



CULTIVATE
SUSTAIN
DEVELOP
PROMOTE

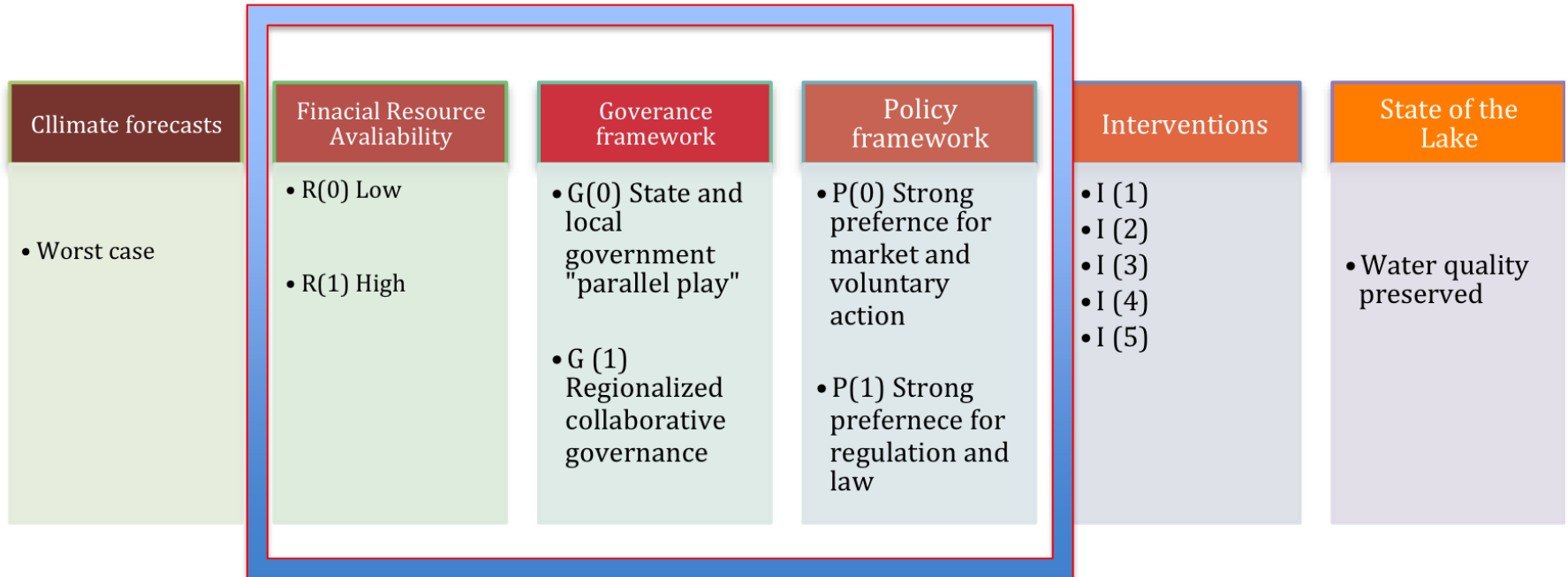


Governance Design, Recourse Allocation and Policy Preferences: Staking Out the Extremes

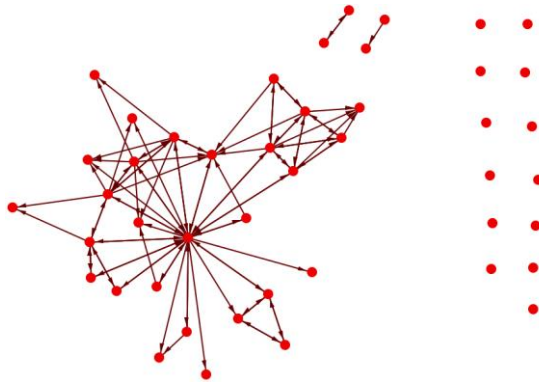
Christopher Koliba, Ph.D.
University of Vermont



Focus of this presentation:



This talk is about:



Governance



Money



Carrots & Sticks

It is also about public will...



Report prepared by Chris Koliba, Asim Zia,
Steve Scheinert, and Katherine Logan

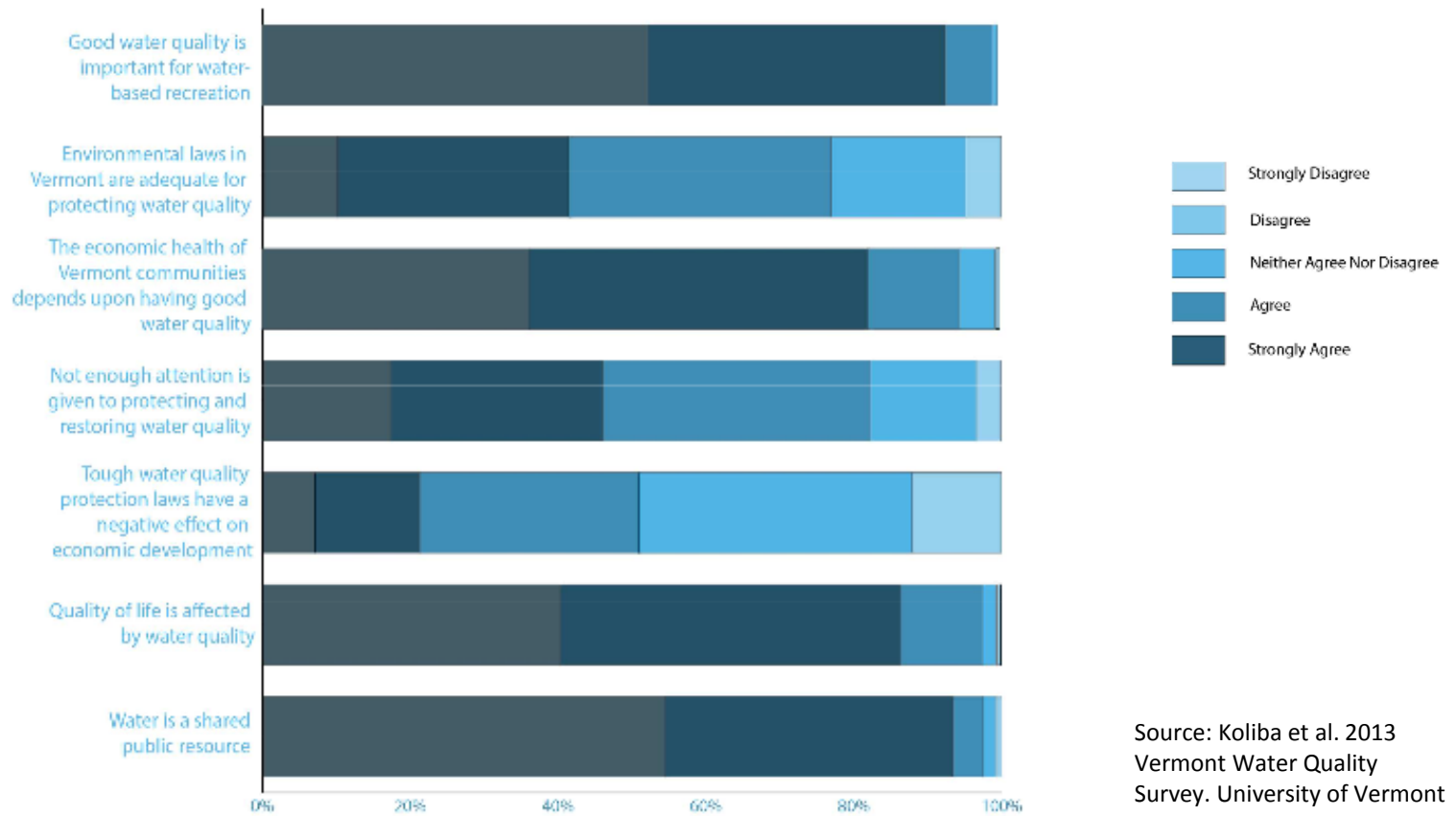


Key Findings from the 2013 Water Quality Survey:

1. Vermonters are deeply concerned about water quality, more so than any other surveyed policy issue.
2. Vermonters believe that water is a public good, and that we ought to focus on the maintenance of recreational opportunities, high quality of life, and economic health as the primary impacts of water quality policy.
3. Vermonters show a strong preference for state-level responsibility for water quality, and also believe that responsibility ought to be clearly designated.
4. Vermonters are convinced that adequate funding ought to be dedicated to water quality in Vermont.
5. Vermonters are largely *unwilling* to allow tax increases or fees in order to fund water quality initiatives and enforcement.
6. Vermonters show the highest level of acceptance of one-time development fees, increased stormwater fees, and excise taxes, with the greatest acceptance being for fees or taxes that are directly related to water usage to fund water quality initiatives and enforcement.
7. Vermonters' recreational habits are significantly impacted by water quality.
8. Socioeconomic, cultural, and life stage factors influence Vermonters' perception of water quality-related legal and economic issues.
9. Vermonters have a fairly high level of confidence in experts on climate change.

