

***PSYCHO-
SOCIAL &
ENVIRONMENTAL
JUSTICE
IMPACT ASSESSMENT:
A TOOL FOR BETTER
UNDERSTANDING
IMPACTS ON
VULNERABLE
POPULATIONS***

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SOCIAL IMPACTS IN EA: STATE OF THE ART,

IAIA16, AICHI-NAGOYA JAPAN, MAY 2016

NEPA REQUIREMENTS FOR EIA

- Potential social impacts due to environmental action
- Potential Environmental Justice Impacts due to “disproportionate” adverse impact to “Environmental Justice” (EJ) population, (minority, low income and/or recognized Native American)
- Discuss in light of cases in Canada and US

A NORM OF SUPERFICIAL EXAMINATION

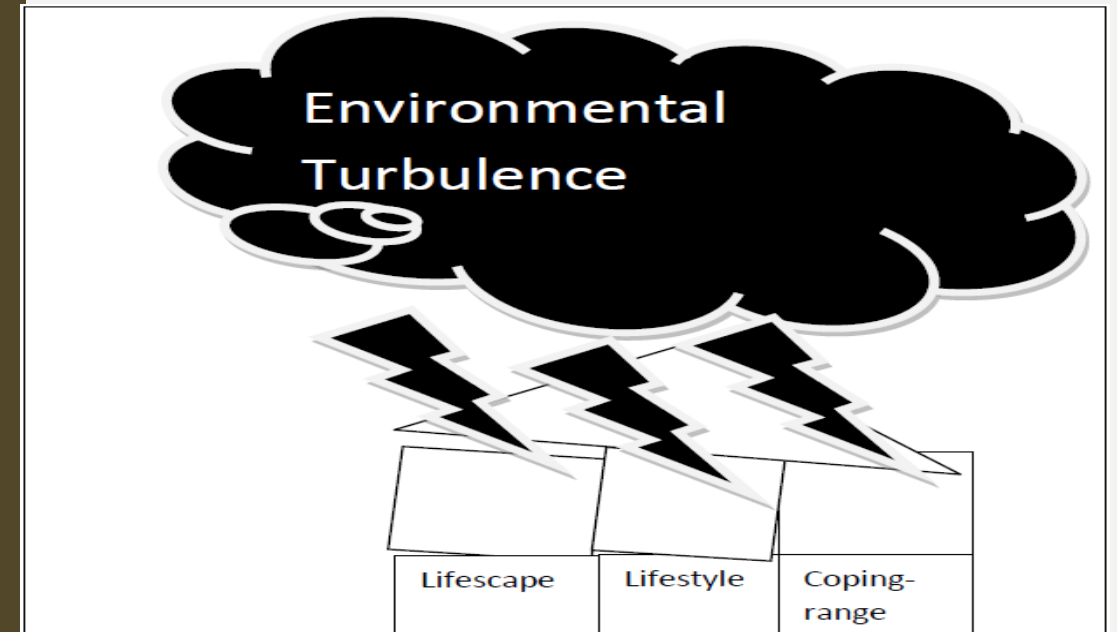
- SIA not explicit NEPA requirement
- Required permits lack explicit social performance outcomes
- Agencies lack social impact mandates
- Also lack trained and dedicated social impact staff
- Social questions rarely scoped for review
- Lack commitment to do good EJ assessment
- Potential for victimization of affected populations routinely missed or minimized under conventional SIA and EJ practice

ADDRESSING THE GAP

- Since 1979, worked to advance state-of-the-art for Psycho-Social Impact Assessment (PSIA)
- However, PSIA rarely included in SIA or EJ assessments
- Detailed impacts to particularly burdened populations not identified
- Even EJ assessment, disproportionate impacts to vulnerable groups inadequately understood and addressed in EIS

“THEORY OF ENVIRONMENTAL TURBULENCE”

- Tool for predicting likely psycho-social impacts; for understanding and valuing impacts so be considered and mitigated
- Contrasts reconstructed “base case” to actual impacts
- Or actual baseline to projected impacts
- Across levels of social process ranging from individuals to larger society
- Potential adverse changes to (potentially) affected populations’:
 - “lifestyle” or pattern of normal activities,
 - “lifescape” or understanding of daily life and stress and coping challenges including “environmental stigma” and “anticipatory fear”
 - “lifestrain” of stress placed by an event’s demands on time and energy



