

Land Use Planning And Integrated Resource Management

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Overview

- Rationale for land use planning (LUP)
 - ◆ Cumulative effects management
 - ◆ Integrated resource management (IRM)
 - ◆ Role of LUP within IRM
- Challenges for LUP
- Addressing challenges – the IRM perspective

Basic Rationale for LUP

- The analogy with urban planning
 - ◆ Externalities
 - ◆ Cumulative effects

Cumulative Effects and Non-urban Land Use

- Multiple activities – increasing intensity
- Activities affect each other directly (oil and gas, forestry, wildlife harvesting, recreation)
- Activities have cumulative environmental and socio-economic impacts
- Cumulative impacts determine ability to achieve landscape-level objectives

The Institutional Challenge of Cumulative Effects Management

- What are the appropriate forums for managing cumulative effects?
- What tools should be used?
- Who should be involved?
- What are their respective roles?
- Who is ultimately responsible for managing cumulative effects?

Case Study

- EA as a focal point for cumulative effects assessment – and management
 - ◆ Appropriate forum?
 - ◆ Appropriate tools (e.g., information, significance criteria, management options)?
 - ◆ Appropriate participants and roles?
 - ◆ Ultimate responsibility?

Alberta Energy And Utilities Board (EUB) Decision 2000-17

- Application for sour gas wells and pipelines
- Castle Crown region of SW Alberta (north of Waterton Lakes National Park)
- Interveners raised concerns about cumulative effects – oil and gas development, forestry, agriculture, recreational and residential development, access management, linear disturbances, habitat fragmentation, impacts on protected areas, etc.

The EUB's Dilemma

- Proponent cannot manage cumulative effects
- EUB cannot manage cumulative effects
- Government land managers not accountable for cumulative effects in EUB process
- Integrated Resource Plan (IRP) inadequate
- No effective legal, policy and institutional framework for managing cumulative effects

EUB Findings

- Board notes general agreement that it is “possible or even likely that the biological thresholds for at least some of the key species identified in the IRP may now have been exceeded in the region”
- “publicly available planning tools for the region may now be outdated and inadequate to address the current level of development”

EUB Conclusions

- “The Board agrees ... that, in the absence of threshold values against which to measure such ecological effects, it is difficult for an applicant, the public, or the Board to evaluate to what degree incremental impacts from new development would be acceptable. Nor is it possible to determine what mitigative actions ... might be used to reduce cumulative effects to suitable levels.”

EUB Recommendations

- Notes over two decades of land-use conflict in Castle region
- The Board “strongly believes” that an updated integrated resource management strategy is needed to ensure that future energy development in the region is environmentally acceptable
- Need for strategies to address cumulative effects of human activity – including energy development

EUB Decision

- Applications approved
- The proposed development “will likely have a small incremental effect on regional wildlife populations” – but not sufficiently large to outweigh public benefits
- EUB will approach land management agencies regarding the need for strategies to address cumulative effects

Key Themes

- Inability to address cumulative effects adequately at the project review stage
- Need for updated planning framework and tools for cumulative effects management
 - ◆ E.g., Guidance on biological thresholds
- Need for IRM to manage cumulative effects

What is IRM?

- “A resource management philosophy that attempts to coordinate a broad range of values by finding interconnections among values, common goals, and key elements to focus on. IRM is characterized by strategies to blend and integrate uses, by attempts to use resources to meet economic, social, and ecological aims, and by the use of participatory decision making” – YLUPC

Why Implement IRM?

- Response to fragmentation and incrementalism in environmental and resource management
 - ◆ Improve cumulative effects management
 - ◆ Improve the efficiency and effectiveness of decision-making

How Does IRM Work?

- Three principles of IRM
 - ◆ Integration among the stages of decision-making
 - ◆ Integration across sectors and land uses
 - ◆ Integration over “meaningful space and meaningful time”

Integration Among Stages of Decision-making

- Policy
- Land use planning
- Rights issuance
- Project review / environmental assessment (EA)
- Regulation (from project initiation to reclamation)

Decision-making Continuum

- Each stage provides context and lays groundwork for subsequent stages
- Issues addressed in appropriate forums
- Progressive narrowing of issues
- Progressive increase in level of detail
- Incorporation of feedback loops and flexibility mechanisms

Integration Across Sectors and Land Uses

- Mining
- Oil and gas (including pipelines)
- Forestry
- Harvesting (trapping, hunting, gathering ...)
- Human settlement
- Transportation infrastructure
- Recreation
- Etc.

Moving Beyond Sectoral 'Silos'

- Consider effects of decisions on other sectors and interests
 - ◆ Internalize externalities
- Align decisions with broader objectives and values (environmental, socio-economic)
- Take account of cumulative effects

Integration Across “Meaningful Space and Meaningful Time”

- Source: Brad Stelfox (Forem Technologies)
- Identify relevant spatial and temporal dimensions of landscape-level objectives (ecological, socio-economic)
- Match decision-making with appropriate spatial and temporal scales
- Address challenges – short time frames, jurisdictional boundaries, etc.

What is the Role of LUP in IRM?

- Integration along the decision-making continuum
 - ◆ Implementation of policy direction
 - ◆ Guidance for rights issuance, project review and regulation
- Integration across sectors and activities
 - ◆ Landscape-level objectives, thresholds, etc.