Water quality appears to be important to the Vermonters

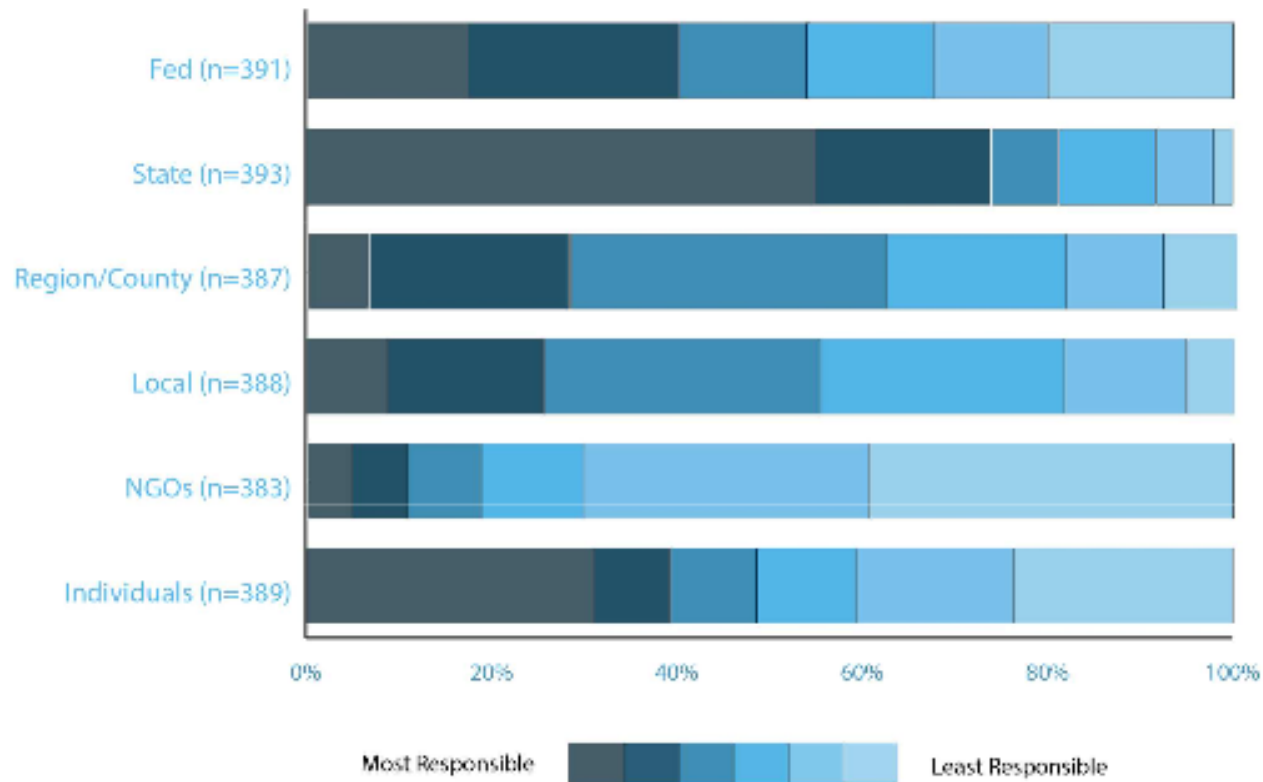
Figure 5: Vermonters' Water Quality Priorities (n=399)



Source: Koliba et al. 2013 Vermont Water Quality Survey. University of Vermont

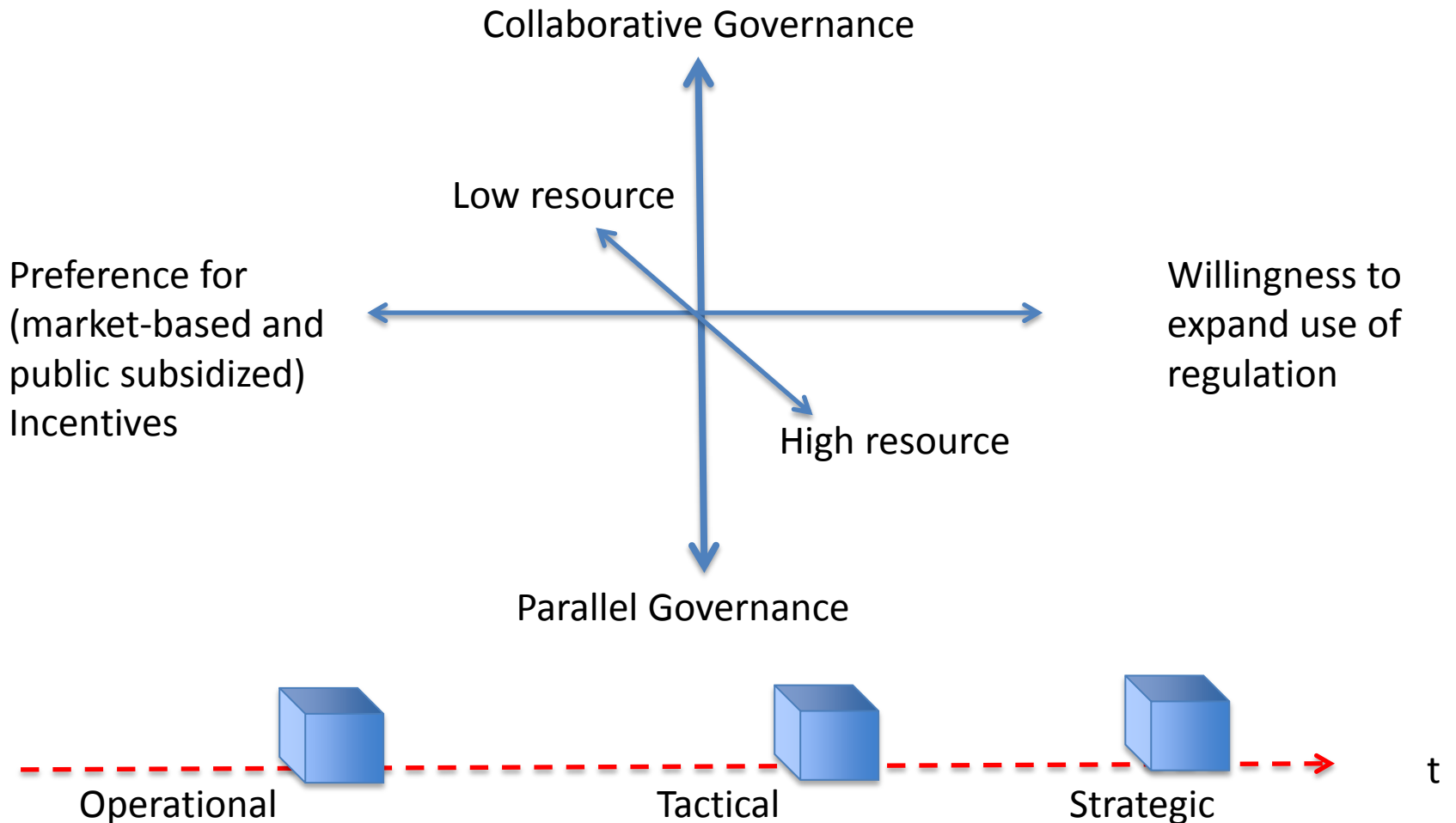
And that they feel that it fall mostly to the State, Individuals and the the Federal government to ensure water quality..

Figure 7: Where does the responsibility lie for ensuring water quality?

