

CLIMATE CHANGE ADAPTATION PLANNING FOR NORTHWEST SKEENA COMMUNITIES

Social Science Team Report

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With

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Purpose of the Project

- ❑ To examine environment change, particularly the impact of climate change on forests and rivers (i.e. riparian zones) in the Skeena watershed region.
- ❑ To identify what are the 'values' identified by residents of local communities with regard to their environment.
- ❑ To develop an understanding of the 'vision' of the future of their community that is held by residents of local communities.

Purpose of the Project- continued

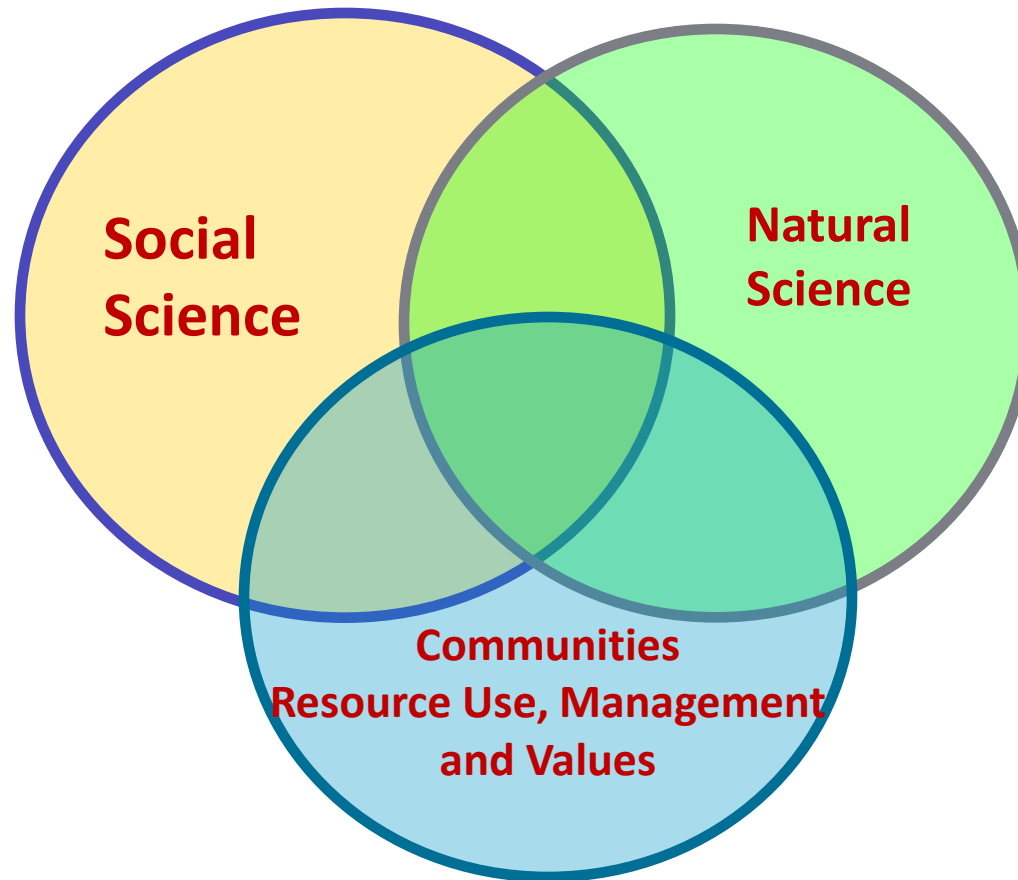
To provide the basis upon which local decision makers may develop a plan for the development of forests and river systems in the Skeena regions that:

- ❖ Takes into account the impact of climate change on the environment.
- ❖ Takes into account the 'values' identified by local communities.
- ❖ Is consistent with the changes and future that local community residents identify.

SUM: TO HELP LOCAL COMMUNITIES TO DEVELOP A SUSTAINABLE ENVIRONMENTAL PLAN FOR THE SKEENA REGION THAT:

- ❖ *IS BASED ON COMMUNITY VALUES*
- ❖ *REFLECTS THE POTENTIAL IMPACT OF CLIMATE CHANGE.*

Purpose of the project: Three Types of Knowledge Intersection and Integration



Who is Involved:

▶ Funding:

- Future Forest Ecosystem Science Council - BC Government
 - Research Grant to Coast Tsimshian Resources (CTR)
- World Wildlife Fund (WWF)

▶ Research:

- Social Research
- Department of Sociology – UBC

- Natural Science:
- ESSA Consulting;
- Cortex Technologies;
- BC Ministry of Environment;
- BC Ministry of Forests, Lands, and Natural Resource Operations
- Environment Canada

▶ Administration:

- ▶ CTR -Brinkman Forest Resources; WWF

The Community Reports: What do we mean by Values?

- ❑ Note: Goal is to incorporate local community values into resource management
 - ❑ Two Meaning of Values:
 - ❖ Your fundamental beliefs about what is 'right'
E.g. honesty, integrity, self-sufficiency
 - ❖ **What** it is that you value
E.g. clean environment; quality of life; health; lifestyle
- Our 'Social Research' on community values focuses on What you value".

Community Report: The Issue of Adaptation vs. Adaptive Capacity

- ❑ Stewart Cohen talked in his opening remarks about adaptation and adaptation policy
 - ❖ Basic focus is on how to respond to climate change
 - ❖ i.e. adaptation is different from mitigation
- ❑ We no longer can ignore that climate change is real or that we can mitigate it.

The Path Ahead

- ❑ Adaptation to climate change
 - ❑ What changes do we have to make to “the way we do things around here” (i.e. **institutional culture**), to adapt to the changing environment?
 - ❑ What changes do we have to make to the way we are **organized** in our community and our economic and social activity to adapt to the changing environment
 - ❑ What **knowledge** do we have and what knowledge do we need, to adapt to the changing environment?
 - ❑ What changes do we need to make to the way we **act / behave** to adapt to the changing environment?

Adaptation vs. Adaptive Capacity (continued)

- ❑ Adaptive Capacity is the ability of a community to respond effectively to its exposures, vulnerabilities and threats, and in a way that leads to positive development.
- ❑ It is different from Resilience
- ❑ It is more than Adaptation

What is Adaptive Capacity?

- ❑ It is the ability of a community to respond effectively to challenges.
- ❑ It depends on **flexible organization**
- ❑ It depends on a **culture of institutional openness** to change and alternatives.
- ❑ It depends on **the actions of individuals** in organizations and community cultures.
- ❑ It involves the integration of **knowledge** and the incorporation of new knowledge

❑ I WILL RETURN TO THIS AT THE END OF THE MORNING –

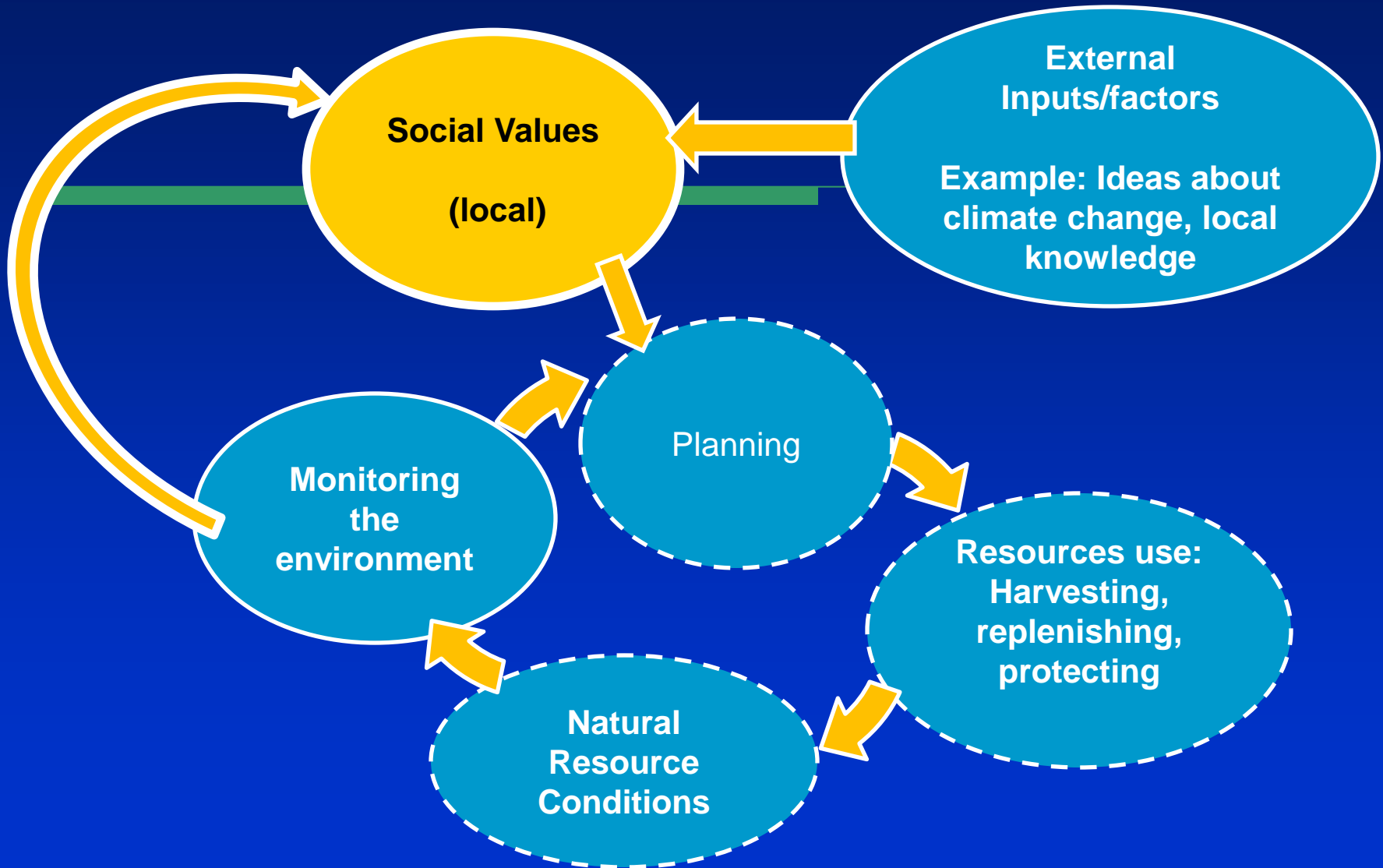
❑ But now.....

❖ THE SOCIAL SCIENCE REPORT ON YOUR COMMUNITY BASED ON 50 INTERVIEWS WITH COMMUNITY MEMBERS

Sociology Report Part I: Yesterday and Today

- Who was interviewed?
- What resources are valued?
- How have these resources changed?
- What are the key community issues?