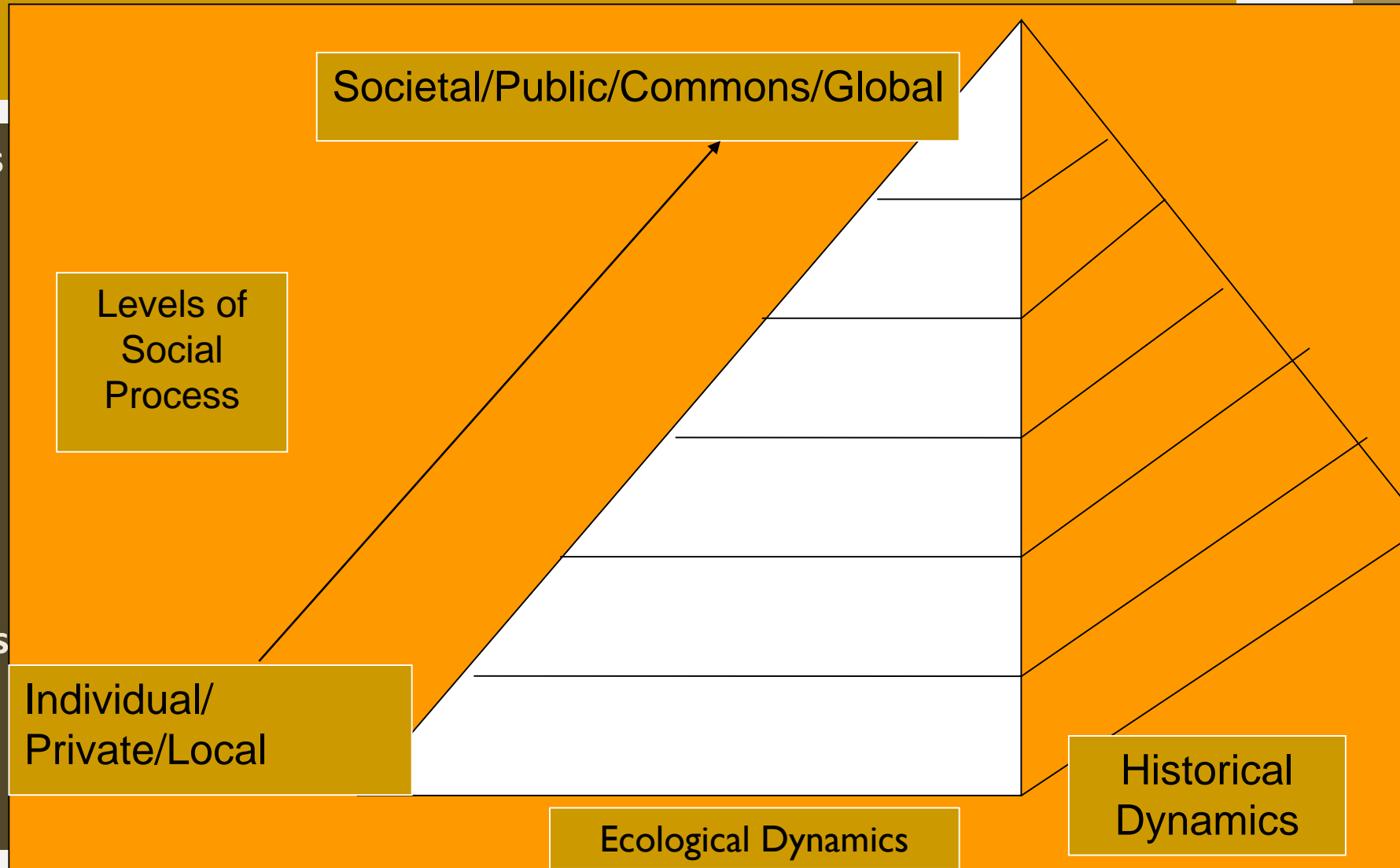
3D SOCIAL PROCESS CONTINUUM

Psycho-social impacts occur at all levels of social process

Levels are nested, interactive and interdependent

Dynamics at any one level influence all

Any level of process is influenced by other levels



LIFESTRAIN

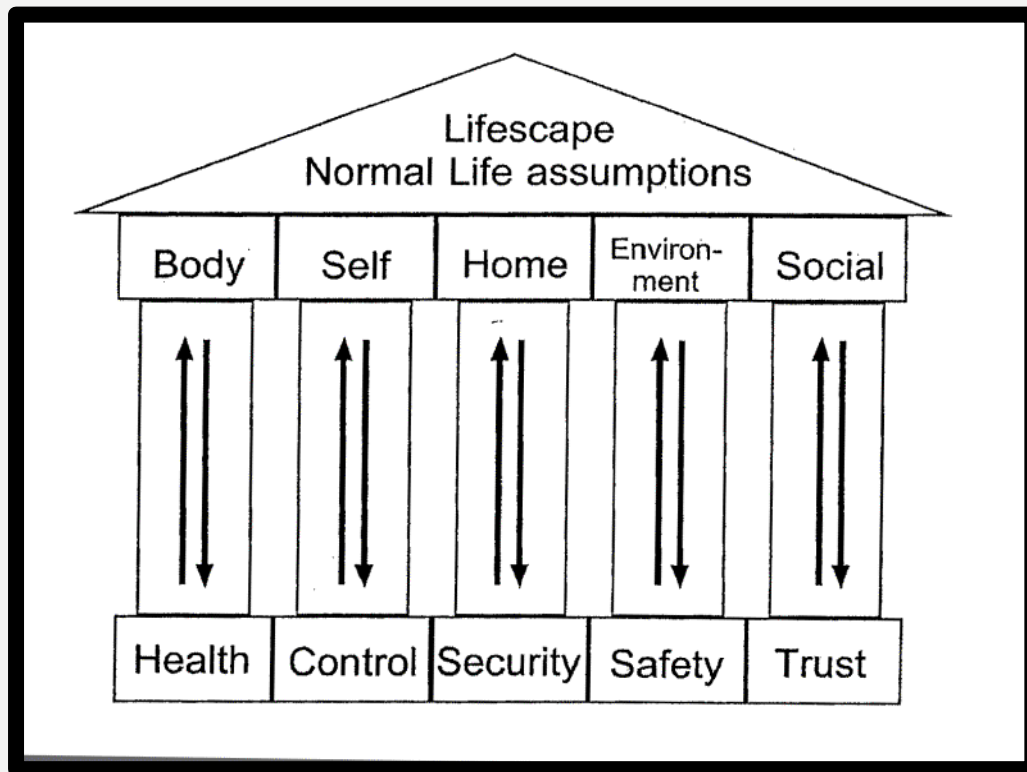
Changed Relational Dynamics

- **Disabling**
- **Environmental stigma**
- **Disabling and enabling responses**
- **Community conflict**
- **Outsiders don't understand**
- **Environmental Injustice**

Coping Challenges

- **Changed psychological well being**
- **Stress and coping impacts**
- **Anticipatory fears**
- **Psychological and social dysfunction**
- **Half stress from event, half from response**

LIFESCAPE



Core Lifescape Assumptions	
<i>Previous to Contamination</i>	<i>After Contamination</i>
Health Optimism	Health Pessimism
Personal Control	Loss of Control, Disabled
Home is Secure and Valued	Inversion of Home and Place
Environment is Benign	Environment is Malevolent
Social Trust	Social Distrust and Stigma

Figure 3.1 Fundamental Lifescape Shifts

LIFESTYLE AND LIFECYCLE

- Lifestyle
- Direct Impacts
- Meaning
- Change in behavior
- Loss of Normalcy

Age	Life-style	Life-scape	Life-strain	Stigma	Relations
Child					
Teen					
Young Adult					
Parent					
Elder					

CASE ONE: TAR SANDS UPGRADING

- **2010 TOTAL proposal for tar sands upgrader in Fort Saskatchewan, Alberta to refine bitumen**
- **Alberta Industrial Heartland (AIH) neighboring rural residences and farm lands**
- **Testified before ERCB for nearby residents on adequacy of TOTAL's Emergency Response Plan (ERP)**
- **Effective ERP all that stands between local residents and disaster during a hazardous event**
- **Requires active participation of residents during releases**
- **Baseline: effectiveness of similar ERPS for existing AIH industry**
- **Intensive interviews with local residents re cumulative AIH impact**