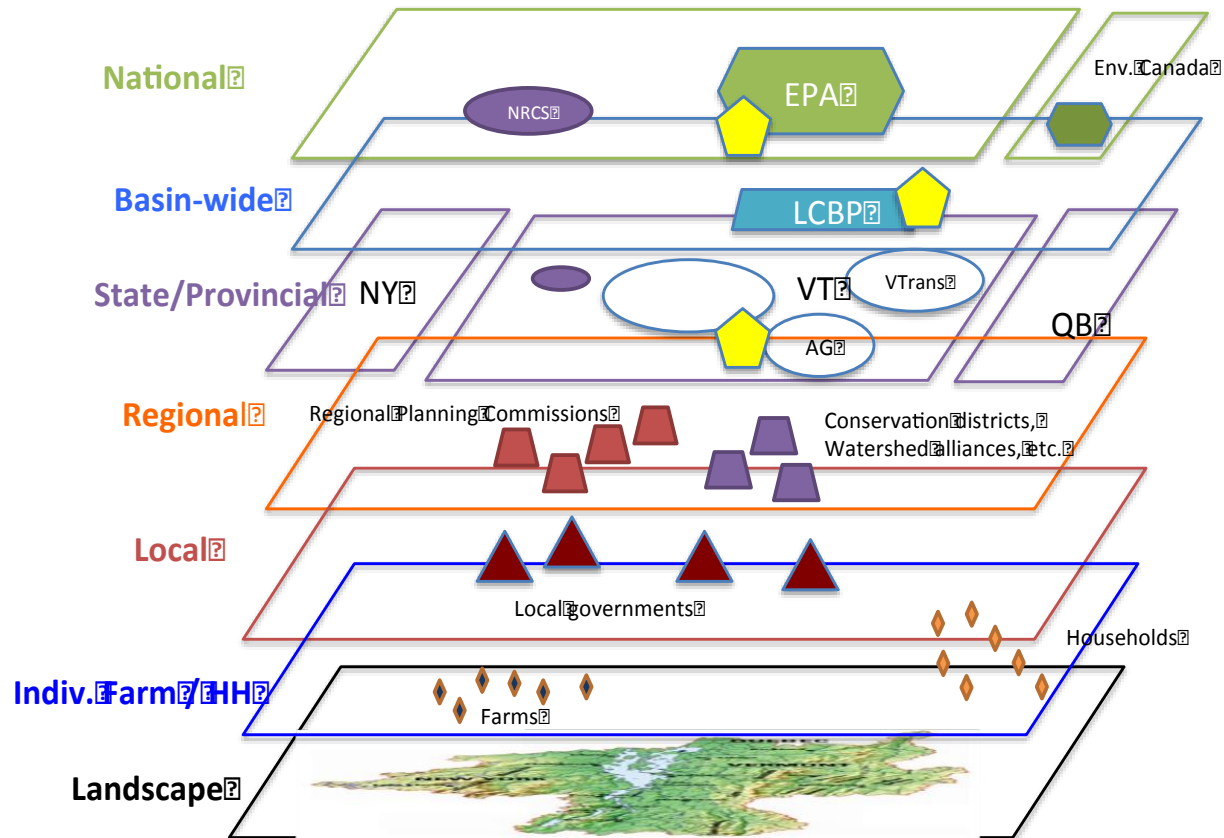


Source: Koliba et al. 2013 Vermont Water Quality Survey. University of Vermont

Framework for thinking about today's scenario development exercise



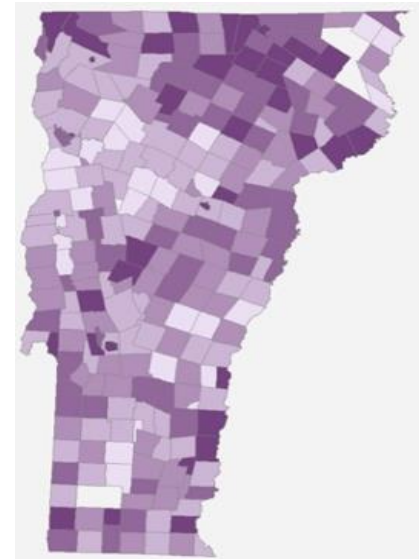
Governance Design

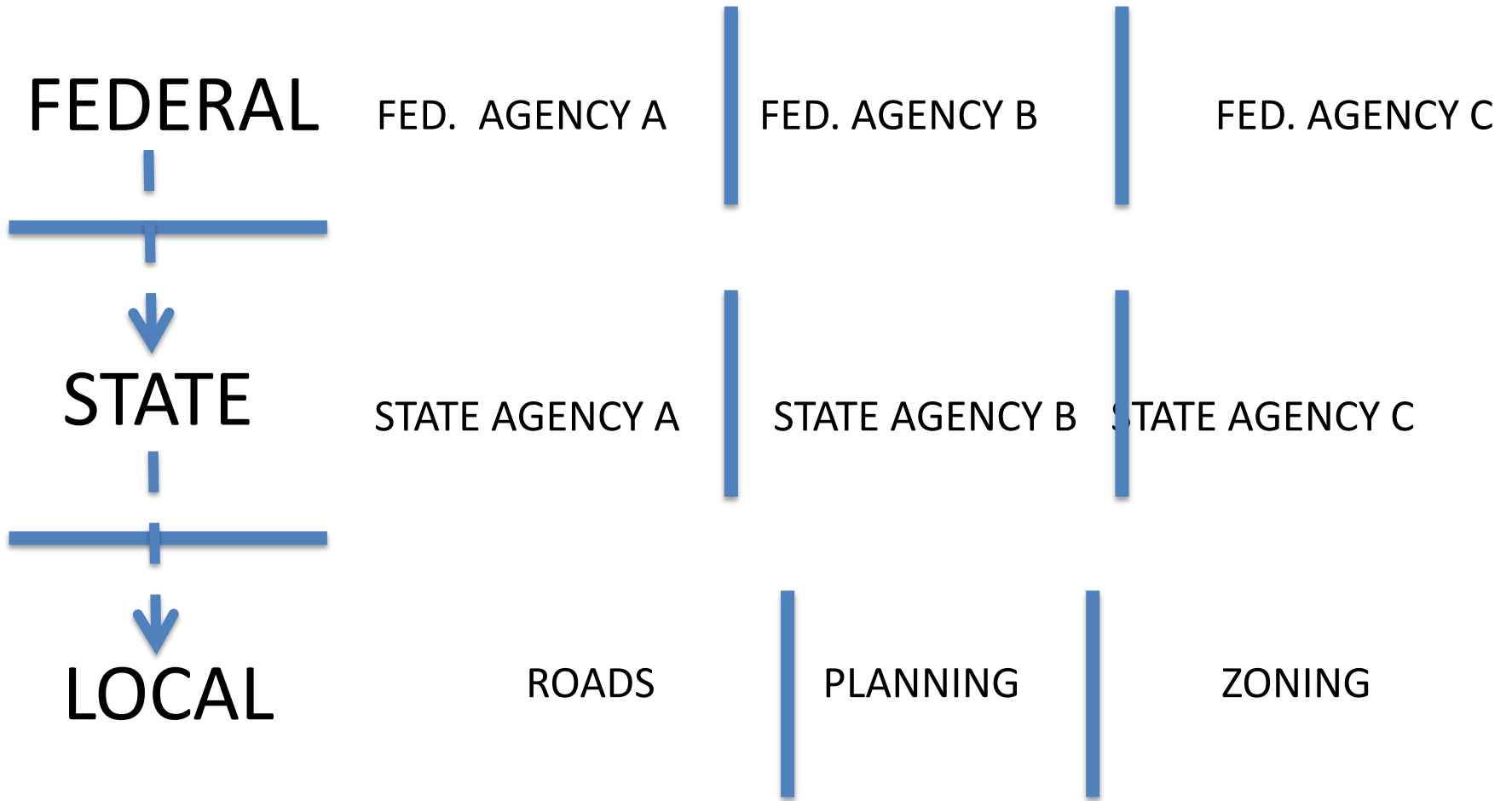


Who are the central watershed management actors in the region and how do they work together?

Business as Usual (BAU) governance scenario for the LCB: **Parallel Governance**

- “Parallel play”



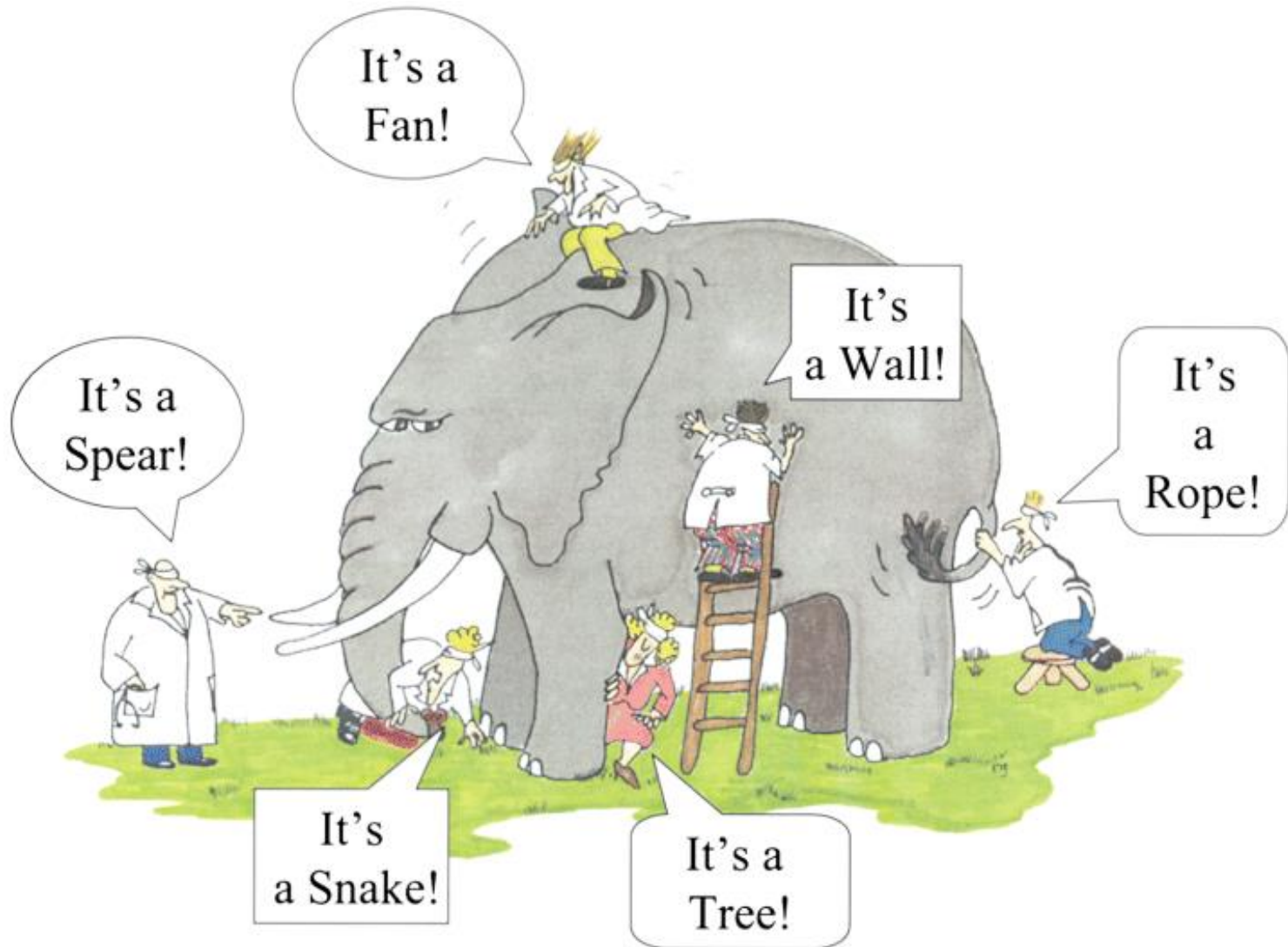


Lines of parallel governance

Consequences of parallel governance?