The Role of Sociology



Sociology Team Research

- 50 interviews in each community
- Purposive sample focused on people in key positions of leadership and resource management
- 1-3 hours for each interview



Who Was Interviewed

Men	39
Women	11

Resource Usage	
High	2
Medium	13
Low	33
No usage	3

Length of Residence in Terrace	
Very long time (+20 years)	34
Long time (10 - 20 years)	7
Medium time (5-10 years)	6
Short time (1-5 years)	3

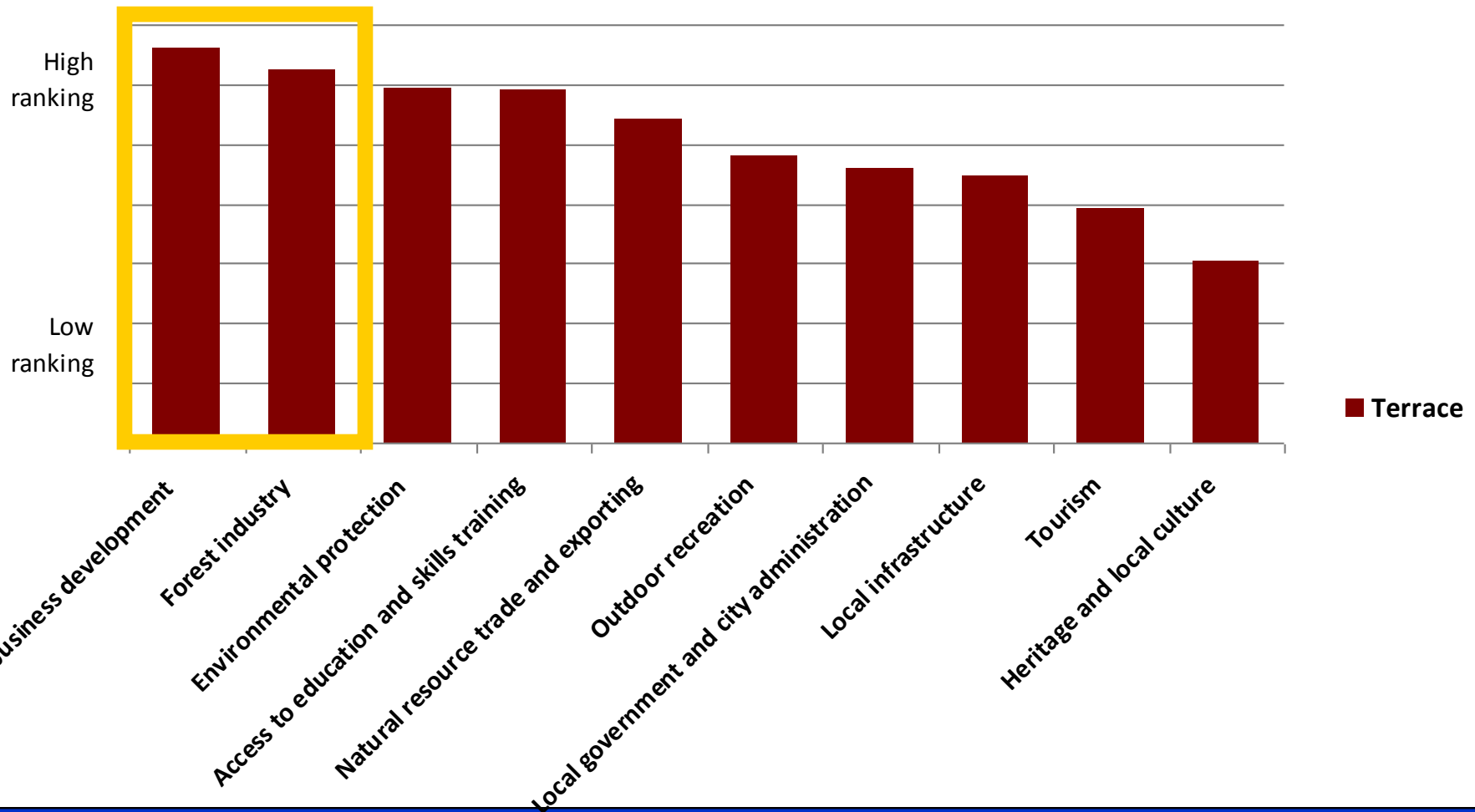
Who Was Interviewed

Occupations	
Community leader	2
Councillor	6
High level manager	2
Mid-level manager	11
Small operation manager	7
Administrator	3
Sole proprietor	6
Resource worker	5
Other worker	2
Retired	5

Public Sector	23
Private Sector	19
Retired	5
Non-government organization	3

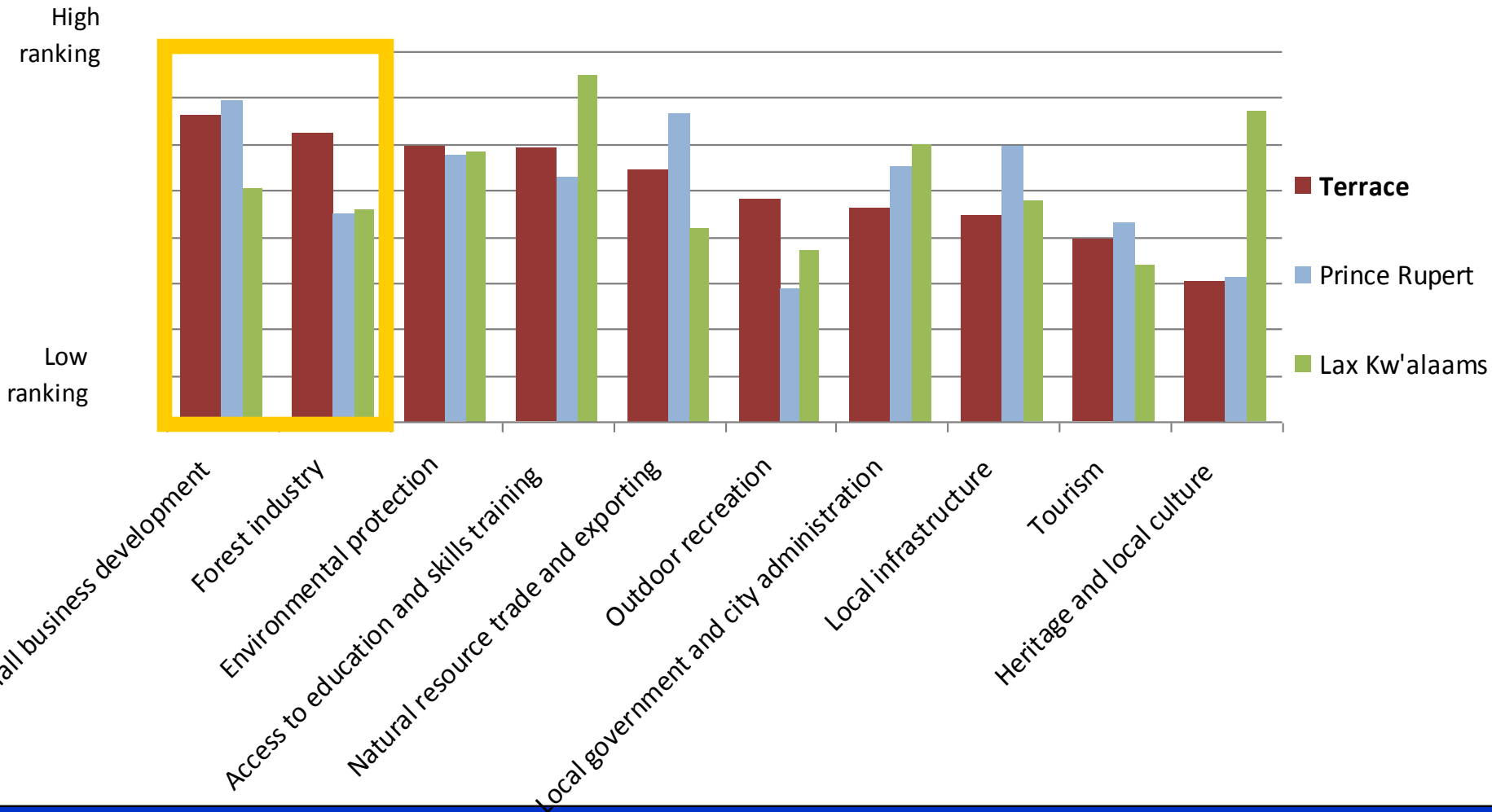
Community Involvement	
More than 10 hours per week	11
2 - 10 hours per week	22
0 - 2 hours	9
No Involvement	8