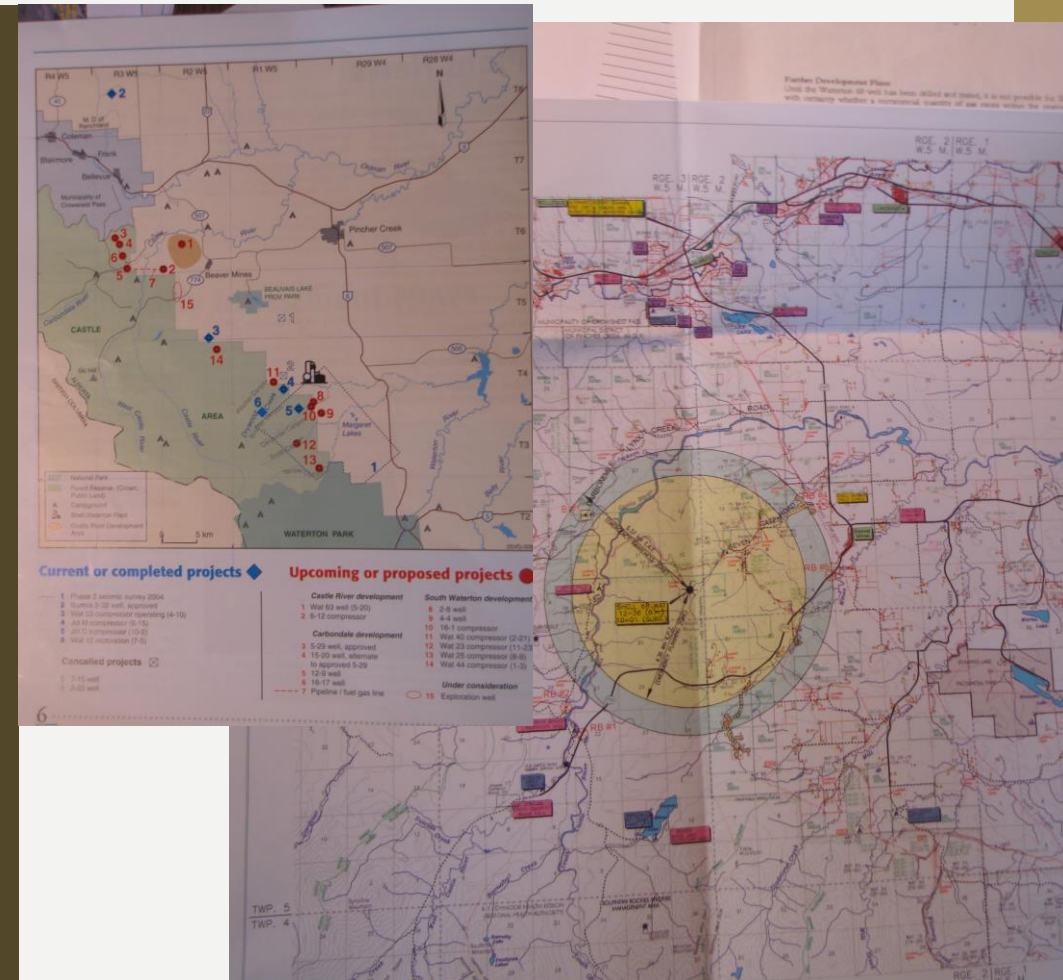
CASE ONE: 2

- Myriad ERP communication problems placed residents at risk
- Only protective actions: “shelter in place” and “evacuation” failed during actual events
- Mona and the refrigerator magnet only education
- Residents’ forced vigilance, monitoring for undetected releases
- Trapped from Environmental stigma and inadequate residential buy-out program
- Constant threat caused significant lifestyle, lifescape and lifestrain stress
- TOTAL proposed an identical ERP to failed prior ERPs
- Doubting ERP was adequately protected, I recommendation fair term relocation
- ERCB rejected and charged me with undermining public confidence in shelter in place
- I was not ERP expert; denied fees
- Real fear was empowerment of industry opponents



CASE TWO: GAS EXTRACTION AND TRANSMISSION

- 2010 Shell proposed new gas well by Waterton National Park
- Testified before Alberta Energy Resource Conservation Board (ERCB) for proximate residents and recreationalists
- Baseline: Local experience with existing wells and pipelines
- Intensive interviews and guided tours
- Connecting pipelines amplified potential well impact
- Sour gas amplified Anticipatory fears
- Leaks surprisingly common
- One informant nearly died in gas release
- Releases unpredictably fail to follow prevailing winds



CASE TWO: SLIDE 2

WILDERNESS INDUSTRIAL LANDSCAPE



CASE TWO: SLIDE 3

- Residents de facto monitors
- Stressful meetings with gas companies
- Industrialized landscape vs. wilderness
- Significant impacts to lifescape, lifestyle and lifestrain for residents, merchants and hikers
- Psycho-social impacts ignored by EIS Adjudicated because citizens' intervened
- Citizen's attested to accuracy of my testimony
- Results infuriated ERCB administrative judges
- Punished me by denying fees
- Discourage future community interventions