- Tendency toward compartmentalized Federal and State Agencies
 - environmental – agricultural trade-offs / technical assistance – regulation trade-offs
- Local government control over landuse and zoning decisions
 - Oftentimes, these local governments are fragmented themselves.

Competing views of priorities and practices



In Vermont, we are spanning boundaries better than most...

- VANR – VAAFMM - VTRANS collaborations
- Environmental court
- EPA – VT working groups and joint plan development
- Some regional coordination around TA to farms
- Regional planning efforts
- LCBP planning and reports

But, how does parallel governance constrain possibility?

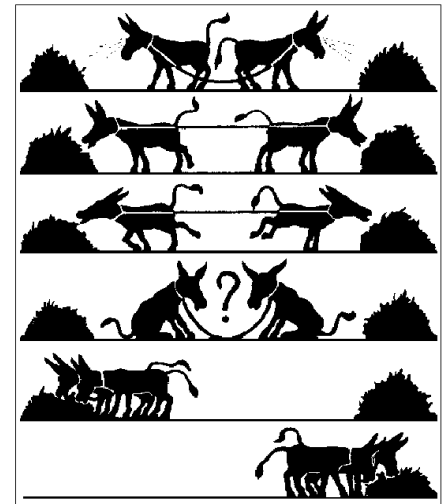
- Fixed institutional rule structures and jurisdictional lines.
- Path dependent and constrained organizational capacity.
- Entrenched positions leading to distinct (and consistent) roles and goals.

What is the alternative?

Collaborative governance:

- Stronger regional and watershed level planning and implementation.
- Stronger involvement of voluntary associations and grassroots groups.
- Deeper and sustained coordination between federal, state and local state agencies.

COLLABORATION



Resilient Vermont Project “Governance” Recommendations

“Work Together and Learn Together”

- Within state government, assign a champion responsible for resilience and risk management that is authorized to coordinate the work across state agencies to achieve a consistent approach, identify and advance state priorities, and ensure accountability.
- Create the Vermont Strong Network a cross sector collaboration that includes both public and private organizations involved in resiliency work to align efforts, share best practices, and leverage resources to advance resilience efforts statewide.
- Strengthen regional networks to support watershed scale planning and enable municipalities to collaborate across jurisdictions to set priorities and make cost effective investments that reduce hazards for downstream communities and development.
- Support local resiliency networks that bring together planning boards, conservation commissions, emergency managers and human service providers to develop a shared vision for resilience within a community.
- Engage private landowners as key partners in implementing land management practices that reduce hazards and support healthy ecosystems

Source: Institute for Sustainable Communities “Roadmap to Resilience” Draft Recommendations (2014)

Alternative governance design: (Bio)Regionalism at the Watershed Level for Planning and Coordination

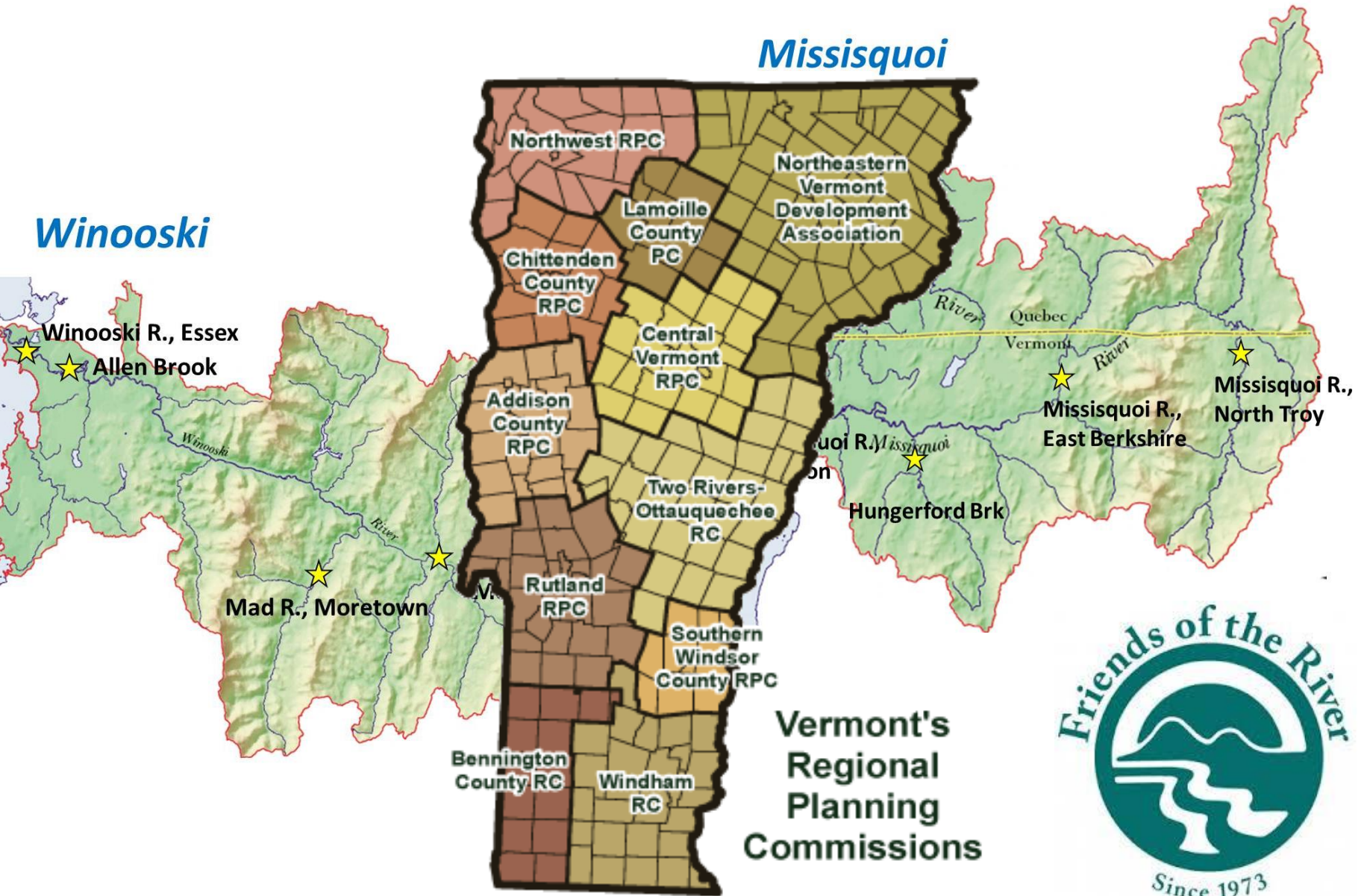
- Empowered civil society groups operating at regional scales vested with real resources and/or authority.
- Regional planning and implementation practices that take into account local variation.
- Watershed-level approaches to interventions that rely on the best science and technologies available.

- Bioregionalism: Is the study of the “complex relationships between human communities, government institutions and the natural world, and through which to plan and implement environmental policy” (McGinnis, 1990).
- “Action based on watershed boundaries rather than political boundaries, such as town or county borders, can better target polluted or threatened areas for restoration or protection. Citizens can then act to improve water quality based on their knowledge of their local area, and neighboring communities can link together to develop innovative ways to solve pollution problems within their watershed.”