Valued Community Resources in Terrace

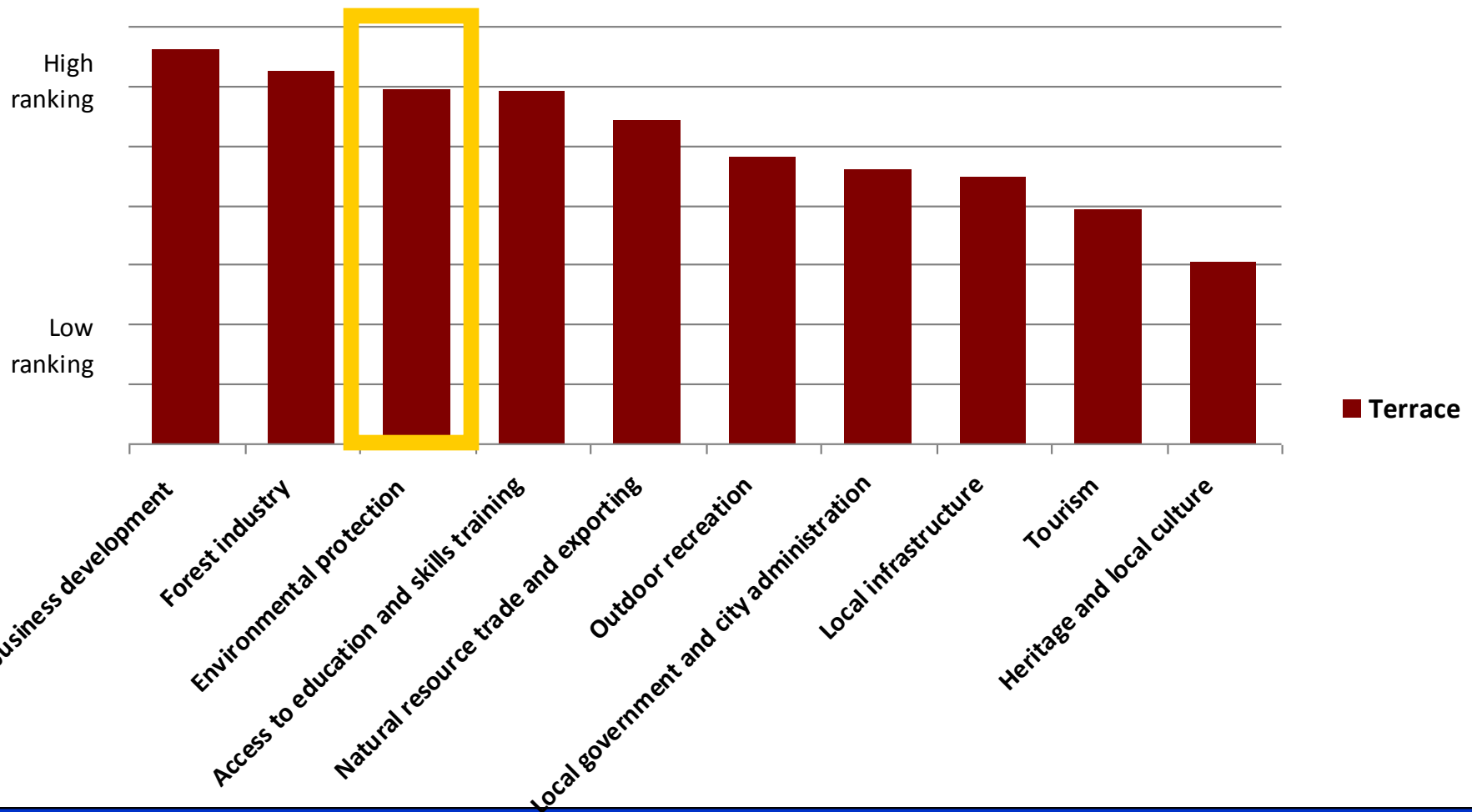


Valued Community Resources in Terrace

Valued Community Resources for Terrace, Prince Rupert and Lax Kw'alaams

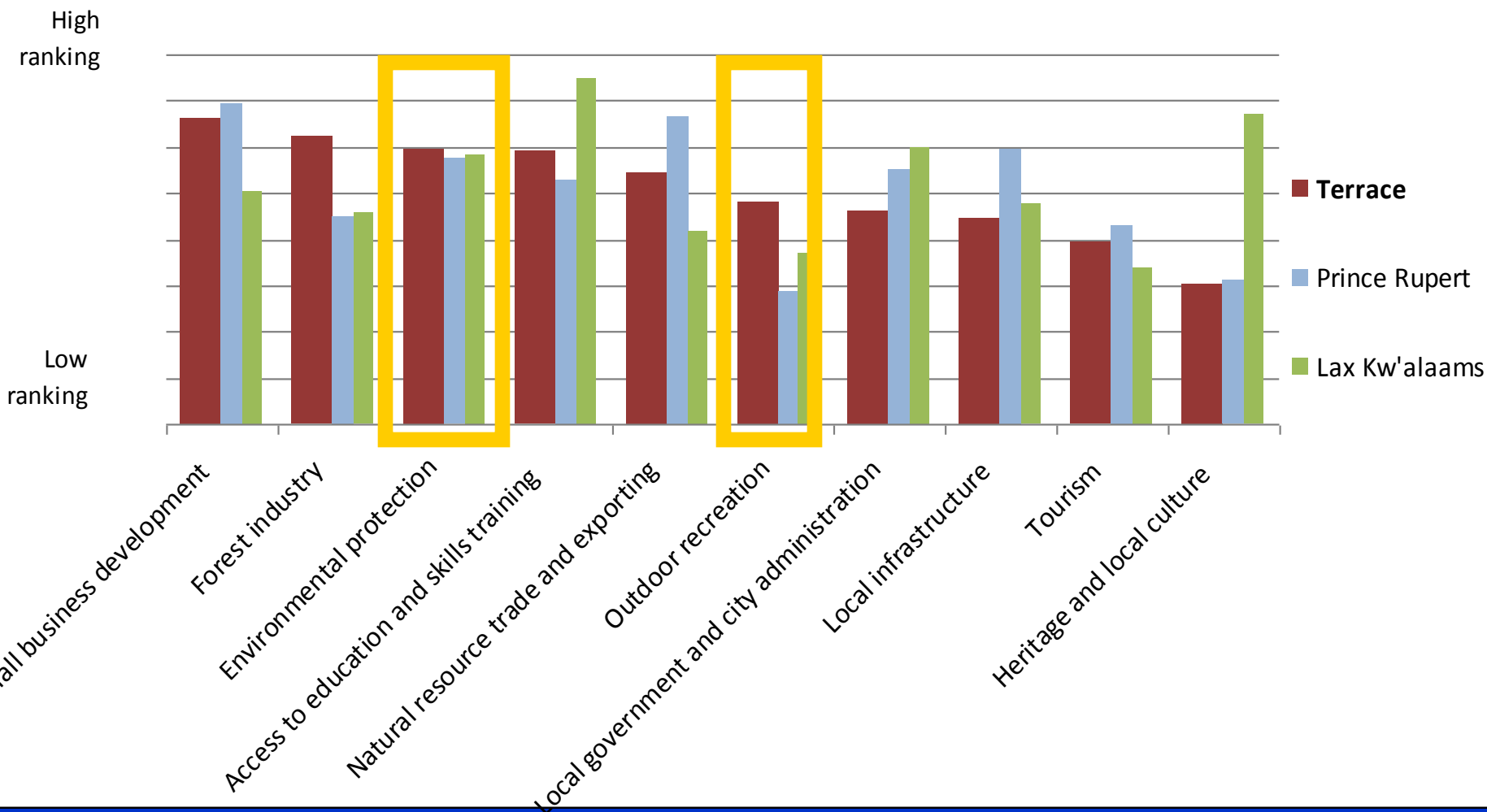


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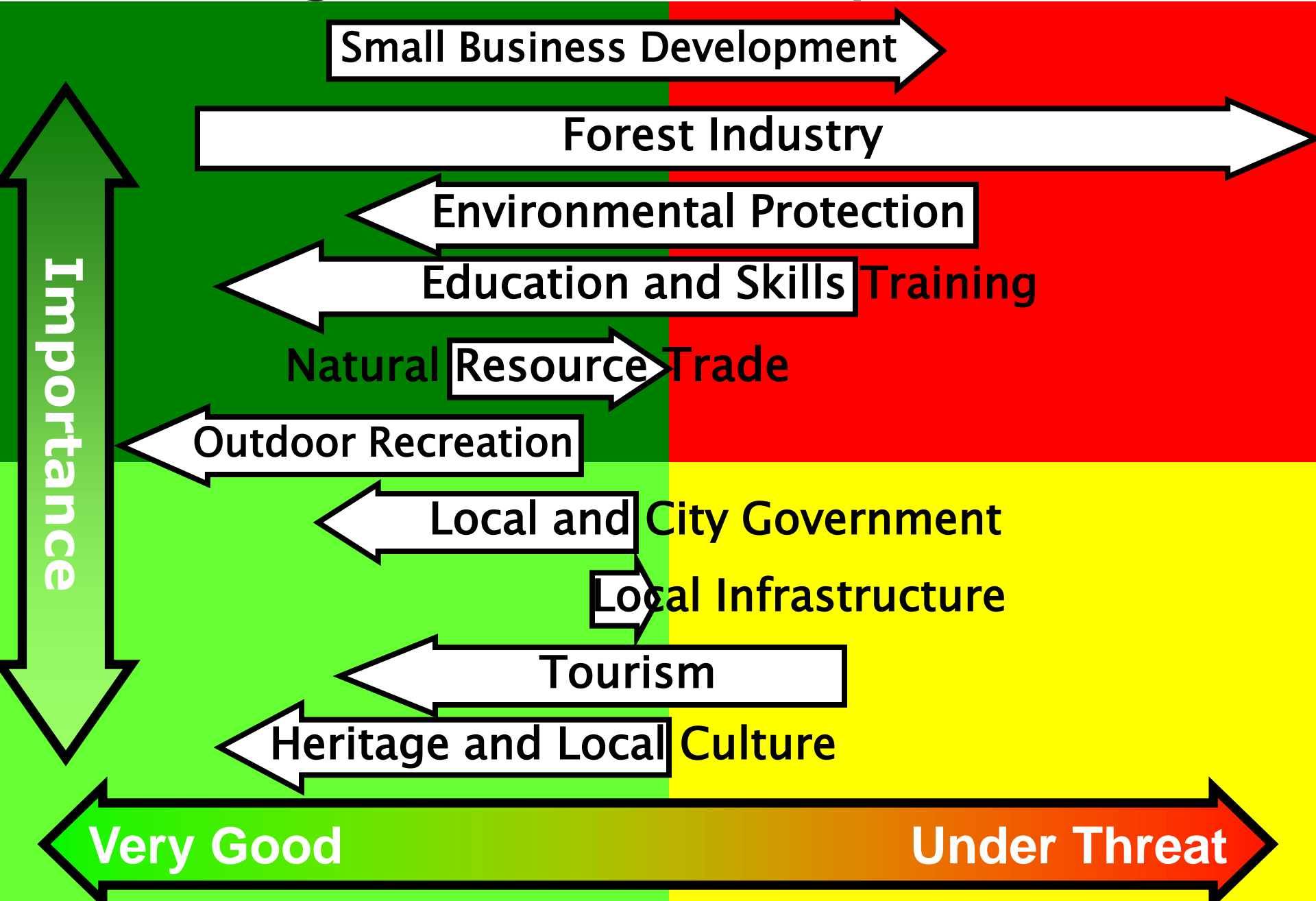


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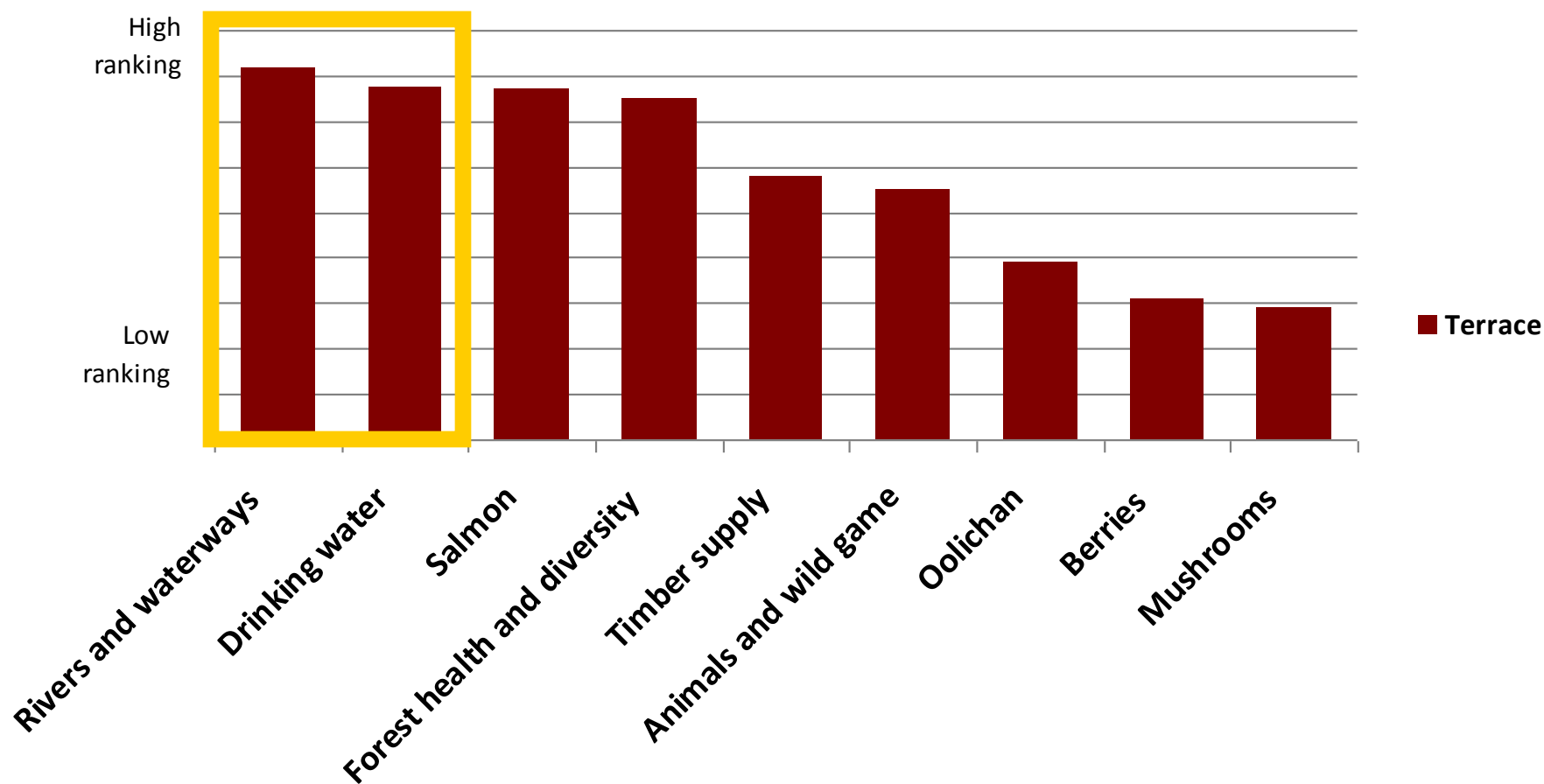
Valued Community Resources for Terrace, Prince Rupert and Lax Kw'alaams