LUP's Role in IRM (cont'd)

- Spatial and temporal integration
 - ◆ Geographical scope of planning process
 - ◆ Time frame for planning decisions
- Institutional champion for IRM
 - ◆ Integration mandate at strategic location in decision-making continuum
 - ◆ Integrative mechanism with distinct legal, institutional and policy basis

Summary – IRM and LUP

- IRM provides the institutional framework for cumulative effects management
- LUP is a key integrative mechanism within IRM

The Paradox of LUP

- Arguments for LUP are persuasive at the conceptual level
- The practical need for LUP has been recognized for many years
- Principles and models for LUP exist
- Successful implementation is difficult in environmental and resource management
- Why?

What Are the Principal Challenges for LUP?

- Balance flexibility and certainty
- Reflect distinctive values and circumstances – and respond when they change
- Remain relevant to decision-makers and stakeholders
- Deliver appropriate levels of planning effort and detail

Challenges for LUP (cont'd)

- Produce and revise plans within reasonable time frame and budget
- Involve stakeholders – without wasting their time
- Overcome political and institutional resistance
- Overcome human nature
- Other ...

What Are the Appropriate Tools for LUP?

- Land-use zoning
- Define acceptable ecological impacts
- Define limits on footprint of development
- Define limits on intensity of activities
- Phased development (combine temporal and spatial parameters for development)
- Other ...

What Does an IRM Perspective Tell Us About LUP?

- The IRM perspective focuses on
 - ◆ Roles of decision-makers within IRM
 - ◆ Linkages between components of an integrated regime for environmental and resource management
 - ◆ Legal, policy and institutional mechanisms for implementing IRM

What Are the Key Linkages for LUP Within IRM?

- Operational linkages
 - ◆ Between stages of decision-making
 - ◆ Between sectors and activities
 - ◆ Across ‘meaningful’ spatial and temporal scales
- Overarching linkage to power – political, legal and institutional support for LUP

Linkages to the Policy Context

- Policy context informs planning
 - ◆ Political accountability
 - ◆ Broader perspective on issues and trade-offs (e.g., territory-wide perspective)
- Specific policy parameters guide planning
- Approval process tests planning against policy and politics

Policy Linkages – Mechanisms

- Effective processes for developing and articulating land use policy
- Policy and planning hierarchy – territory-wide objectives, strategic planning, etc.
- Effective communication between policy-makers and planning process
- Terms of reference for planning
- Transparent approval process for plans

Linkages to Rights Issuance, Project Review and Regulation

■ Planning should focus on

- ◆ Issues confronting decision-makers at other stages
- ◆ Information and tools that these decision-makers need to address the key issues
- ◆ Time lines and procedural requirements that apply to other decision-makers

Linkages to Subsequent Stages – Mechanisms

- ‘Users’ of LUP involved in the design and implementation of planning processes
 - ◆ Importance of ‘scoping’ LUP – lessons from EA
- Planners involved in conformity decisions
- Formal requirement that other decision-makers consider (or comply with) plans
 - ◆ E.g., reasons for non-conforming land use

Linkages to Subsequent Stages – Mechanisms (cont'd)

- Ongoing communication and formal feedback mechanisms between planning and other stages
 - ◆ Monitoring, environmental audits, etc.
 - ◆ Evaluate effectiveness of planning tools
- Accountability mechanisms for implementation – e.g., independent oversight, appeal mechanism

Linkages Across Sectors and Land Uses

■ LUP should

- ◆ Apply to the full range of land and resource uses on the landscape
- ◆ Use tools that are adapted to the specific land-use activities and issues
- ◆ Respond to changes in activities and issues

Linkages Across Sectors – Mechanisms

- Internalization of LUP and IRM into all sectoral decision-making
- Planning hierarchy – sectoral resource management plans conform to LUP
- Coordination of LUP and sectoral processes
- Feedback loops – identify planning tools that meet sectoral needs

Spatial and Temporal Linkages

- The geographic and temporal scales for LUP should reflect
 - ◆ Landscape-level objectives (established through policy and planning processes)
 - ◆ The mix of activities on the landscape
 - ◆ The cumulative effects of these activities

Spatial and Temporal Linkages – Mechanisms

- Policy and planning processes identify
 - ◆ Spatial and temporal scales for landscape-level objectives
 - ◆ Spatial and temporal dimensions of key issues (e.g., cumulative effects)
- Coordinate LUP on transboundary issues
- Legal / institutional basis for continuity and long-term focus in LUP and IRM

Linkages to Power – Political and Institutional Support

- Institutional resistance to integration – from stages of decision-making, from sectoral interests, and over space and time
- Planning requires leverage to function as an integrative mechanism
- Planning requires power to be an effective institutional champion for IRM

Linkages to Power – Mechanisms

- Legal mandate and requirements
 - ◆ E.g., legally entrenched process and plans
- Institutional position
 - ◆ Central agency function, overarching mandate, authoritative coordination
- Adequate funding
- Legal and policy basis for continuity
- Political support

Summary – IRM Questions for Evaluating LUP

- Are there effective two-way linkages between LUP and other stages in the decision-making continuum?
- Are there effective two-way linkages between LUP and sectoral decision-makers?

Summary – IRM Questions for Evaluating LUP (cont'd)

- Is LUP implemented over “meaningful space and meaningful time” – defined in terms of landscape-level objectives and cumulative effects?
- Does LUP have the political and institutional support that it needs to play an integrative role?