

# The Impact of Global Economic Development on Cultures Embedded in Forest Landscapes: *Lessons from The Yinta in British Columbia, Canada*

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Hereditary Chiefs.

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world

# The pursuit of sustainability...

...can be characterized as a question of how to create a level playing field in a multi-dimensional space.

Globalization feeds tensions between competing policies and institutions operating at a range of regional, national and international scales.

# Perspectives on the local impacts of globalization



*“That kind of impact is a direct result of the forest industry – **look at our potlatch system, how commercialized it is now.** If they did it the right way, the way it was done in the 1950s, there wouldn’t be much money in there.*

*There would be more handmade stuff that was handed out in the potlatch system rather than just going over to Superstore or Costco to buy all these products.”*

– OWFN Hereditary Chief, 2006

Sources: [crossroads.crm.com](http://crossroads.crm.com), [sd91.bc.ca](http://sd91.bc.ca), [americanindian.si.edu](http://americanindian.si.edu), [community.acdsee.com](http://community.acdsee.com)

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# The Canadian Conundrum



- Ranked 4<sup>th</sup> most liveable country in the world (UN Human Development Index, 2009)
  - 53.8% of total area is forest land
  - 192 forest-dependent communities
- ~ 80% of Aboriginal communities are forest-dependent
  - Huge disparity in HDI/Community Well-Being rankings, closer to developing nations (Beavon 2009, Cooke et al. 2007)

# Case Study: Local Industry

BC's forest industry faces converging economic and ecological threats

- Ongoing corporate consolidation
- “Performance exceptionally poor over last 5 years” (COFI 2010)
  - Forestry revenues down 50% and lumber shipments down 45% (BC Stats 2010)
  - 34 mill closures and 10,000 jobs lost since 2007 (BC Stats 2010)
- Nearing the ‘bust’ end of an artificial ‘boom’
  - Harvest of Mountain Pine Beetle epidemic expected to impact 64% of pine forests (projected 25–30 year recovery)
- Educational institutions face ongoing decline in enrolment in forestry programs

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# Case Study: The Yinta

- Traditional Territories of the Office of the Wet'suwet'en First Nation: 2,447 members
  - 22,000 km<sup>2</sup> in north-central British Columbia
  - archaeological evidence and oral tradition (*kungax*) indicate a local 6,000–10,000 year history
- Traditional system of hereditary government: 35 House territories (*biyi'n*) headed by Chiefs

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- informal tenure system for stewardship of named tracts of land, resources sites and