Changes in Community Resources

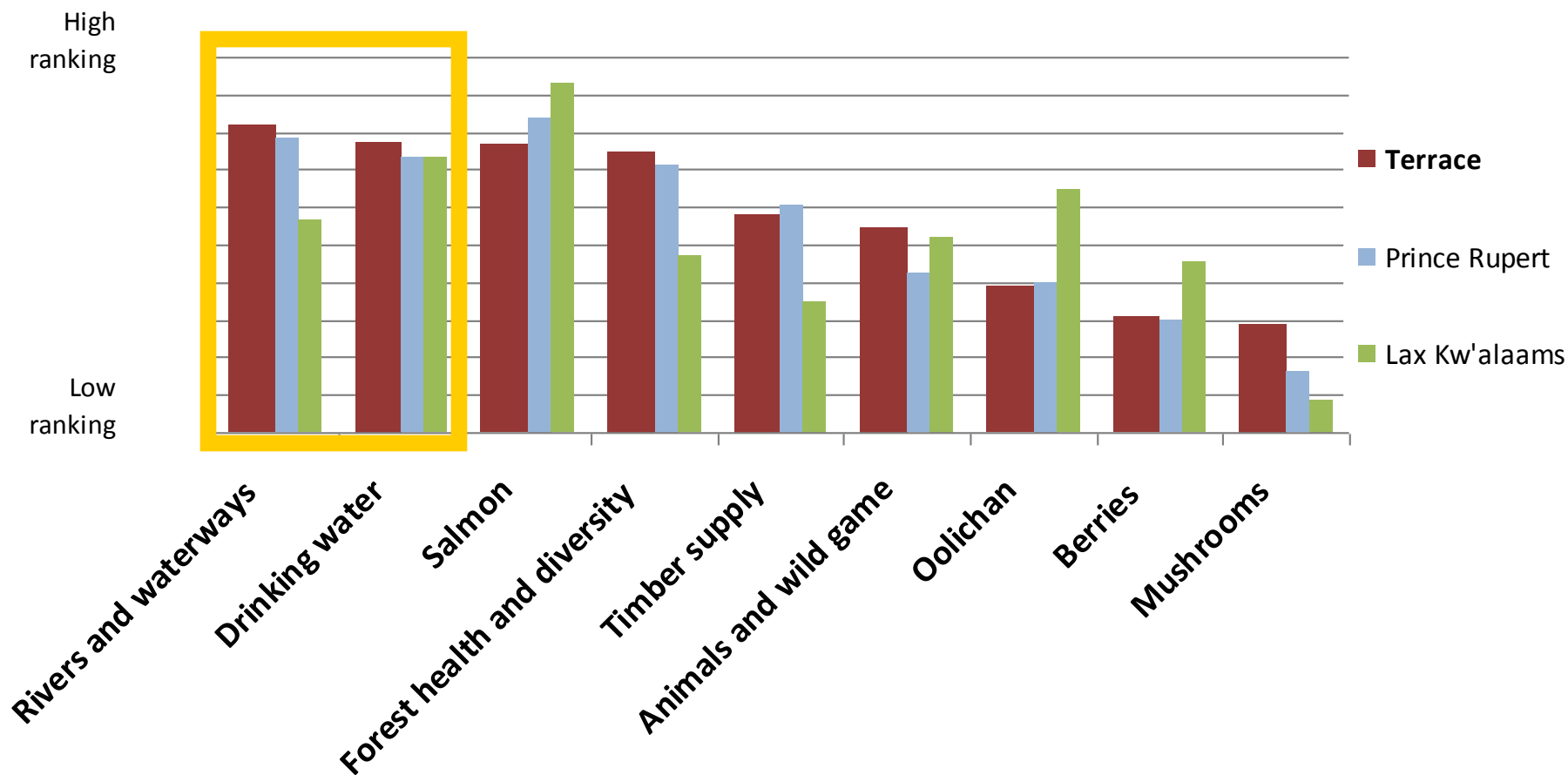


Valued Natural Resources in Terrace

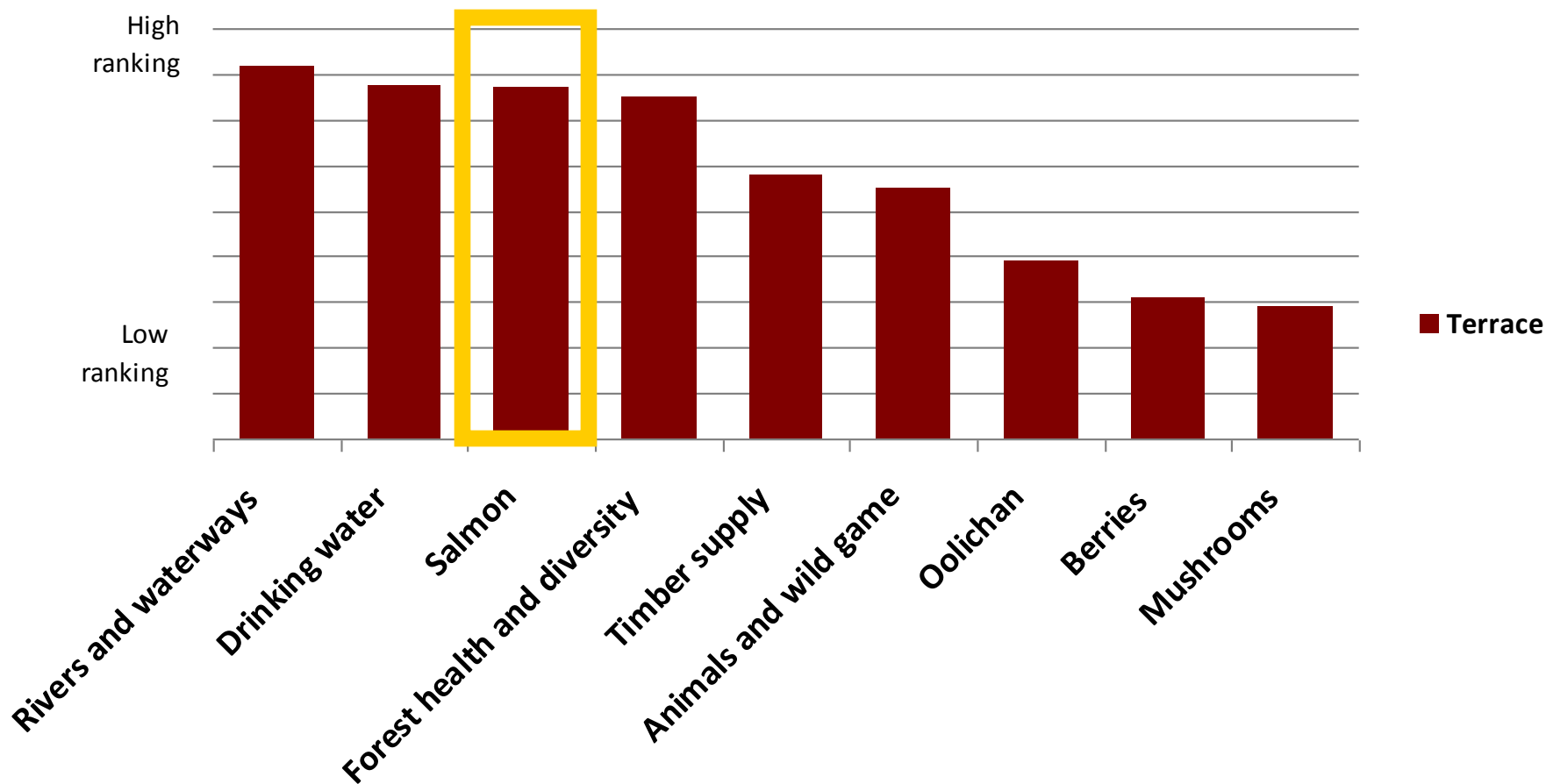


Valued Natural Resources in Terrace

Valued Environmental Resources for Terrace, Prince Rupert and Lax Kw'alaams

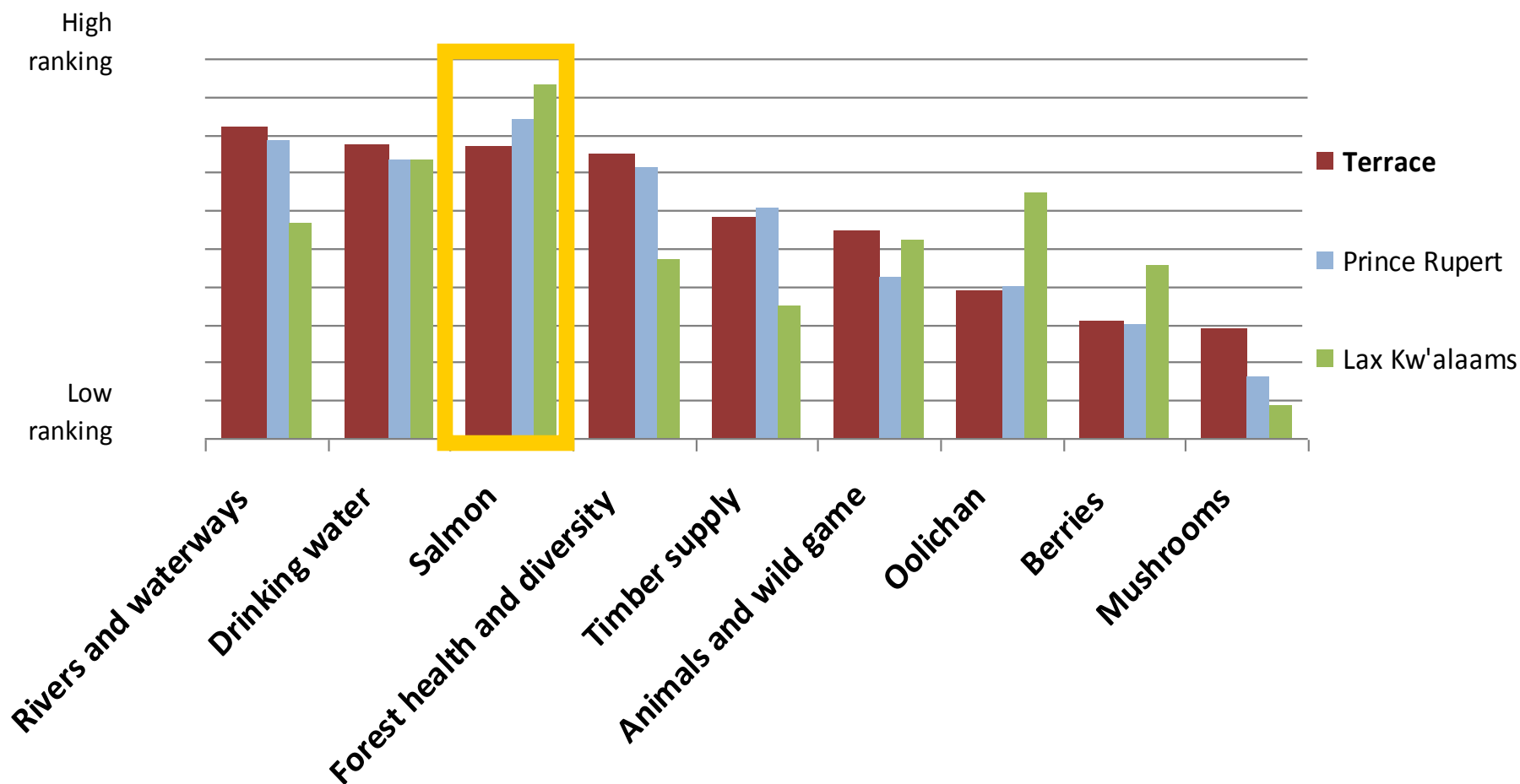


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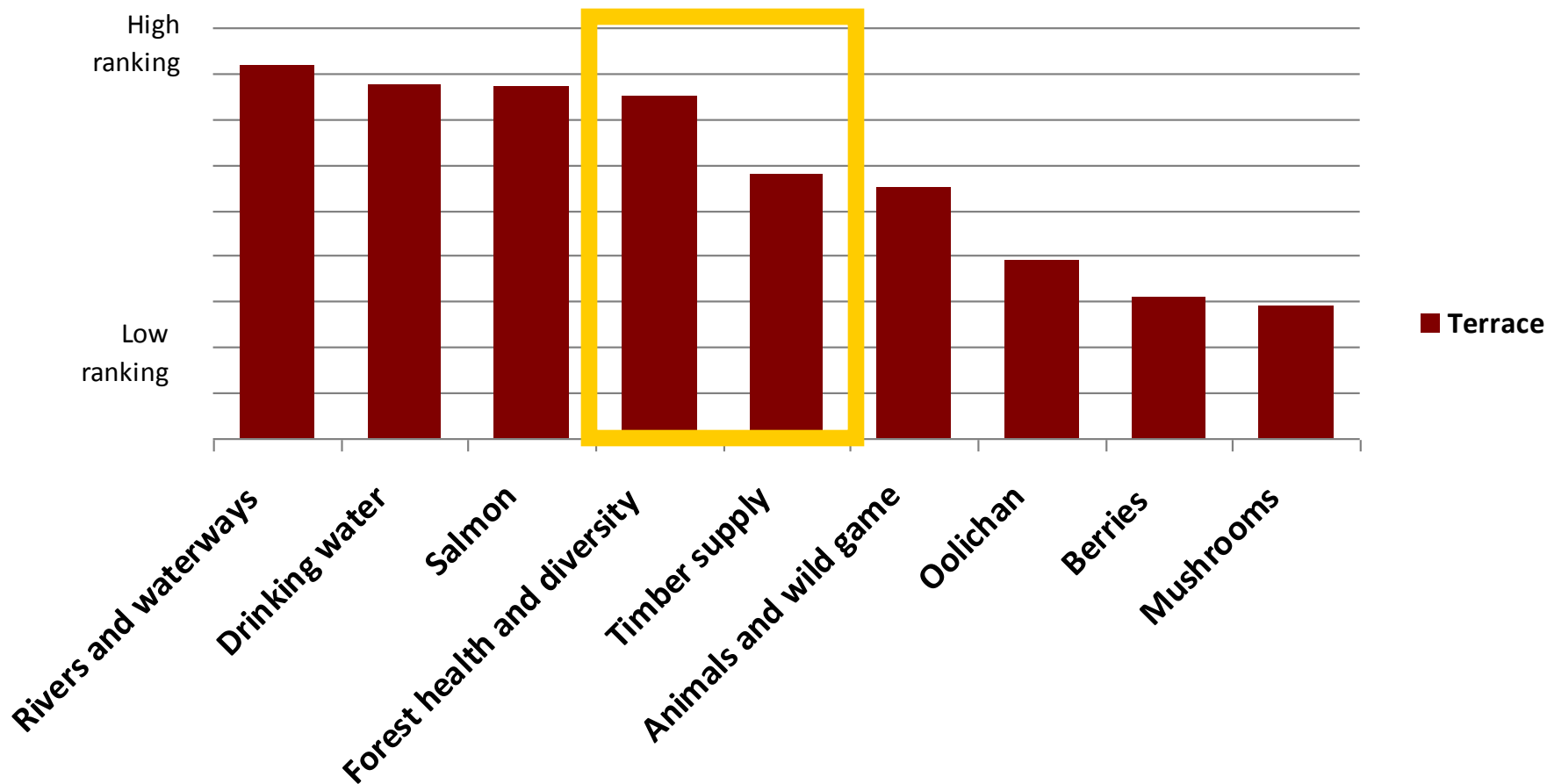


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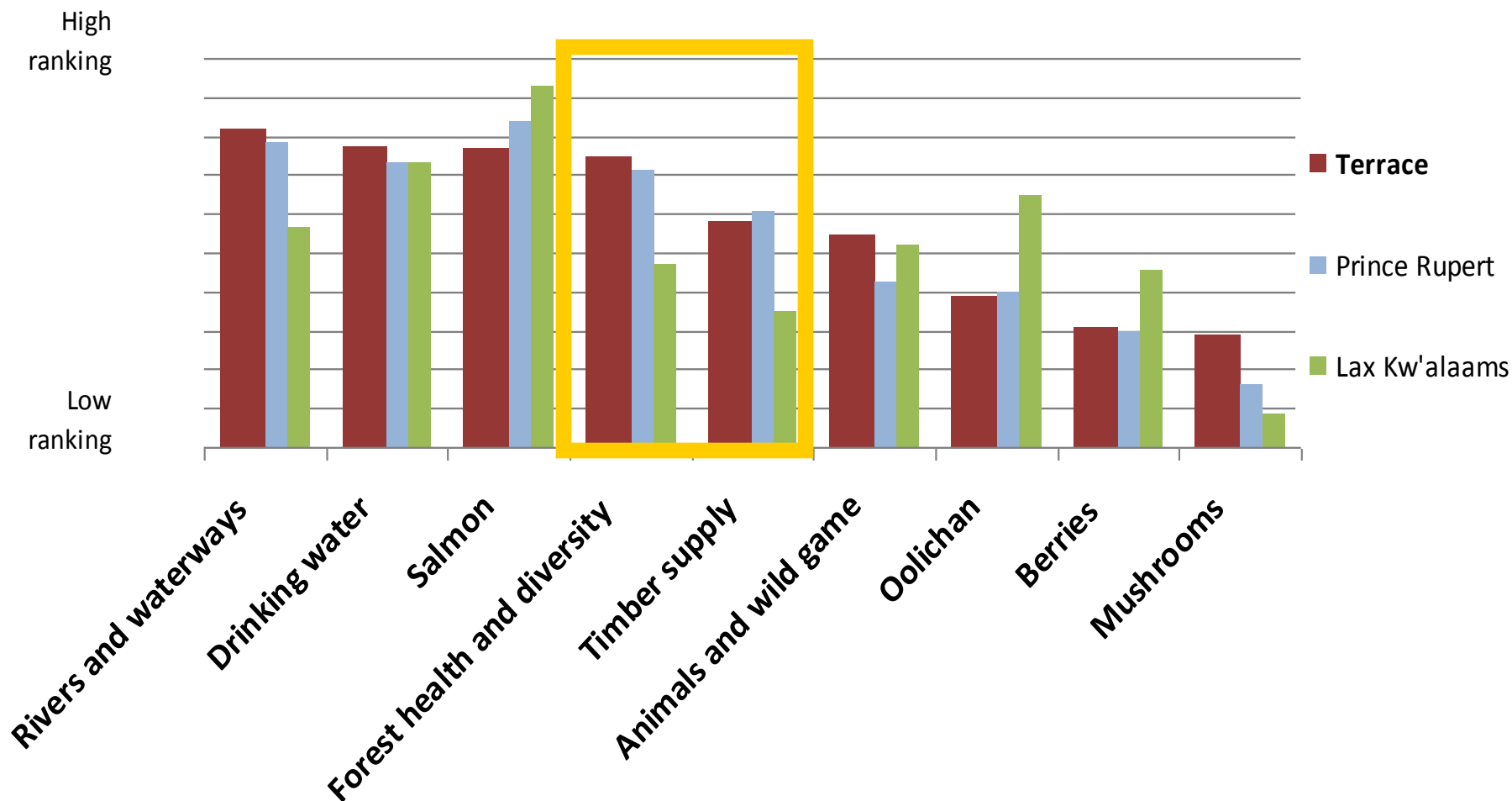


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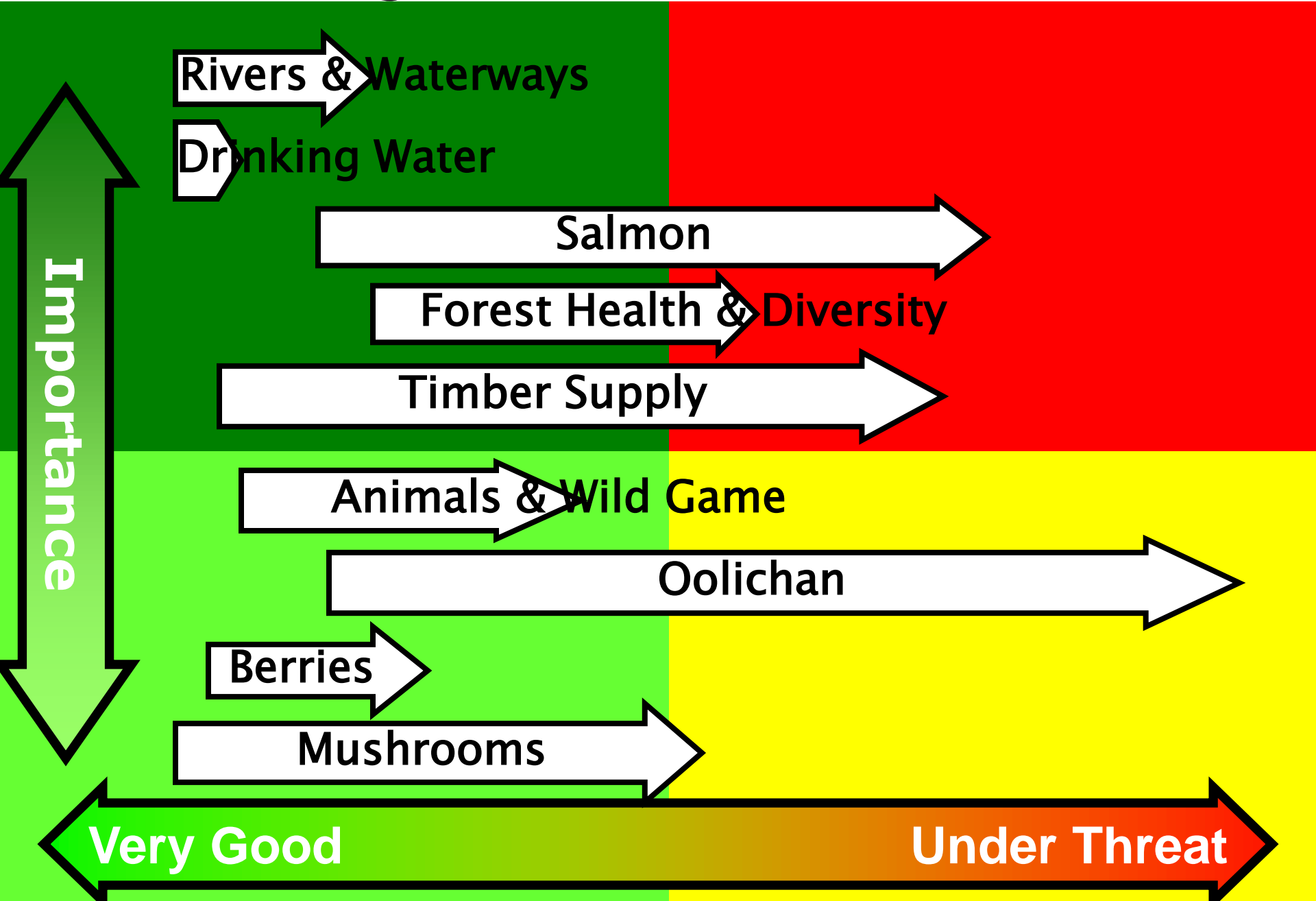


Valued Natural Resources in Terrace

Valued Environmental Resources for Terrace, Prince Rupert and Lax Kw'alaams



Changes in Natural Resources



Key Community Issues

98% mention economic issues

- Decline in forestry a key issues
- Need for diversification within forestry AND in other industries

64% mention social issues

- Maintaining quality of living
- Developing new community identity

64% mention environmental issues

- Need to balance new development with environmental protection



Key Environment and Resource Issues

45% mention forestry issues

- ❑ Management of the resource
- ❑ Reorganizing the industry