(LCBP Opportunities for Action, 1994: Introduction 3)

Winooski

Missisquoi



FEDERAL

FEDERAL
AGENCY A



FEDERAL
AGENCY B



FEDERAL
AGENCY C



STATE

STATE
AGENCY A



STATE
AGENCY B



STATE
AGENCY C



LOCAL



ROADS



PLANNING



ZONING

FEDERAL

FEDERAL
AGENCY A



FEDERAL
AGENCY B



FEDERAL
AGENCY C



BASIN

BASIN PROGRAM



STATE

STATE
AGENCY A



STATE
AGENCY B



STATE
AGENCY C



WATERSHED (REGIONAL)

REGIONAL PLANNING
COMMISSIONS



WATERSHED
LEVEL NGOs



REGIONAL
CONSERVATION
DISTRICTS



LOCAL

ROADS



PLANNING



ZONING



FEDERAL

FEDERAL
AGENCY A

FEDERAL
AGENCY B

FEDERAL
AGENCY C

BASIN

BASIN PROGRAM

STATE

STATE
AGENCY A

STATE
AGENCY B

STATE
AGENCY C

WATERSHED
(REGIONAL)

REGIONAL PLANNING
COMMISSIONS

WATERSHED
LEVEL NGOs

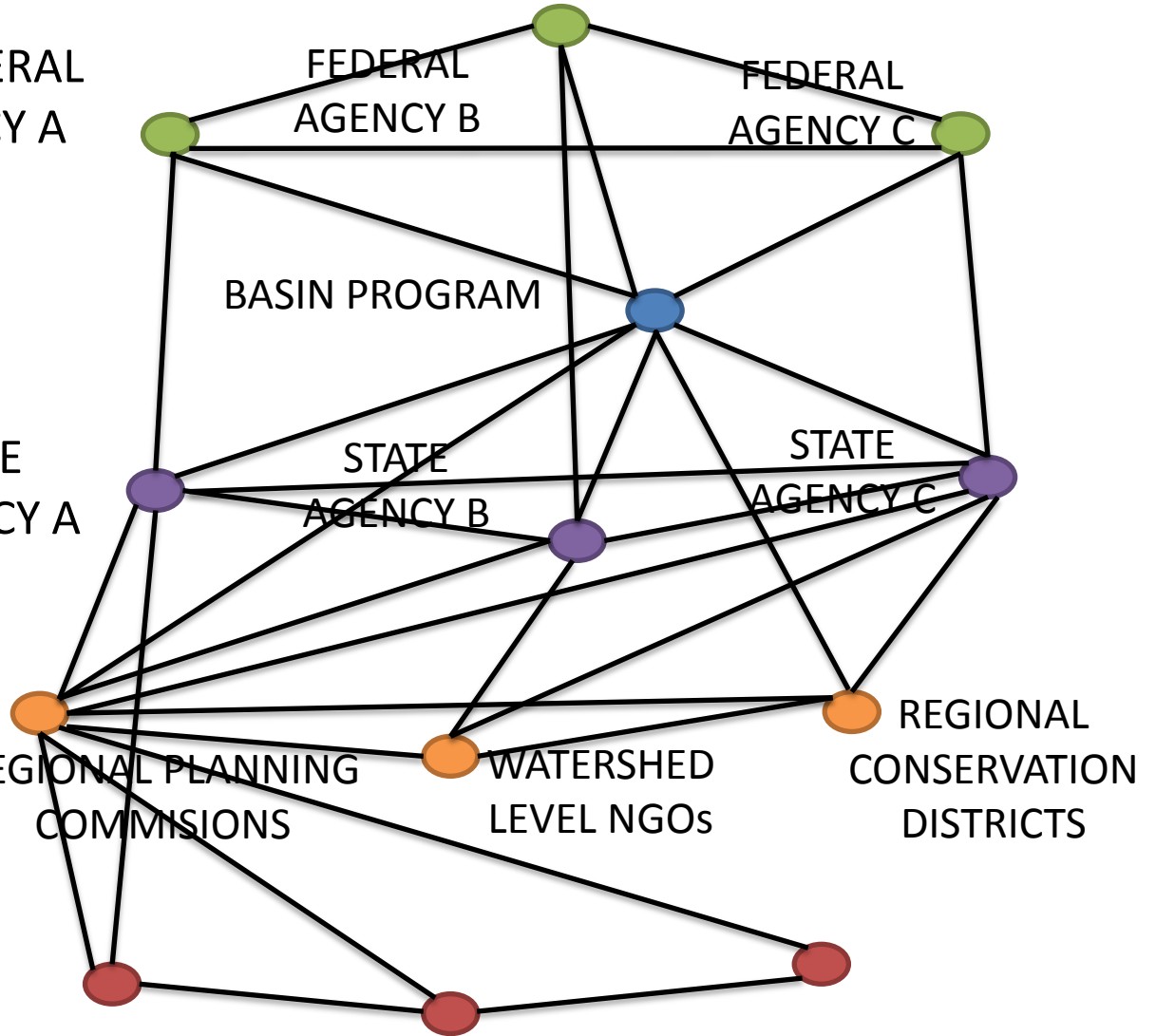
REGIONAL
CONSERVATION
DISTRICTS

LOCAL

ROADS

PLANNING

ZONING



Concretely, what does a collaborative governance approach to bioregional government look like?

- Regional planning with some authority.
- Creative funding mechanisms (see Special Districts).
- Strong civic engagement.
- Governments serving as catalysts and partners.

Resource Availability



v.



v.



Where does money for water quality mitigation come from?

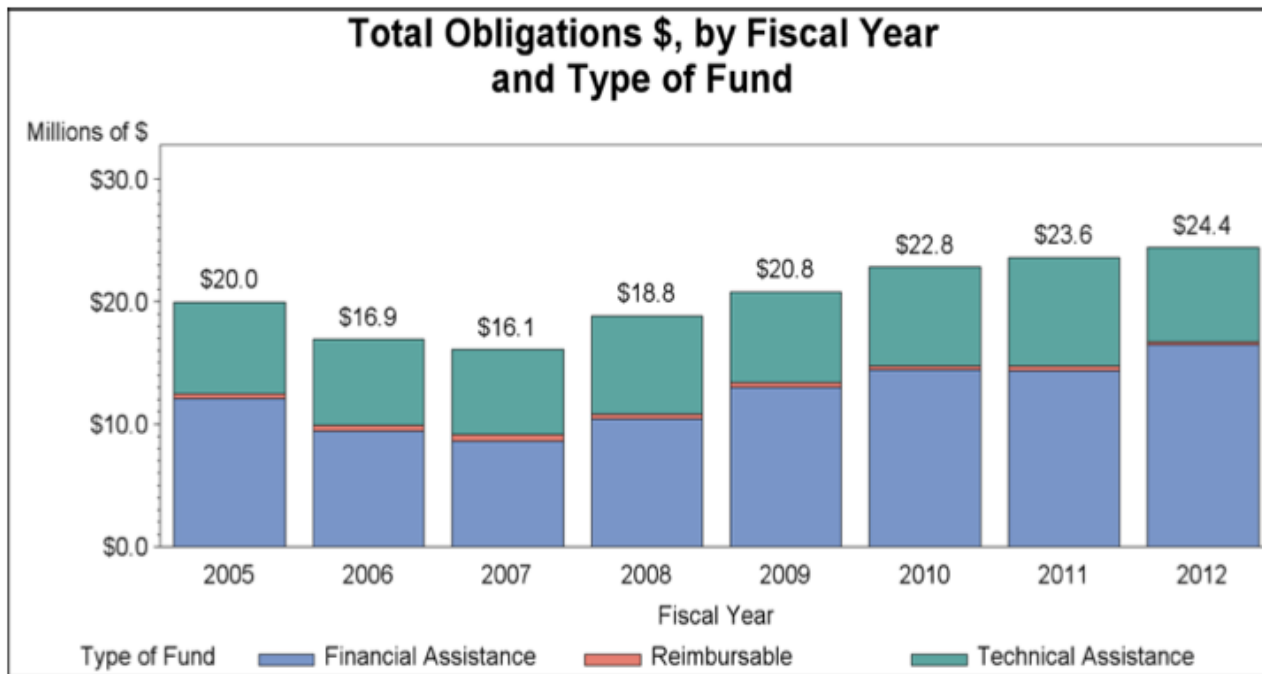


| Jurisdiction | Agency | Department | Program |
|--------------|--------|-----------------|---|
| Vermont | AAFM | ARM | Agrichemical Management |
| Vermont | AAFM | ARM | ARM Enforcement |
| Vermont | AAFM | ARM | Engineering |
| Vermont | AAFM | ARM | Laboratory |
| Vermont | AAFM | ARM | Plant Industry |
| Vermont | AAFM | ARM | Water Quality |
| Vermont | ANR | DEC | Compliance & Enforcement |
| Vermont | ANR | DEC | Enforcement Services |
| Vermont | ANR | DEC | Connecticut Valley Flood Control Compact |
| Vermont | ANR | DEC | Public Drinking Water Engineering and Financial Services |
| Vermont | ANR | DEC | Public Drinking Water Operations/Compliance/ Planning |
| Vermont | ANR | DEC | Indirect Discharge |
| Vermont | ANR | DEC | Underground Injection Control |
| Vermont | ANR | DEC | Regional Permits |
| Vermont | ANR | DEC | Permit and Compliance Assistance |
| Vermont | ANR | DEC | Pollution Prevention |
| Vermont | ANR | DEC | Laboratory Services |
| Vermont | ANR | DEC | ANR Engineering Services |
| Vermont | ANR | DEC | Pollution Control Projects Implementation |
| Vermont | ANR | DEC | Water System Project Implementation |
| Vermont | ANR | DEC | Dam Safety |
| Vermont | ANR | DEC | Vermont Geological Survey |
| Vermont | ANR | DEC | Hazardous Waste |
| Vermont | ANR | DEC | Sites Management |
| Vermont | ANR | DEC | Hazardous Sites Settlement Accounts |
| Vermont | ANR | DEC | Solid Waste |
| Vermont | ANR | DEC | Hazardous Material Spills Response |
| Vermont | ANR | DEC | Underground Storage Tanks |
| Vermont | ANR | DEC | VT Agricultural Environmental Management (AEM) Program |
| Vermont | ANR | DEC | Public Water System Resource Management |
| Vermont | ANR | DEC | Lakes and Ponds |
| Vermont | ANR | DEC | Surface Water Monitoring, Assessment & Watershed Planning |
| Vermont | ANR | DEC | Riparian Corridor |
| Vermont | ANR | DEC | Stormwater |
| Vermont | ANR | DEC | Direct Discharge |
| Vermont | ANR | DEC | Residuals |
| Vermont | ANR | DEC | Wetlands |
| Vermont | ANR | Fish & Wildlife | Fisheries |
| Vermont | ANR | Fish & Wildlife | Law Enforcement |
| Vermont | ANR | Fish & Wildlife | Outreach |
| Vermont | ANR | Fish & Wildlife | Wildlife |
| Vermont | ANR | FPR | Administration |

