policy.
 - d. Amend the Use Value Appraisal (UVA) program to allow for
 - (1) greater development of old forest structure as articulated in the targets of Vermont Conservation Design;
 - (2) the enrollment of wildland reserves under the existing forestland category where conditions and eligibility criteria are met as defined by Forest Parks and Recreation, facilitating the development of old forest conditions through active restoration and/or passive management as a means of enrollment in the Old Forest ESTA (ecologically significant treatment area) category;
 - (3) privately held parcels with 'Forever Wild' easements on them, held by a qualified 501c(3), to be enrolled in the UVA Program in the Conservation Category; and
 - (4) the potential for, and implications of, developing a new category of enrollment for land in UVA which allows for passive management modeled on the 'open-space' designation included in similar programs elsewhere in New England.
 - e. Identify priority Natural and Working Lands (NWL) for conservation in or adjacent to the built environment that have large impact to human health, wellbeing, and equity.
 - f. Revise the Flood Hazard Area & River Corridor (FHARC) rule to incorporate statewide jurisdiction and permitting authority for river corridors for all kinds of development.

3. Invest in strategic conservation in order to increase the pace of permanent conservation towards 30x30 targets (described in federal report [“Conserving and Restoring America the Beautiful”](#)), with Vermont Conservation Design acting as the guiding plan for prioritization of efforts.
 - a. Expand use of the Water Infrastructure Sponsorship Program (WISPr) to improve accessibility and use for restoration projects.
 - b. Promote statewide landscape connectivity and forest blocks conservation planning through robust support of the Staying Connective Initiative and use of Vermont Conservation Design and TNC’s Resilient and Connected Landscape in state program prioritization frameworks.
 - c. Through permanent conservation coupled with both active and passive restoration efforts on both public and private lands, allow approximately 9% of Vermont's forest to become (or be maintained as) old forest, specifically targeting 15% of the matrix forest within the highest priority forest blocks identified in Vermont Conservation Design to achieve this condition.
 - d. Create a statewide environmental justice policy.
 - e. Per the formula in statute, fully fund the Vermont Housing & Conservation Board (VHCB); including \$3M for the Farm & Forest Viability Program and increase annual VHCB funding above the statutory amount by 15%, targeting those funds for implementation of conservation actions recommended in CAP, especially those related to forests.
 - f. Identify and protect climate refugia.
 - g. Use best available data and mapping to analyze existing portfolio of conserved agricultural lands to identify forest, wetland and natural community restoration opportunities and prioritize funding for these projects.
 - h. Maintain a suite of Farmland Conservation & Protection tools ranging from voluntary, regulatory and planning (e.g. easements, Act 250, planning, zoning).
4. Increase technical assistance, capacity, education, and resources to support private forestland owners and municipalities as we address the trends relating to intergenerational transfer.
 - a. Support forestland succession/estate planning efforts to reduce forest parcelization and fragmentation through implementation of the Act 171 'Intergenerational Transfer of Forestland Working Group Recommendations' of 2017.
 - b. Develop and implement a farmer retirement program to facilitate the transfer of intact farmland.
5. Avoid, minimize, and mitigate the negative impacts of renewable energy generation on natural and working lands.
 - a. Evaluate the effectiveness of the program of Regional Enhanced Energy Plans and the application of these plans to decisions by the PUC in terms of their ability to direct the siting of renewable energy projects in a manner that avoids the conversion of working and natural lands and the loss of the carbon storage and sequestration, climate resilience, and other co-benefits that are associated with those lands. If the process of developing and implementing the system of Regional Enhanced Energy Plans is not achieving this goal, then adjust the laws and regulations applicable to renewable energy siting to ensure the effectiveness of the plans.

- b. Incentivize or mandate solar and wind capacity on new buildings as well as in previously disturbed/developed areas and avoid and minimize forest clearing for renewables through incentives and other siting policies, rules, and regulations.
- c. Require incentives to site new renewable energy generation on parking lots, rooftops, and already altered locations. And discourage and penalize siting of new renewable energy generation on intact ecosystems, priority forests, and natural land.