41% mention oil and gas exploration

- ❑ Tremendous opportunities envisioned
- ❑ Need for environmental protection



39% mention fishing

- ❑ Sensitivity of fish habitat
- ❑ The unique value of the Skeena



Key Forestry Issues

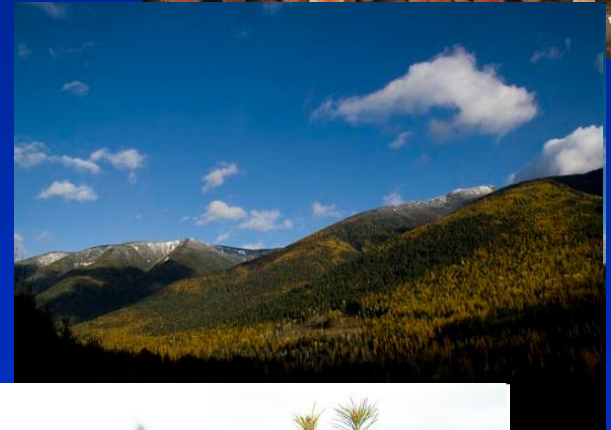
74% mention state of the industry

- ❑ Log exports a contentious issue
- ❑ “New” forestry is needed



48% mention forestry management

- ❑ Questions about value of existing timber
- ❑ Maintenance of forestry roads



36% mention forest health

- ❑ How will trees grow in the future



Sociology Team Research

- Wide range of the community consulted.
- Small business and forest industry highly valued but perceived as being in significant decline.
- Many community resources seen to be improving.
- Water resources highly valued and seen as relatively stable. However, salmon and forestry resources seen as declining.
- Recovery from forestry recession and diversification of industrial core seen as critical issues.
- Respondents see tremendous opportunities, but concerned about potential impacts and divided over which identity should come first.
- **THANK YOU TO ALL PARTICIPANTS**

LATER in Part II

What does the future look like?