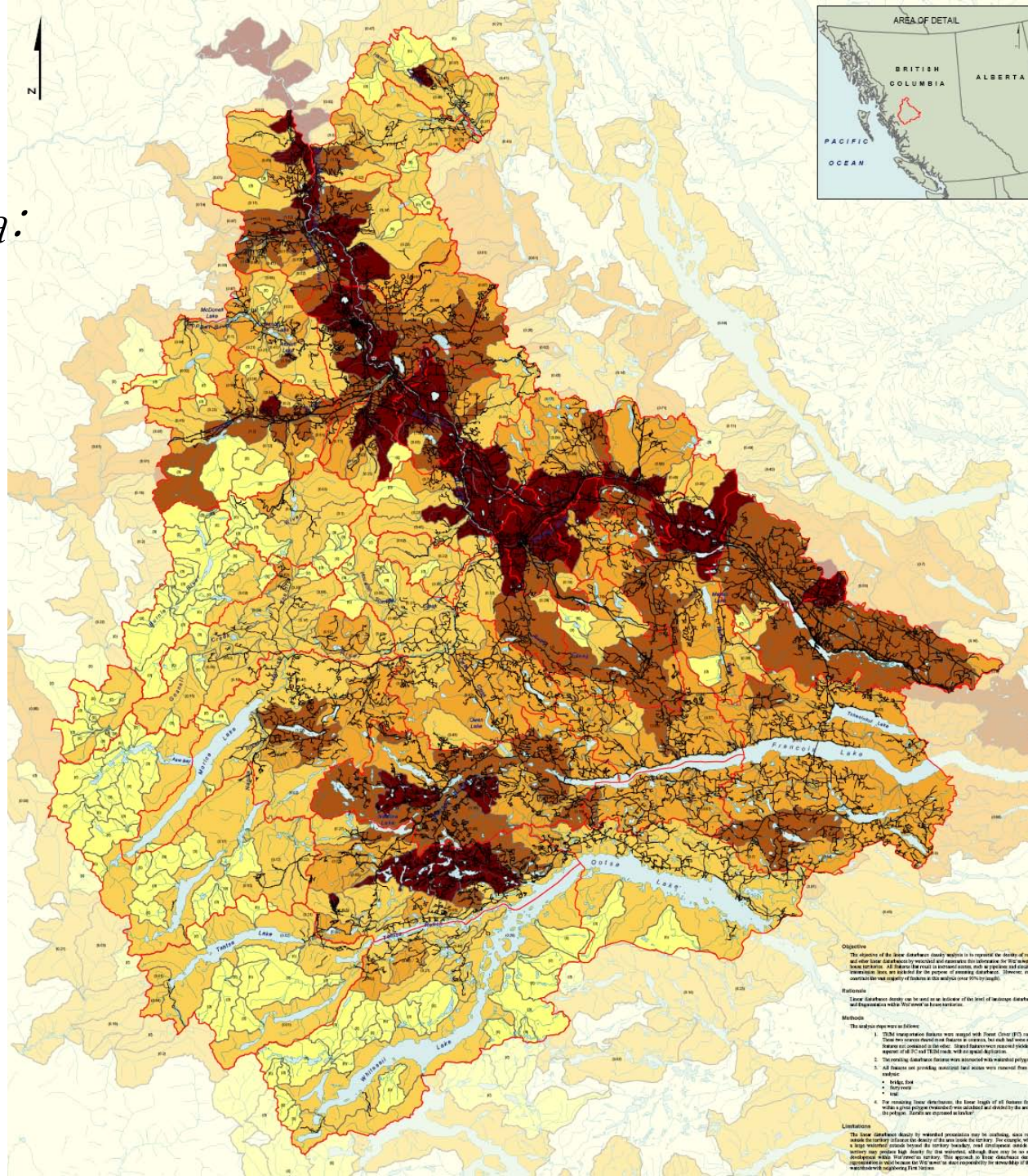
# Linear Disturbance Density on The Yinta: by Watershed Boundary

- distribution of intact watersheds (no road)

̂ Road Density By Watershed (Km of road/Km<sup>2</sup>)



Source: OWFN/AXYS 2005



**Objective**  
The objective of this linear density study was to provide the density of road and other linear disturbances resulting from the development of the watershed for the purpose of assessing disturbance. However, the objective was not to provide a measure of the impact of the road network on the watershed.

**Rationale**  
Linear Disturbance Density can be used as an indicator of the level of landscape disturbance and fragmentation within the watershed.