THE ENVIRONMENTAL JUSTICE FRAME

- Involuntary exposure to Environmental hazard is an injustice
- Early 1980s realized pattern mirroring social stigma
- February 1984 President Bill Clinton promulgated EO12898
- Considered violation of Civil Rights Act of 1964
- Incorporated into federal NEPA compliance
- Identify EJ populations and whether disproportionate health or environmental risk
- Consider cumulative and multiple exposures
- EIS assess such factors as:
 1. Risk and risk communication needs
 2. dietary and resource consumption impacts
 3. cultural resources,
 4. community health data and occupational exposures
 5. community's priorities for environmental cleanup

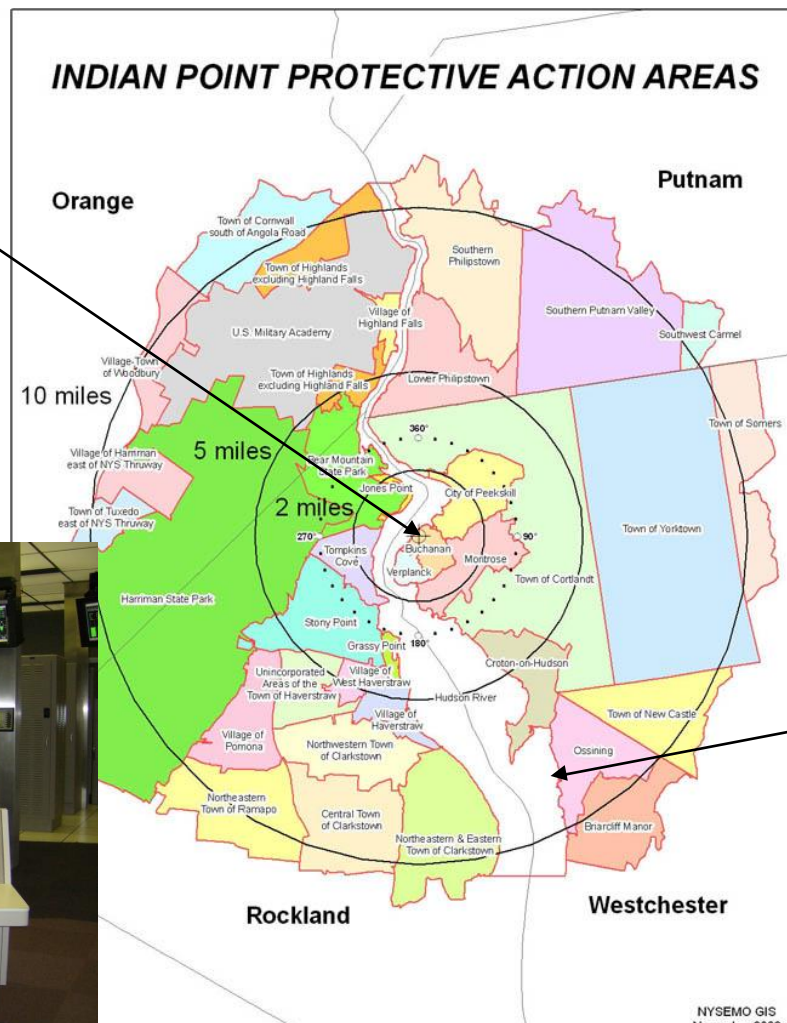
EPA AND OTHER AGENCIES EMBELLISH EJ: EPA

- **Fair Treatment**
- **Equal protection**
- **Meaningful involvement**
- **Empower communities**
- **Create partnerships for healthy and sustainable communities**
- **Accept perception of community as its reality**
- **Involve all stakeholders**
- **Make meetings convenient**
- **In 2015 EPA determined to robustly advance EJ as agency priority**
- **In 2015 include tribal and indigenous peoples**
- **Use indigenous knowledge and address communication and cultural difference**

CASE THREE: NUCLEAR PLANT RE-PERMITTING

- **Nuclear Regulatory Commission (NRC) evaluating 20 year extensions for US nuclear plants**
- **2 operating Indian Point nuclear reactors northwest of New York City owned by Entergy**
- **In 2010, site-specific EIA prepared by NRC**
- **Hudson River Clearwater intervened on inadequate assessment of potential EJ impacts**
- **Atomic Safety and Licensing Board (ASALB) agreed to hear testimony on issue**
- **Narrowed to potential disproportionate impacts to inmates of high security Sing Sing prison**
- **Sing Sing less than ten miles south---own census block**
- **1,750 prisoners 87% minority and low income, 79% violent felons**