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Sociology Report Part II: Looking to the Future

- What role does climate change play?
- Do we have enough information to plan?
- What will drive change in the future?



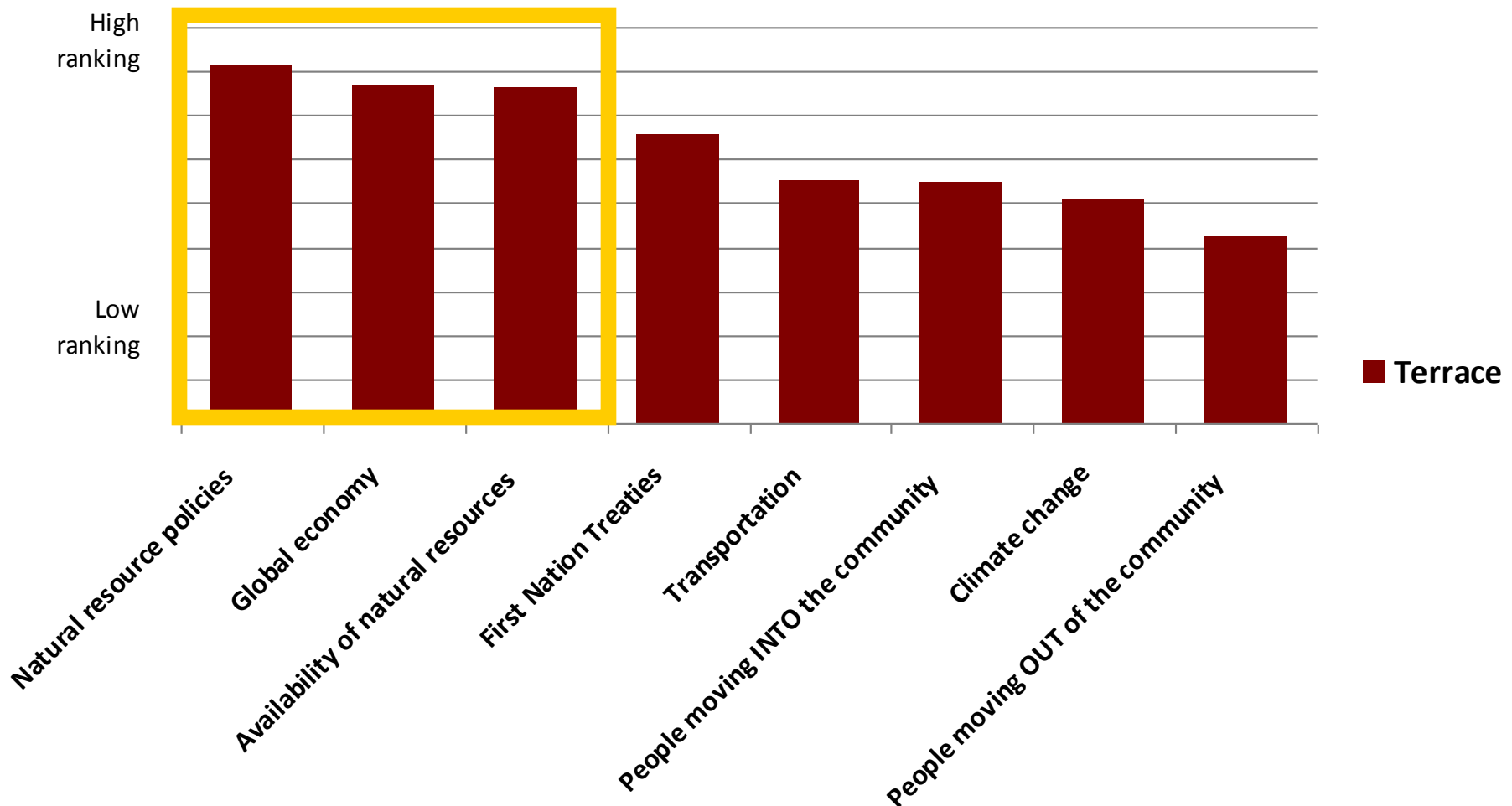
Assessing Climate Change

- 69% see relationship between climate change and key issues
- Concerns revolve around impact on forest health and river flows.
 - ❖ Salmon habitat
 - ❖ New forests for a changing climate and a changing industry
- Concern about “Indirect” climate change impacts
- Climate change understandings hinge on sense of geography

Planning for Climate Change

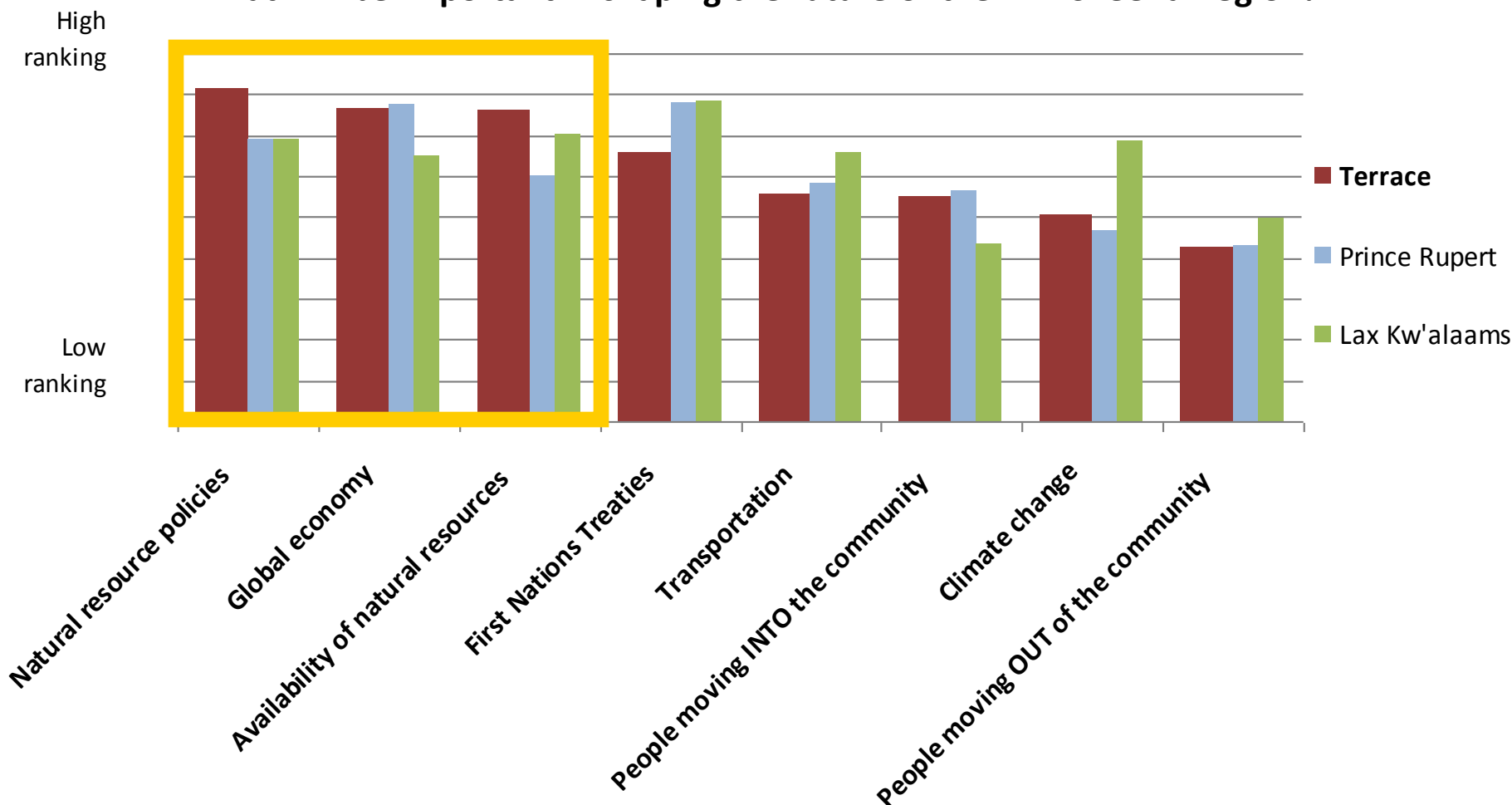
- ❑ 28% think information is specific enough
 - Information seen as focused on “other” places
- ❑ 40% believe Terrace can plan for climate change based on information available
 - Confidence is linked to tackling LOCAL issues
- ❑ Specific data does equate with the ability to plan for climate change.
 - ❖ Information must be mobilized
 - ❖ Challenge must be recognized
 - ❖ Funding

Drivers of Change in Terrace



Drivers of Change in Terrace

What will be important in shaping the future of the NW Skeena Region?



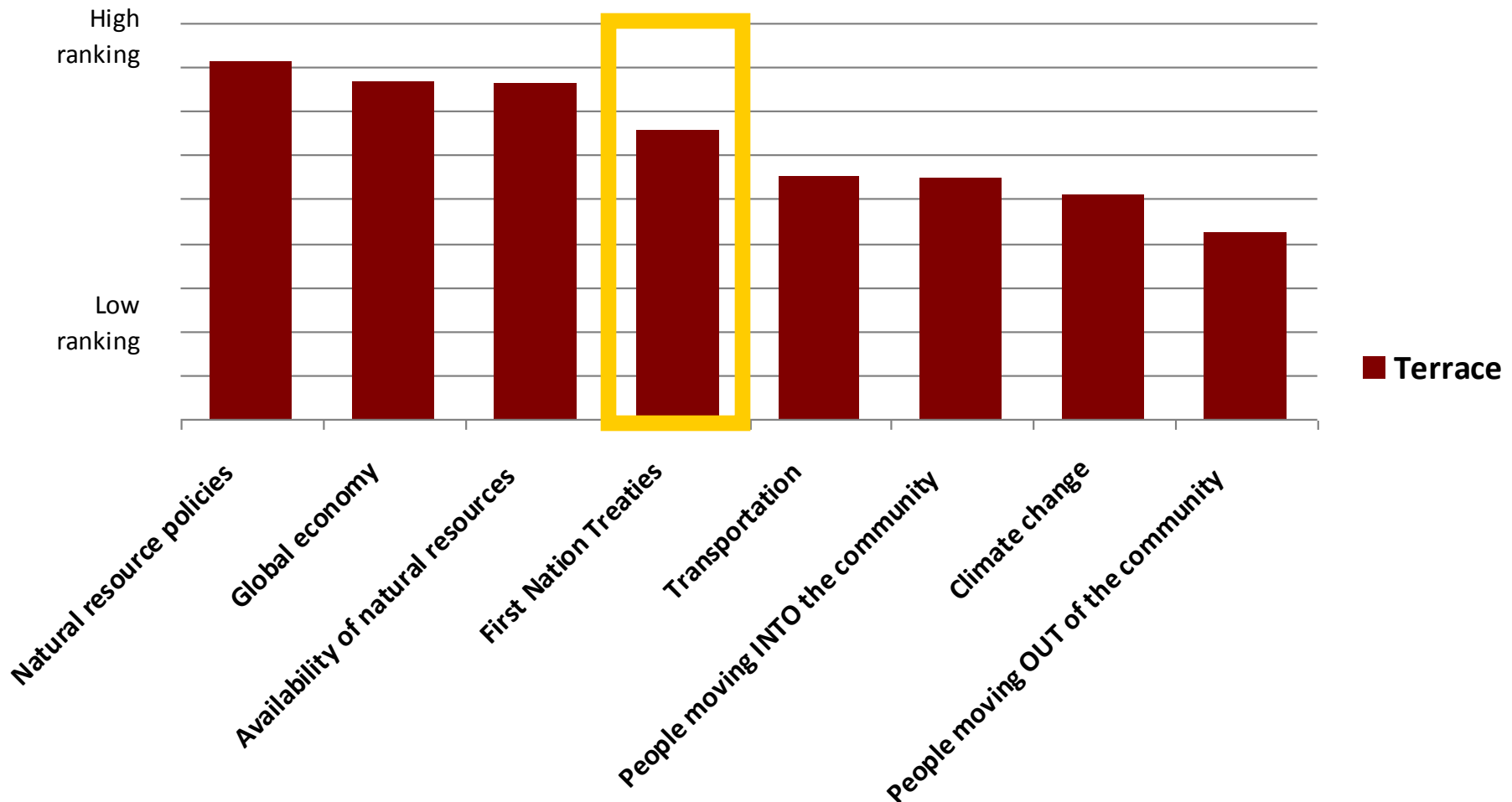
Local residents on global economy, natural resource policies, and availability of resources:

"I think the driver for the community of Terrace will be the expansion of our local economy, local and regional economy, to meet some new global demands."