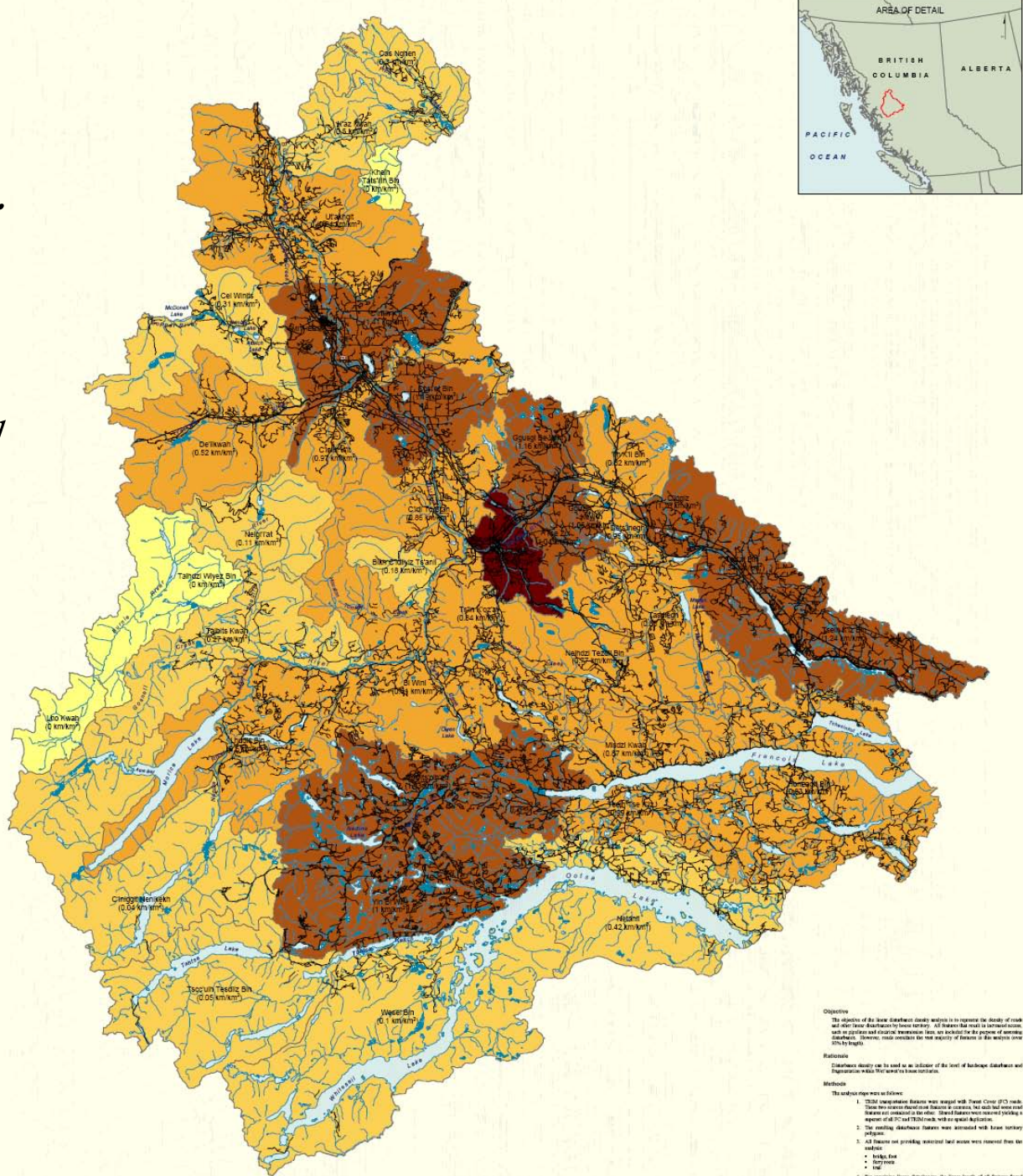
**Method**  
The methodology was as follows:  
1. The watershed boundary was defined using the 1:50,000 scale topographic map of the watershed. The boundary was defined using the 1:50,000 scale topographic map of the watershed.  
2. The road network was digitized from the 1:50,000 scale topographic map of the watershed. The road network was digitized from the 1:50,000 scale topographic map of the watershed.  
3. All roads were digitized, including both paved and unpaved roads.  
4. The road network was digitized from the 1:50,000 scale topographic map of the watershed. The road network was digitized from the 1:50,000 scale topographic map of the watershed.  
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**Limitations**  
The linear density study by watershed boundaries may be misleading, since the road network density is not uniform across the watershed. The density of the road network is not uniform across the watershed, and the density of the road network is not uniform across the watershed. The density of the road network is not uniform across the watershed, and the density of the road network is not uniform across the watershed.

# Linear Disturbance Density on The Yinta: by House Territory

- only 2 of 35 House Territories intact (no road)

Road Density By House Territory (Km of road/Km<sup>2</sup>)



Source: OWFN/AXYS 2005

**Objective**  
The objective of the linear disturbance density analysis is to represent the density of roads and other linear disturbances by house territory. All features that result in increased access, such as pipelines and electrical transmission lines, are excluded for the purpose of measuring disturbance. However, roads are included for the purpose of determining the road network.