| Jurisdiction | Agency | Department | Program |
|--------------|--------|---------------------------------|---|
| Vermont | ANR | FPR | Forest Product Utilization and Marketing |
| Vermont | ANR | FPR | Private Forest Land Management |
| Vermont | ANR | FPR | State Forest Land Management |
| Vermont | ANR | FPR | Forest Resource Protection |
| Vermont | ANR | FPR | Urban and Community Forestry |
| Vermont | ANR | FPR | Lands Administration |
| Vermont | ANR | FPR | State Park Operations |
| Vermont | ANR | FPR | Forest Highway Maintenance |
| Vermont | VTrans | Program Development | Better Backroads |
| Vermont | VTrans | Environmental | Municipal Mitigation Grants |
| Vermont | NRB | N/A | Land Use Panel |
| Vermont | NRB | N/A | Water Resources Panel |
| Federal | USDA | Farm Service Agency | Conservation Reserve Enhancement Program (CREP) |
| Federal | USDA | Farm Service Agency | Conservation Reserve Program (CRP) |
| Federal | USDA | NRCS | Farm and Ranch Lands Protection Program (FRPP) |
| Federal | USDA | NRCS | Agricultural Management Assistance (AMA) |
| Federal | USDA | NRCS | Environmental Quality Incentive Program (EQIP) |
| Federal | USDA | NRCS | Wildlife Habitat Incentives Program (WHIP) |
| Federal | USDA | NRCS | Conservation Technical Assistance (CTA) |
| Federal | EPA | Office of Wastewater Management | National Pollutant Discharge Elimination System (NPDES) |
| Federal | FEMA | N/A | National Flood Insurance Program (NFIP) |

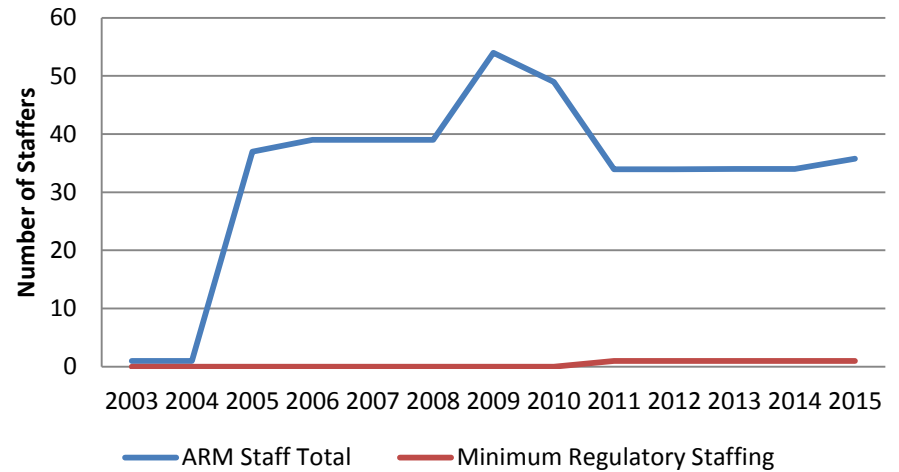
60 + FEDERAL AND STATE PROGRAMS

VT NRCS Budget (all programming)

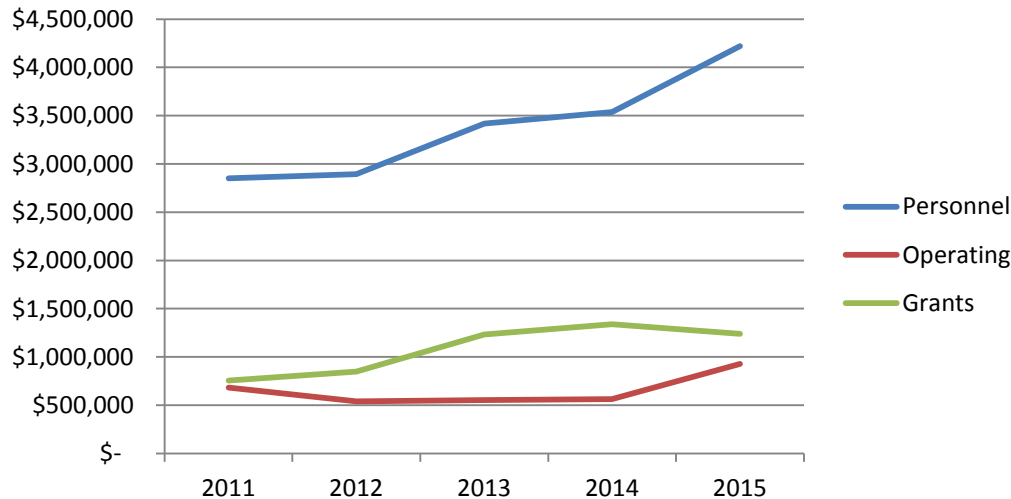


VT Agency of Agriculture, Farms and Markets- Staffing and Funding Patterns for Agriculture Resource Management Division