"If only all these big planet-killing companies would stop proposing bad projects in our region, all these environmentalists could be paid to come up with sustainable energy solutions for the future...we could really be putting our energy into some of these solutions and building a green economy."

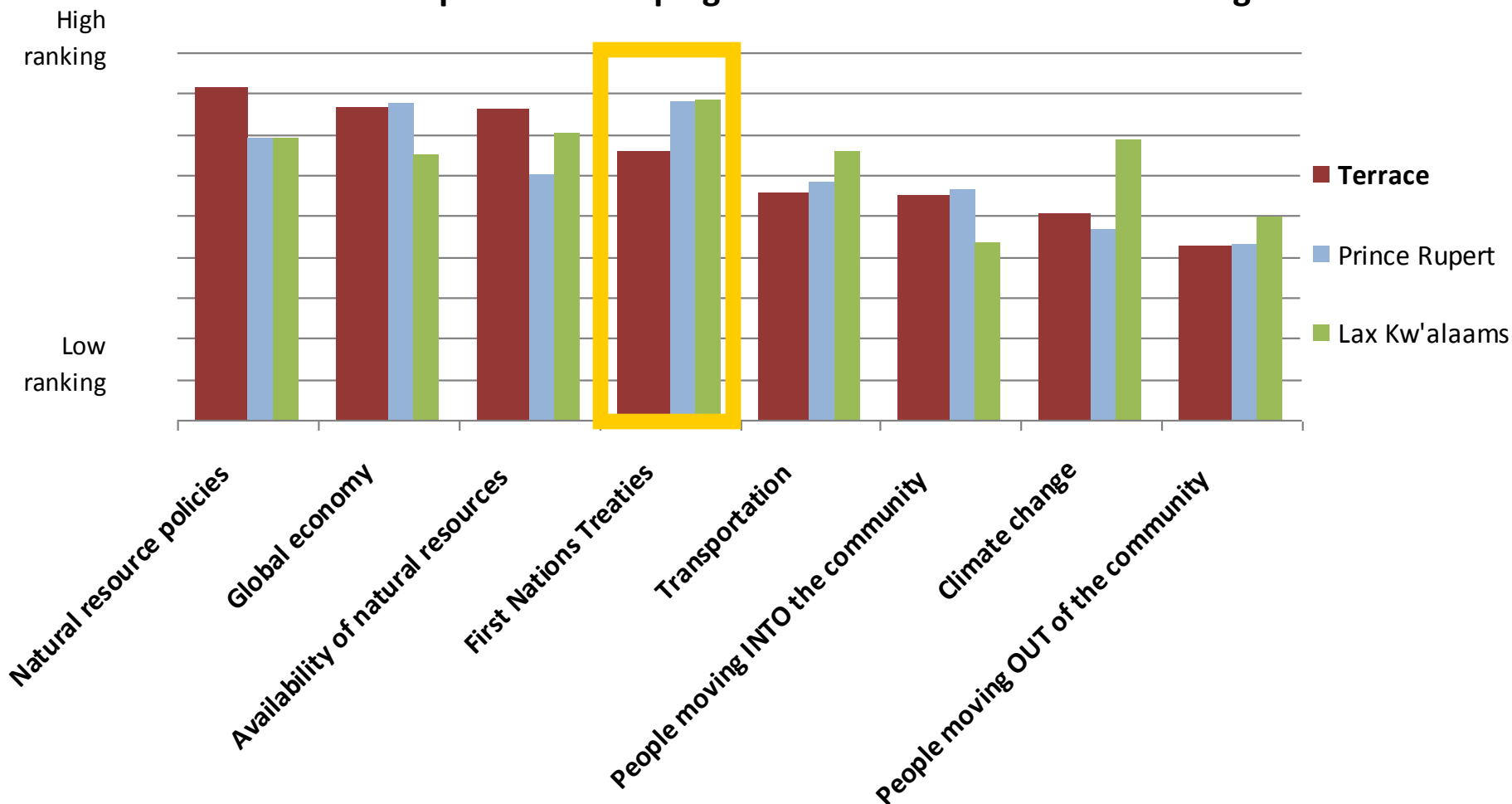


Drivers of Change in Terrace



Drivers of Change in Terrace

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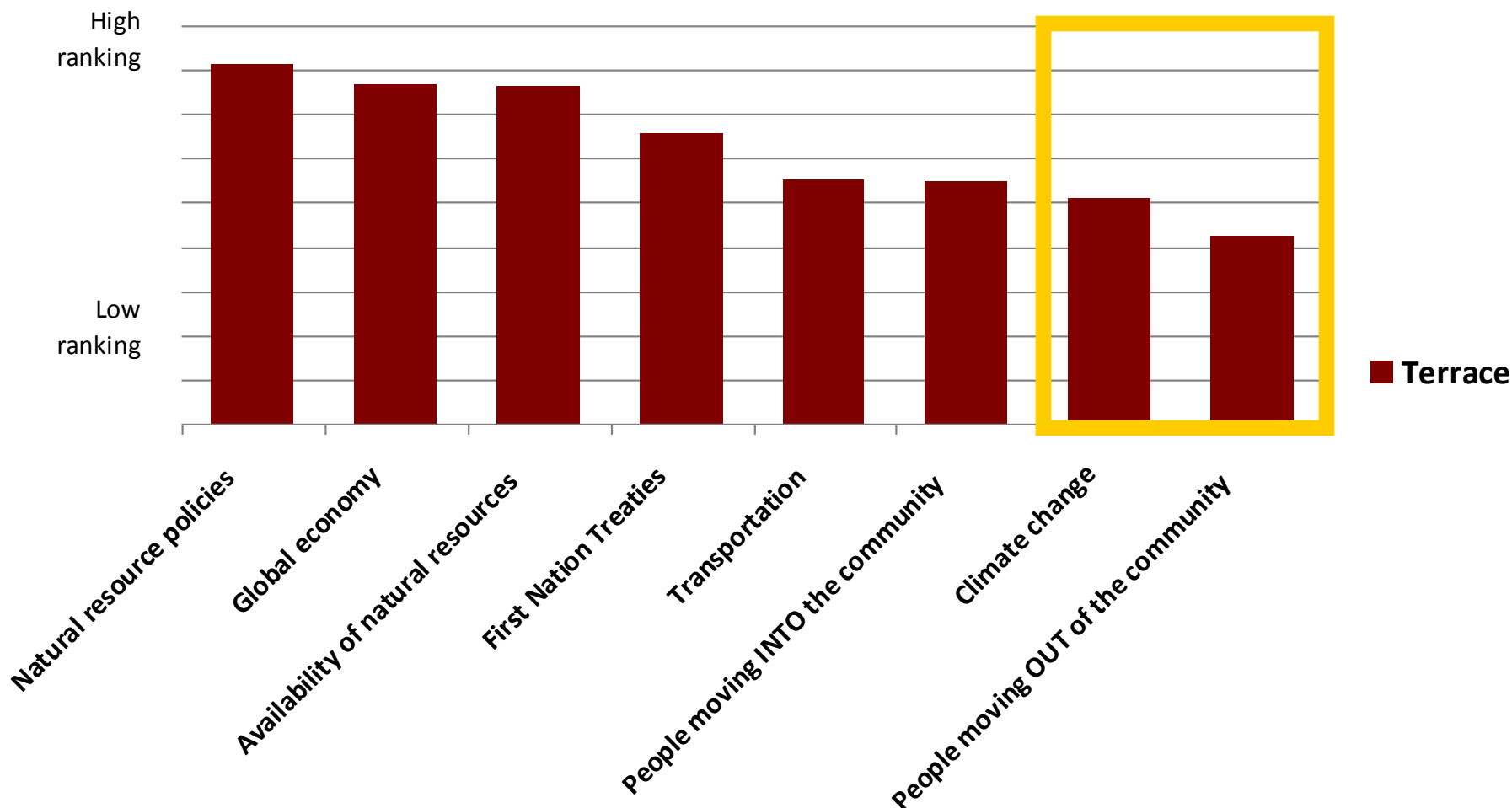


Local residents on First Nations Treaties:

"There's a lot of First Nations traditional territory and I think without that being settled, it makes it difficult for those industries to, for major investment, to come in."

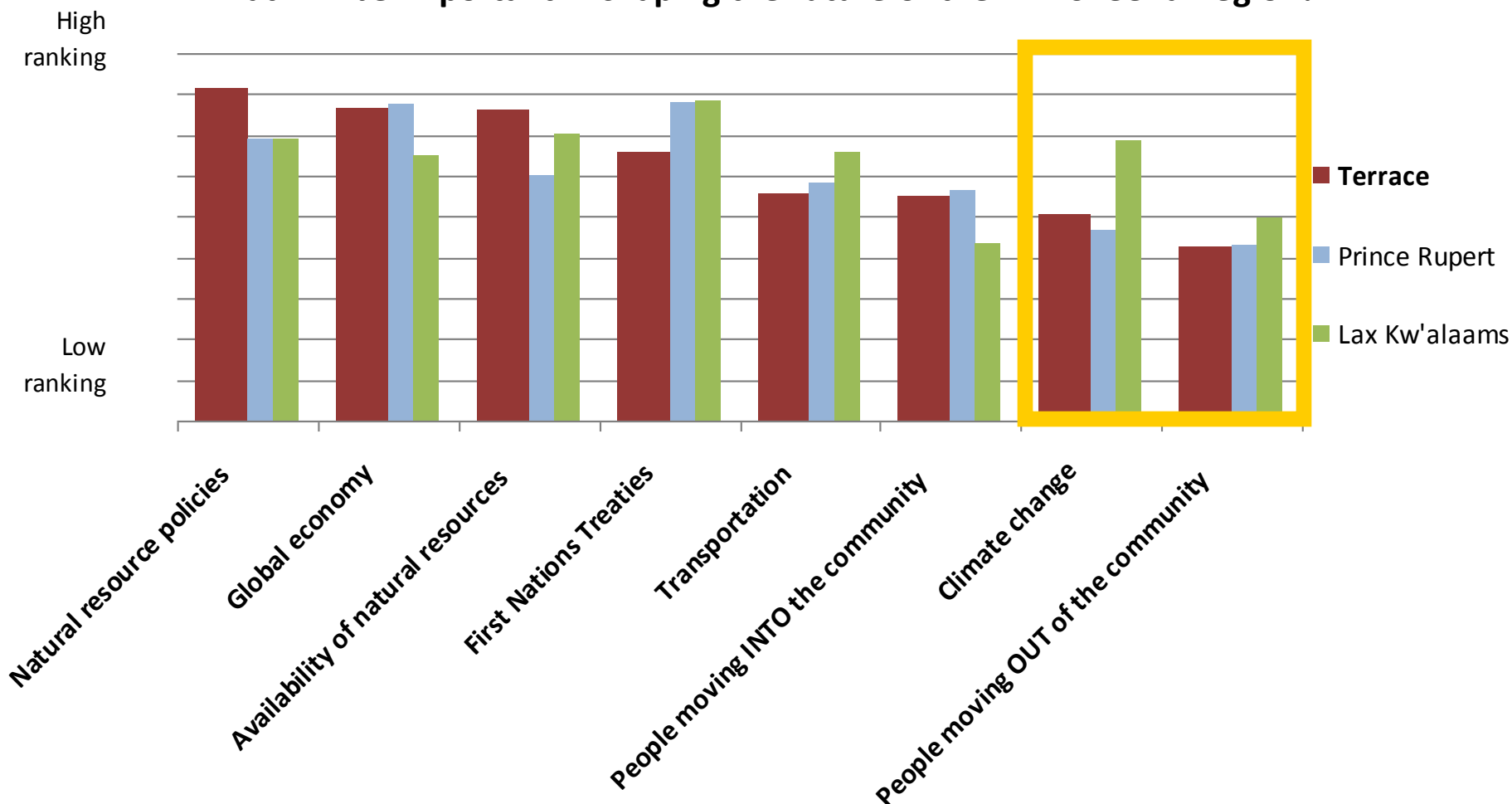
"What if out of every First Nation community, we could get a group, a leadership group, of well educated professionals, to guide-- to provide vision and strategic direction for the future."