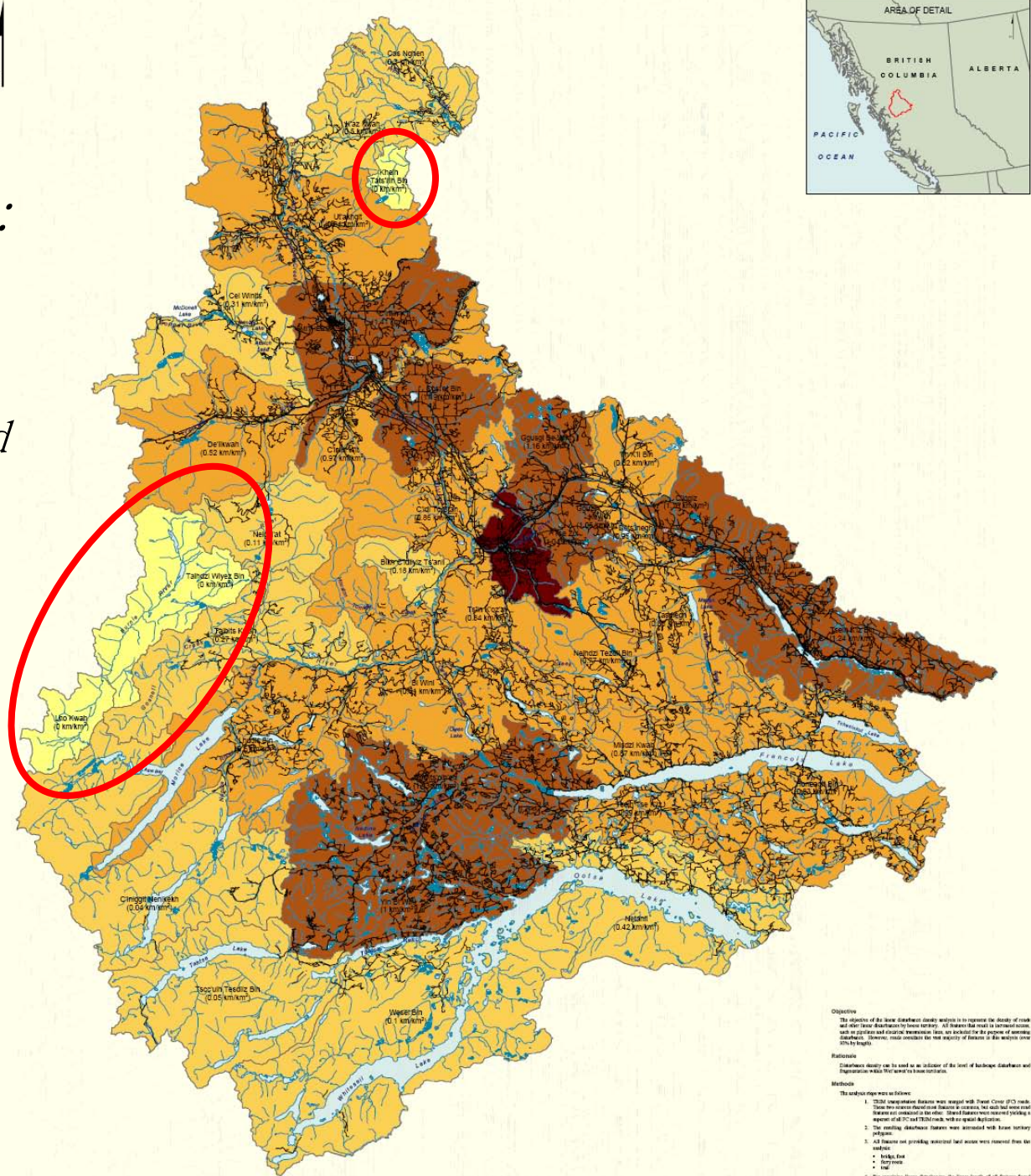
**Rationale**  
Disturbance density can be used as an indicator of the level of landscape disturbance and fragmentation within the area of interest.

**Methods**  
The analysis was completed as follows:  
1. 1:25000 topographic data were acquired with Street View (3D) maps. These were overlaid on the base map of contours, and each had more road data than was available in the other. Street View was used for checking a segment of all TC and TRM roads with an aerial photograph.  
2. The resulting disturbance features were associated with house territory polygons.  
3. All features not providing significant land access were removed from the analysis:  
• Arrows, lines  
• 100' roads  
4. The resulting linear disturbance, the linear length of all features from which a road network, pipeline network, or electrical line derive by way of the polygon. Results are expressed as follows:

# Linear Disturbance Density on The Yinta: by House Territory

only 2 of 35 House Territories intact (no road)

Road Density By House Territory (Km of road/Km<sup>2</sup>)



Source: OWFN/AXYS 2005

**Objective**  
The objective of the linear disturbance density analysis is to represent the density of roads and other linear disturbances by house territory. All features that result in increased access, such as pipelines and electrical transmission lines, are excluded for the purpose of measuring disturbance. However, roads are included as the majority of features in this analysis cover 97% of the length.