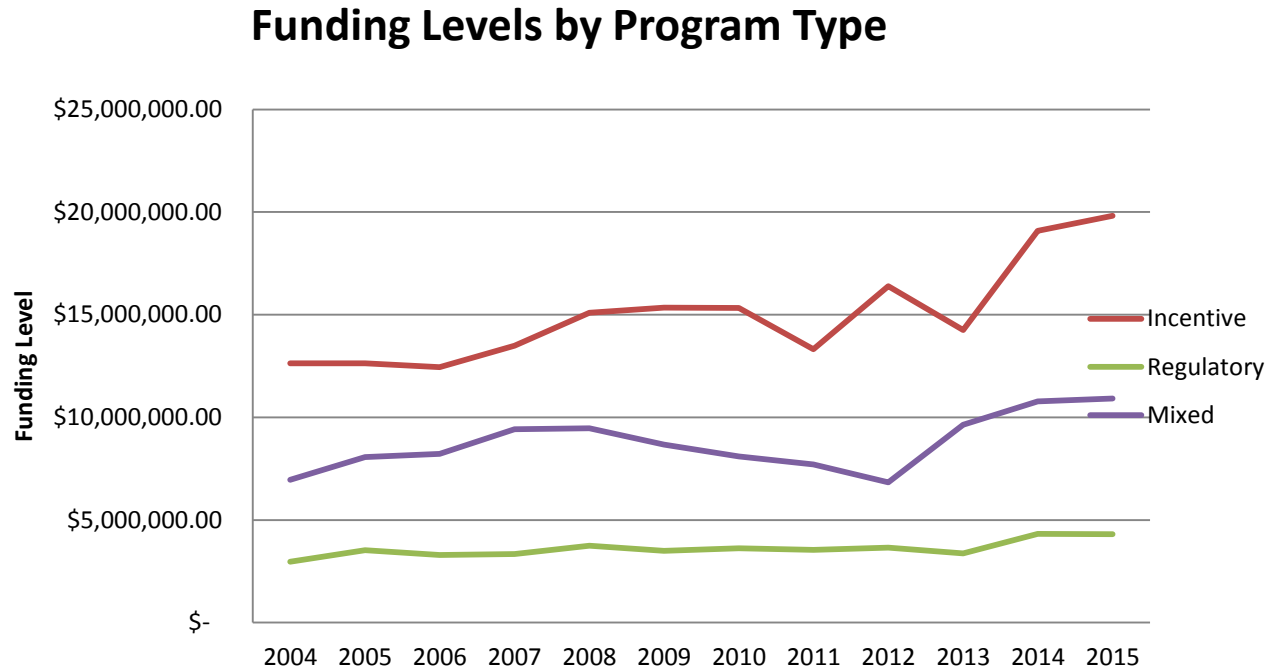
AAFM ARM Division Staffing Levels



AAFM ARM Division Funding Levels

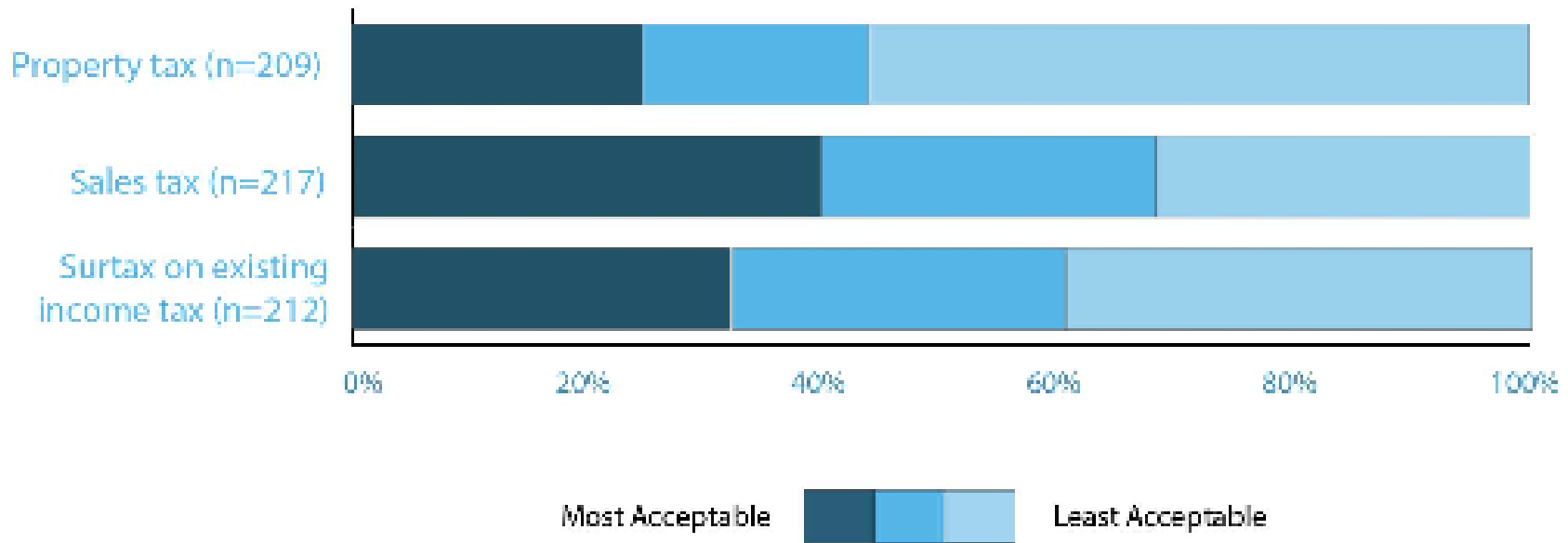


VT Agency of Natural Resource: Funding Trends



Is there a willingness to pay for better water quality?

Figure 11: Acceptability of different kinds of taxes

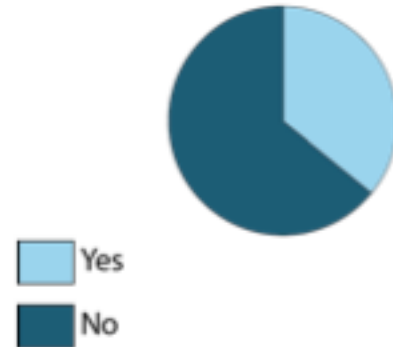


Source: Koliba et al. 2013 Vermont Water Quality Survey. University of Vermont

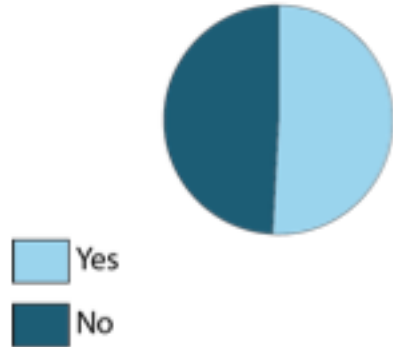
It is important that the State of Vermont raise adequate funds to manage, protect and restore water quality



Is a raise in taxes for water quality acceptable?



Does the kind of tax matter for its acceptability?



BAU: Resource scarcity

- Marked by the limited capacity of federal, state and/or local institutions to raise money to support water quality initiatives.
- Governed by the parallel play of governmental agencies that tend to constrain the creative uses of existing resources.



Alternative resourcing scenario: Resource abundance

- Ample resources are made available through taxation, user fees, and other significant public and private investments for water quality preservation.



Policy Preferences

- Policy tools are commonly grouped into two categories: incentives and regulations (e.g. carrots & sticks)



STICKS:

REGULATIONS
SANCTIONS
PERMITS

CARROTS:

INCENTIVES
TECHNICAL ASSISTANCE
PUBLIC INFORMATION/
EDUCATION

Evidence of policy preferences in the 2010 Opportunities for Action (OFA) Plan and the 2010 TMDL Implementation Plan

| | OFA (192 tasks) | | TMDL (249 tasks) | |
|--------------------------|--------------------|----------------|---------------------|----------------|
| | <i>Count</i> | <i>Percent</i> | <i>Count</i> | <i>Percent</i> |
| Economic Regulation | 0 | 0.0 | 1 | 0.4 |
| Environmental Regulation | 42 | 21.9 | 48 | 19.3 |
| Permits | 9 | 4.7 | 14 | 5.6 |
| Public Information | 100 | 52.1 | 135 | 54.2 |
| Contracts | 6 | 3.1 | 6 | 2.4 |
| Grants | 35 | 18.2 | 36 | 14.5 |
| Loan Guarantees | 0 | 0.0 | 7 | 2.8 |
| Tax Incentives | 0 | 0.0 | 2 | 0.8 |
| Policy Tools Utilized | 192 | 100.0 | 249 | 100.0 |

Source: Koliba, C., Reynolds, A., Zia, A., and Scheinert, S. (accepted for publication). **Isomorphic Properties of Network Governance: Comparing Two Watershed Governance Initiatives in the Lake Champlain Basin Using Institutional Network Analysis.** *Complexity, Governance and Networks*. 1(2).

BAU Policy Preference: Preference for incentives-based policy over regulatory-based policy

- Decline (or stagnation) in the number of agricultural and environmental regulators over time.
- Large number of incentives programs funded through USDA, EPA and other sources.
- The preference is also marked by a desirability to use market-based approaches to address water quality problems as a *first* resort.

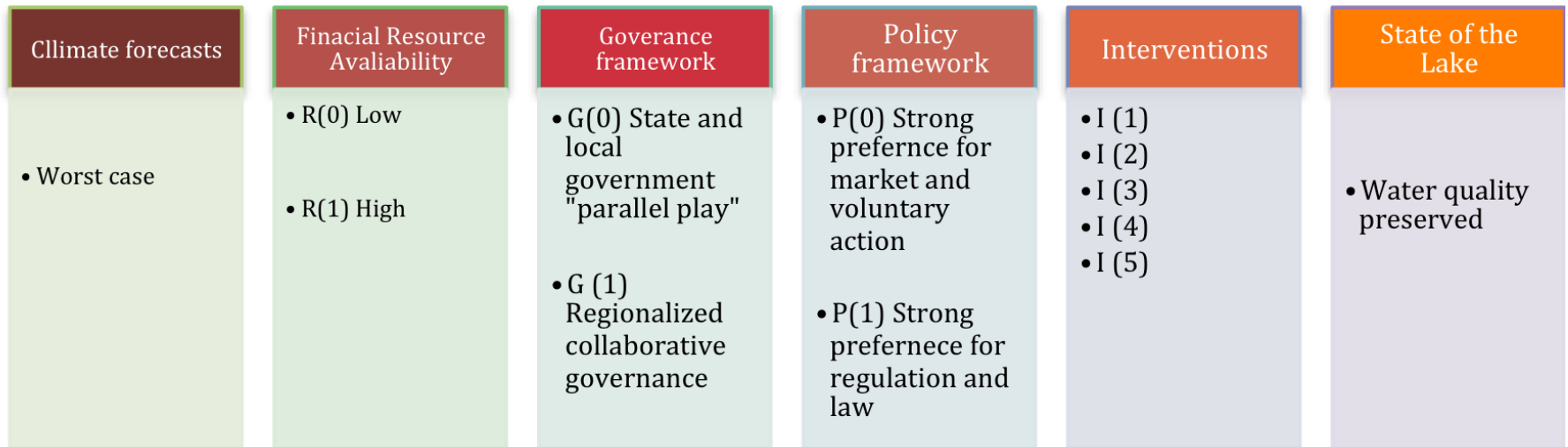


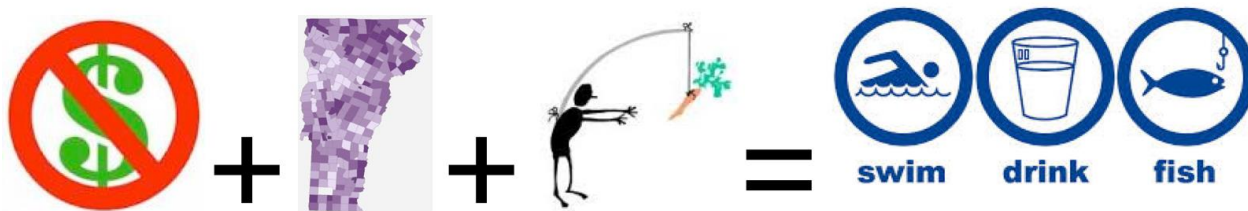
Alternative policy preference: The use of stronger regulatory and legal authority

- Drawing on precedence from countries like Brazil, as well our own region's success in managing point source pollution, this preference is bold in suggesting and implementing regulations designed to ensure water quality for the region.