CASE THREE: 2



CASE 3: 3

- **My 2012 Atomic Safety & Licensing Board testimony**
- **Issue: failure of NRC EJ analysis to take a “Hard Look”**
 - **No generic risk from restarting reactors = no EJ**
 - **Demographic approach washed out EJ populations; 0 EJ populations in 57 cases**
 - **10 mi EPZ 48.7% minority at last census and 87% Sing Sing census block**
 - **Analyzed other disasters (Katrina and Fukushima)**
 - **Interviewed Sing Sing prisoners**
 - **Concluded neither evacuation nor shelter in place protect prisoners; allowed higher exposure**
 - **Threat of radioactive release disproportionately impact Sing Sing prisoners**
 - **Entergy and NRC rebuttal strengthened argument**

CASE 3: 4

- **AL&SB 11/27/2013:** *“By failing to consider factors peculiar to the EJ community in the event of an accident, the Board finds that the Staff failed to identify and adequately weigh effects on low-income and minority communities surrounding Indian Point. Thus, we find that the Staff failed to take a reasonably hard look at environmental effects of relicensing Indian Point on the EJ population, and thus has failed to comply with its EJ obligations under NEPA.”*
- **The hearings continue into 2016**
- **Unclear how ASALB will weigh the EJ impacts in the eventual decision and whether the precedent will force future improvement of EJ assessment by the NRC**

Case Four: Ringwood Mine Superfund Site

- 1950s-1970s, Ford Motor Company dumped hazardous wastes throughout Ramapo Mountains
- Mostly paint sludge from Mahwah Production Plant, full of organic chemicals and heavy metals
- Ramapough-Lenape Indians living in mountains victimized
- Turtle Clan's Upper Ringwood community sits atop abandoned iron mine shafts filled with paint sludge
- Dumping across fields and waterways as well
- Residents plagued with illness for decades
- Early national priority site for clean up under "Superfund" Law in 1983
- EPA delisted the 500-acre site in 1994 believing successfully remediated
- Relisted in 2006 after repeated discovery of more paint sludge and continuing illness

RINGWOOD 4:2



Site divided into several units for review; first assessed through 2013

EPA moved toward decision

Turtle Clan chief Vincent Mann demanded EJ assessment pursuant to EPA regulations stemming from EO 12898 of 1994

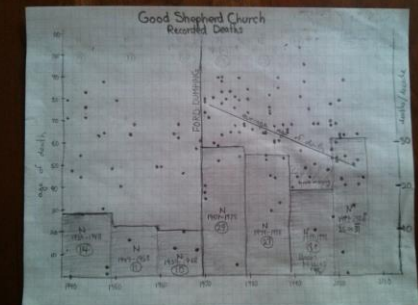
2006 EPA draft stamped final

Upper Ringwood recognized as EJ community

No disproportionate impact until adverse health effects proven

Over 7 years, no health studies completed

Clean up decided and long implemented before future studies completed



RINGWOOD 4:3



At Turtle Clan's request, undertook comprehensive EJ assessment

Comprehensive EIS by 2014 Environmental Assessment class

Impacts analyzed with Turtle clan to assess disproportionality

Measurable indications of environmental injustice

Numerous impacts to psycho-social and general wellbeing

Even remediated, way of life unrestored and hazards remain

Support Chief's plan to relocate the tribe to a safe site

EPA issued ROD without considering impact/mitigation

ROD modified to remove mitigation and increase impact

Testified before EPA April 24 asking to reopen ROD

EPA stand by EJ analysis



CONCLUSION

Ultior reason for demonstrated deficient state of SIA and EJ practice:

- **Anticipating consequences for potentially victimized populations may delay or force denial or mitigation of projects desired by reviewing agencies and/or absent other significant impacts**
- ***“As a public policy matter, if the Department were to deny an application for a facility after concluding that it met all regulatory criteria and that the risk of its construction and operation was within acceptable limits merely because of the fears in the host community, the agency would be abdicating its responsibility...Therefore, I conclude that any psychological impact caused by this facility cannot, standing alone, be grounds for denial of the applications.”***

1990 Decision of Edward Jorling, Commissioner of NY State DEC on application of CECOS, Inc. for 6th hazardous waste disposal site in Niagara Falls, NY

Note Jorling did not dispute projected significant psycho-social impacts to community members

This is challenge for PSIA and EJ assessment:

When other risks are dismissed, grounds for SIA are removed

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