**Rationale**  
Disturbance density can be used as an indicator of the level of landscape disturbance and fragmentation within the area of interest.

**Methods**  
The analysis steps were as follows:  
1. GIS data preparation: Disturbance data were acquired with Street View (2003) and then were processed into line features in a vector file. Road features were created by using a segment of all TC and TRM road with an equal application.  
2. The resulting disturbance features were associated with house territory polygons.  
3. All features not providing spatialized land access were removed from the analysis:  
• Artery, line  
• 100' road  
4. The resulting linear disturbance, the linear length of all features from within a grid polygon, house territory was calculated and divided by the area of the polygon. Results are expressed as km/km<sup>2</sup>.

# Nature of the Research

- Studying the (rival) knowledge claims of groups in controversy is science in action
  - Local, interview and dialogue-based approaches drive relevant research questions and processes
- Steep learning curve for researchers and their institutions
  - Relationship-building and data intimacy required!
- Not for the faint of heart
  - Funding, collaboration and timeline hurdles
  - Objective study of heated issues in participating communities is a delicate balancing act
    - Trust and opinion factors (data that yells at you)

# Perspectives on local impacts of globalization

*“There’s been a lot of people that have prospered. Sad to say it hasn’t been the First Nations that has prospered...not until just recently were we ever invited to participate in this industry.*

*There’s a strong feeling out there to find out where we still fit in. Not only in industry: where do we fit into the **social structure** as a whole?”*

– OWFN Hereditary Chief, 2006



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# Our common future is a common tension.

- Fundamental definitions of SFM
- Geographic and economic dislocation
  - lifestyles and livelihoods
- Knowledge systems, timelines and history
  - rootedness in the community
- Equitable distribution of benefits
  - access to rights and resources
- Governance systems and institutions
- Network of interrelated and competing policies
  - i.e., economic development, natural resources management, Treaty negotiation and settlement



# Perspectives on the local impacts of globalization



*“The impact is: it’s divided people. The rich keep getting richer and the poor are getting poorer, and even recently through politics trying to get First Nations involved with the forest industry – through the Forest and Range Agreements, Interim Measure Agreements – that took us back 50 to 70 years.*”



*It’s definitely divide and conquer again. Now it’s the traditional system versus the Bands, and its all over beads and trinkets.”*

– OWFN Hereditary Chief, 2006

Sources: Griffiths (1978), indybay.org

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# Thinking outside The Panopticon (Bentham 1785).

- Monitoring vs. managing
  - Tendency to aggregate information ‘up’
- Decentralization offers insights into how we can devolve SFM towards cultural sensitivity and relevance
  - Knowledge is inherently social and culturally-driven
  - Meaningful consultation is a good place to start
    - Being heard vs. being understood
- A model for wider pluralist society
  - Awareness as a tool for overcoming geographic and economic dislocations
  - Appreciation that local history and experience are factors that will continue to shape perceptions, goals and satisfaction with current and ongoing efforts at SFM

# Perspectives on the local impacts of globalization

*“...it’s going to be an open market pretty soon: how’s that going to affect everything? ...**whatever happened to that social contract that they had?**”*

*No-one ever talks about that: a social contract that was drawn up in the 1960’s to let them into the forests, that industry’s supposed to follow. They don’t even look at the local people and **the local people don’t even have a say in the resources anymore.**”*

– OWFN Hereditary Chief,

2006

# A Path Forward

- Need to view community-based research as a distributed network of knowledge partnerships
  - Traditional Ecological Knowledge is not a junior partner in science
    - Neither is it just another resource to be inventoried and ‘mined’ for data
- Reframe our research institutions as accessible houses of relevant dialogue for problem-solving and empowerment
  - Support community resilience in weathering the impacts of global economic shifts and ecological change
- Embrace the pending conditions of ‘disaster capitalism’ (Klein 2008) as opportunities for progressive, collaborative work on risk management and regional development

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# Food for Thought

*Is a right really a right if  
you cannot exercise it?*

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