Architecture for the afternoon's scenario development exercise:





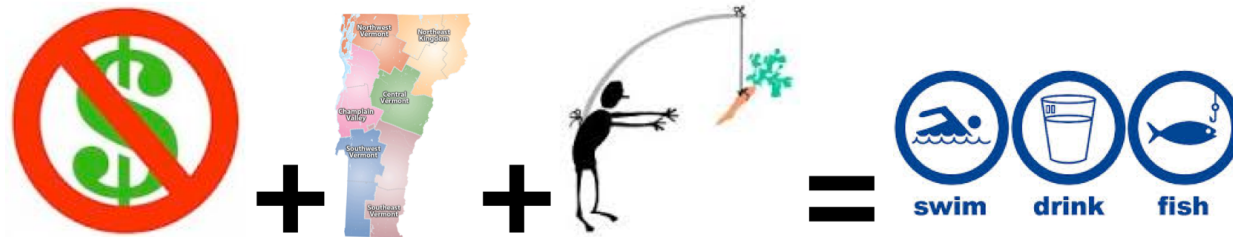
Scenario A:

In the midst of resource scarcity, with little political will or financial capacity to regulate for clean water protection, states and local governments operating in parallel rely heavily on market-based incentives and what federally-sourced incentives are available for clean water protection in the Lake Champlain Basin .



Scenario B:

In the midst of resource scarcity, states and local governments working in parallel rely heavily on regulatory and legal action for clean water protection in Lake Champlain Basin.



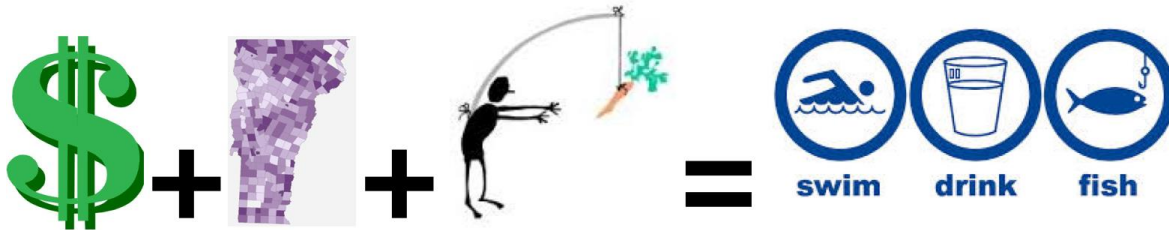
Scenario C:

In the midst of resource scarcity, regionalized watershed-level coordination brings together citizen groups, nonprofits and regional planning groups in concert with their state and local governments rely heavily on market-based incentives for clean water protection in the Lake Champlain Basin.



Scenario D:

In the midst of resource scarcity, regionalized watershed-level coordination brings together citizen groups, nonprofits and regional planning groups in concert with state and local governments to rely heavily on regulation for clean water protection in the Lake Champlain Basin.



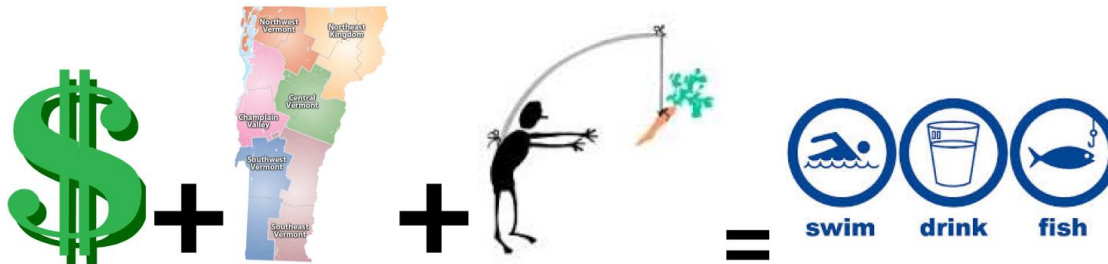
Scenario E:

In the midst of heavy investments of resources from public and private sources, states and local governments working in parallel, rely heavily on voluntary action and incentives by distributing grants, loans, financial assistance and technical assistance to address climate adaption needs for clean water protection in the Lake Champlain Basin.



Scenario F:

States and local governments working in parallel turn to regulatory and legal action in LCB with heavy public investment in building enforcement capacity for clean water protection in the Lake Champlain Basin .



Scenario G:

Regionalized watershed level coordination brings together citizen groups, nonprofits and regional planning groups to establish market-based incentives and outreach in LCB with heavy public and private investment and backing for projects, and initiatives for clean water protection in the Lake Champlain Basin.



Scenario H:

Regionalized watershed level coordination brings together citizen groups, nonprofits and regional planning groups to establish permits, fees and regulation in the LCB with heavy public and private investment and backing for projects, and initiatives for clean water protection in the Lake Champlain Basin.

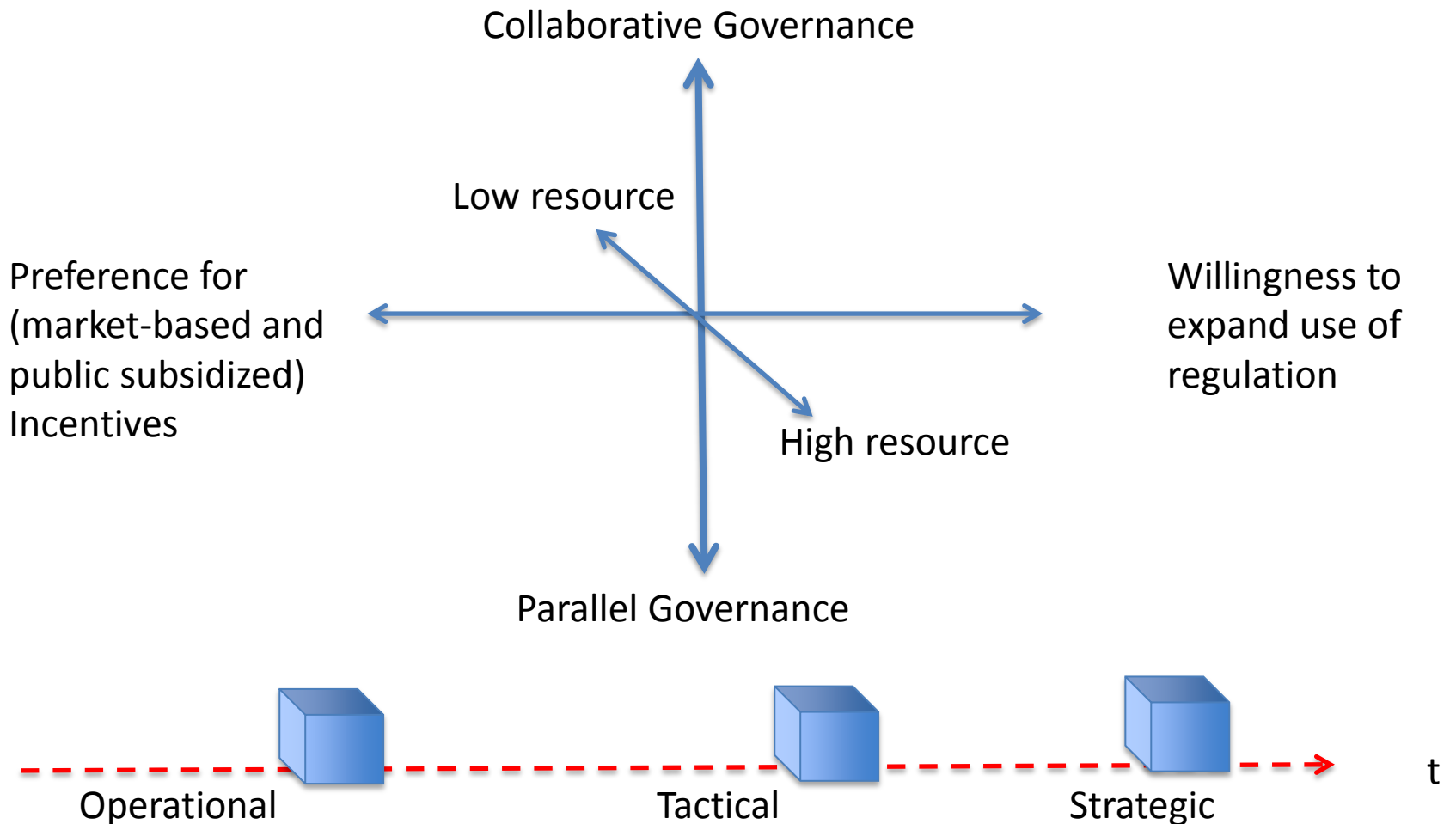
Time and scope dimensions

- Operational Level
- Tactical Level
- Strategic Level

“Time changes everything”

Tommy Duncan

Framework for thinking about today's scenario development exercise



Some comments on this presentation from:

Gina Campoli, Environmental Policy Manager,
Vermont Agency of Transportation