Drivers of Change in Terrace



Drivers of Change in Terrace

What will be important in shaping the future of the NW Skeena Region?



Local residents comment on climate change in Terrace:

"If the world goes towards carbon credits and climate change kind of modeling, then Terrace is in good shape to respond to that. So if there is economic demand for the products that we have, we'll be in good stead."

"If you're in complete survival mode and every dollar you spend is trying to fill a pothole, how do you expect that they would have any ability to respond to an unknown shift in climate?... The answer is no, we have no money to do that."



Visions of the Future

Do you think that the future is most likely to be determined by what goes on within the community and by the actions of local leaders, OR do you think the future will be determined more by external factors that may be largely outside local control?

"Almost exclusively external factors. The biggest influence economically in this area in the last five years has been Alcan and their rehab. When it's operating it's-- it makes a big difference."

"I think overall it's more likely to be influenced by external factors such as resource policy, such as the settling of First Nations treaties. I think those are factors, huge factors, in how this community will grow or prosper."

Summary

- Climate change often seen as being related to key issues, with emphasis on forest industry impacts and salmon habitat.
- Information alone is not enough for planning. Confidence in planning is linked to involvement in local action.
- Quest for new community identity and new role to play in northwest industrial and economic expansion.

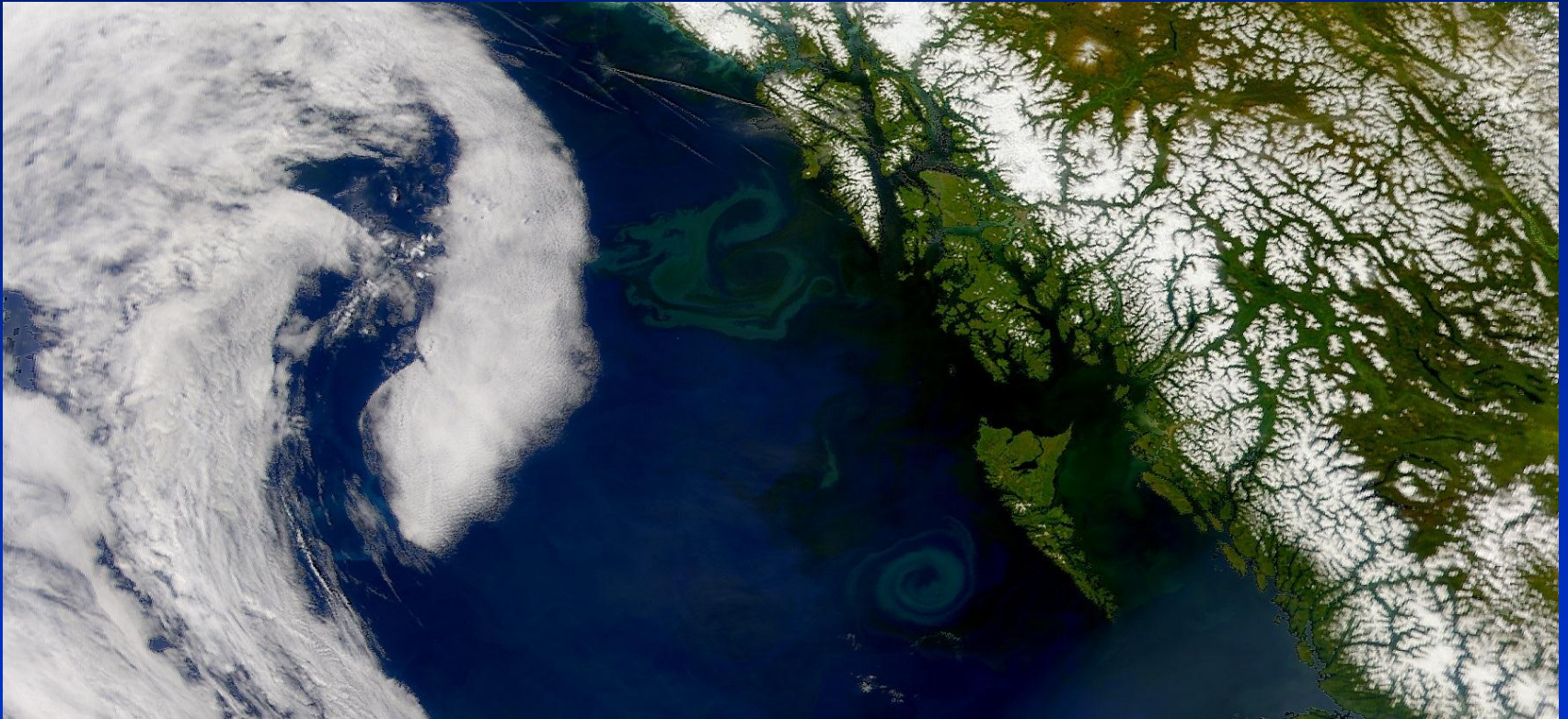
THANK YOU AGAIN TO ALL PARTICIPANTS



Planning for Adaptive Capacity: A Conclusion and a Beginning

Ralph Matthews, Ph.D.,
Professor of Sociology,
The University of British Columbia

Adaptive Capacity – Organizations, Institutions / Culture and Actions



❑ Important:

❑ Not to be bound in looking at every new situation the way you looked at every thing in the past

❑ CRITICAL THING IS TO HAVE THE FLEXIBILITY IN YOUR COMMUNITY, IN THE WAY YOU DO THINGS, THAT PEOPLE ARE ABLE TO DEVELOP WAYS TO RESPOND EFFECTIVELY TO EXPOSURES

Developing Adaptive Capacity – This Afternoon Starts the Process

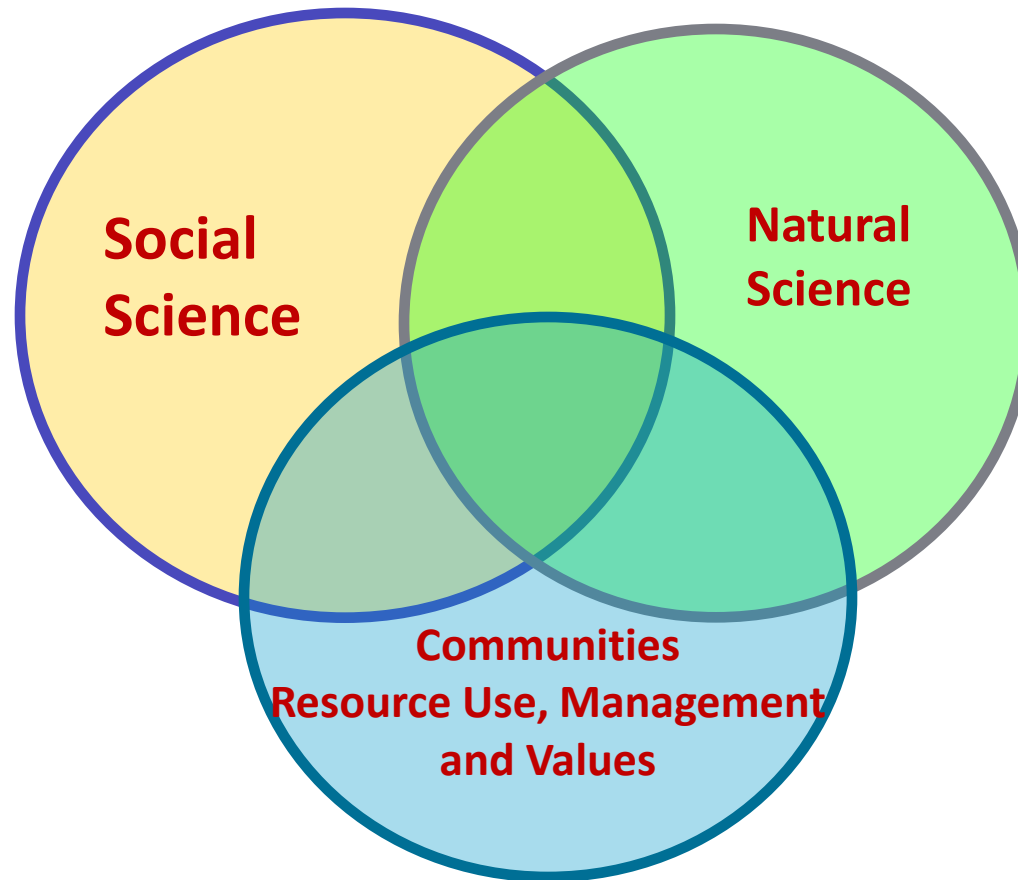
- ❑ Getting you thinking about the issues in terms of your values and your goals.
- ❑ Getting you assessing your adaptive capacity
- ❑ Translating a future climate stress into an effective community response
- ❑ Getting you thinking about the issues in terms of your strengths and weaknesses (SWOT)
- ❑ Getting you to think in terms of **the FIT, Interplay, and Scope** of your responses
- ❑ Getting you thinking about how / what may need to change
- ❑ Getting you to reflect on the future you want and the actions and social changes that may be needed to get there.

The Elements

- ❑ Fit – Does our organization fit the problem
- ❑ Interplay – Do we relate appropriately to others
- ❑ Scope – Geographic and Temporal

- ❑ Consider the four Ps
 - ❖ People
 - ❖ Policies
 - ❖ Politics
 - ❖ Processes

Bringing All Our Knowledges Together



The Process of Knowledge Integration and Mobilization

- ❑ We have been here today to bring you our 'knowledges'
- ❑ It has to be joined by your knowledge of your community and environment
- ❑ The goal of the rest of the day is to put our knowledges together – as a group, how do you answer the community vision questions

The Questions to Ask

- ❑ What knowledge can you trust?
- ❑ What do you need beside good information?
 - ❖ Commitment of people
 - ❖ Social Will (social licence) of the community
 - ❖ Financial resources

A community vision:

- ❑ What are the other drivers of change as outlined by your community in our presentation
- ❑ Do they overlap with resource planning and climate change planning?
- ❑ i.e. This is not just about climate change planning – it is about community change planning and community visioning.

This afternoon:

- We are getting you thinking about the issues in terms of:
 - ❖ The social science findings about your community values
 - ❖ The natural science findings about your ecology

We are asking you to consider how best to work with the overlapping area that was in the diagram this morning

We hope to get you thinking about the issues in terms of your values and in terms of your communities visions of its future.

We hope you will think about what you
need:
need to do,
to change,
to keep the same.

In developing not just a future vision of
your community in all its aspects, but a
climate change informed community
vision.

□ ralph.matthews@ubc.ca