



- Natural Resource Management
- Ecological Surveys and Research
- Approvals and Planning
- GIS and Mapping
- Land use & impact assessment

Capacity Development Workshop For The Pacific Region On National
Biodiversity Strategies And Action Plans
Nadi, Fiji, 2 to 6 February 2009

MAINSTREAMING OF BIODIVERSITY AND THE INTEGRATION OF CLIMATE CHANGE

Strategic Environmental Assessments

Context: Pacific Island Countries

SEA - What is it!!!!????

- a new fad
- a new buzzword
- another acronym!

SEA = Strategic Environment Assessment

SIS = Social Impact Assessment

SA = Sustainability Assessment



CONVENTION ON BIOLOGICAL DIVERSITY
Adopted at Rio de Janeiro on 5 June 1992
Entered into force 29 December 1993

Article 10 **SUSTAINABLE USE OF COMPONENTS OF BIOLOGICAL DIVERSITY**

Each Contracting Party shall, as far as possible and as appropriate:

(a) Integrate consideration of the conservation and sustainable use of biological resources into national decision-making;

Article 14 **IMPACT ASSESSMENT AND MINIMIZING ADVERSE IMPACTS**

1. Each Contracting Party, as far as possible and as appropriate, shall:

(a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures;

(b) Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account;

- ❑ Article 14 – UN CBD Explanatory Materials
 - identifying and evaluating the environmental consequences of proposed policies, plans or programmes
 - covers a wider range of activities or a wider area and often over a longer time span than the environmental impact assessment of projects
 - SEA might be applied to an entire sector (such as a national policy on energy, for example) or to a geographical area
 - SEA does not replace or reduce the need for project-level EIA (although in some cases it can), but it can help to streamline and focus the incorporation of environmental concerns (including biodiversity) into the decision-making
 - SEA is nowadays commonly understood as being proactive and sustainability-driven, whilst EIA is often described as being largely reactive
 - *stakeholder involvement*, *transparency* and *good quality information* are key principles. SEA is thus more than the preparation of a report; it is a tool to enhance good governance
 - developed into its most effective form: integrated into the planning process, bringing stakeholders together during key stages of the planning process and feeding their debate with reliable environmental information

☐ Article 14 – UN CBD

Benefits:

- when decisions have already been taken, SEA can play a meaningful role in monitoring implementation
- SEA aims at better strategies, ranging from legislation and country-wide development policies to sectoral and spatial plans
- Cumulative effects on biodiversity are best anticipated at a strategic level. By applying the principles of the ecosystem approach the cumulative effects of activities on those ecosystem services which support human well-being can be addressed
- In SEA, biodiversity can best be defined in terms of the ecosystem services provided by biodiversity. These services represent ecological or scientific, social (including cultural) and economic values for society and can be linked to stakeholders
- Baseline conditions, trends and characteristics of the production and socio-economic systems determine whether indirect consequences will affect biodiversity

EIA	SEA
Is reactive to a development proposal	Is pro-active and informs development proposals ¹
Assesses the effect of a proposed development on the environment ²	Assesses the effect of the environment on development needs and opportunities
Addresses a specific project	Addresses area, regions or sectors of development
Has a well-defined beginning and end	Is a continuing process aimed at providing information at the right time ³
Assesses direct impacts and benefits	Assesses cumulative impacts and identifies implications and issues for sustainable development
Focuses on the mitigation of impacts	Focuses on maintaining a chosen level of environmental quality
Has a narrow perspective and a high level of detail	Has a wide perspective and a low level of detail to provide a vision and overall framework ⁵
Focuses on project-specific impacts	Creates a framework against which impacts and benefits can be measured

THE MARKETING PITCH (IIED and ors)

SEA identifies the opportunities and constraints which the environment places on the development of plans and programmes;

- SEA sets the criteria of environmental quality or limits of acceptable change;
- SEA is a flexible tool which is adaptable to the planning and sectoral development cycle;
- SEA is a strategic process which begins with the conceptualisation of the plan or programme;
- SEA is part of a tiered approach to environmental assessment and management;
- The scope of an SEA is defined within the wider context of environmental processes;
- SEA is a participative process;
- SEA is set within the context of alternative scenarios;



CONFUSED!!!!

There's more!

The Start !

Chapter 10 of **Agenda 21** notes that:

- "... If, in the future, human requirements are to be met in a sustainable manner, it is now essential to resolve these conflicts and move towards more effective and efficient use of land and its natural resources. Integrated physical and landuse planning and management is an eminently practical way to achieve this."
- Land use planning should be a decision-making process that "facilitates the allocation of land to the uses that provide the greatest sustainable benefits" (Agenda 21. Paragraph 10.5).
- It is the systematic assessment of **physical, environmental, social & economic** factors in such a way as to encourage and assist land users in selecting options that increase their productivity, are sustainable and meet the needs of the society.

❑ “Sustainable Development”

- Changing activities so we “meet the needs of the present without compromising the ability of future generations to meet their own needs” [World Commission on Environment & Development, 1987].
- Balancing use of resources in a way that renewable resources (eg fish, forests, soils) have a chance to replenish; and non-renewable resources (eg minerals) are depleted in a managed way to allow economic , social and cultural systems to adjust to the end of the resource” [UNEP, 1996]
- EIA and SEA [as part of planning systems] are seen as the tools to make the change in development processes and to consider the balance of resource exploitation versus environmental protection/conservation. [Unknown source: Discussing CBD Articles in context of Planning needs of PICs]

❑ **Practical concept of Sustainable Development**

- Balance of the Utility and Need for a resource (People, Society & Economics) and the Sensitivities and Finite nature of them (Environment & Culture) in determining the suitability of development or resource use.
- Utility: means the usefulness to enable basic human rights & quality of life. 'Needs' assessments can be done to determine these.
- Sensitivities (CBD): Equates to Fragility and resilience of systems (natural features), Uniqueness (rarity, frequency, cultural importance), resistance (to damage, to impacts, to change), transformation (from original state), Association (links & synergies required with other elements and/or components) and vulnerability (exposure to natural and manmade adverse events).



Brain tease No 1

Thinking Outside the Box

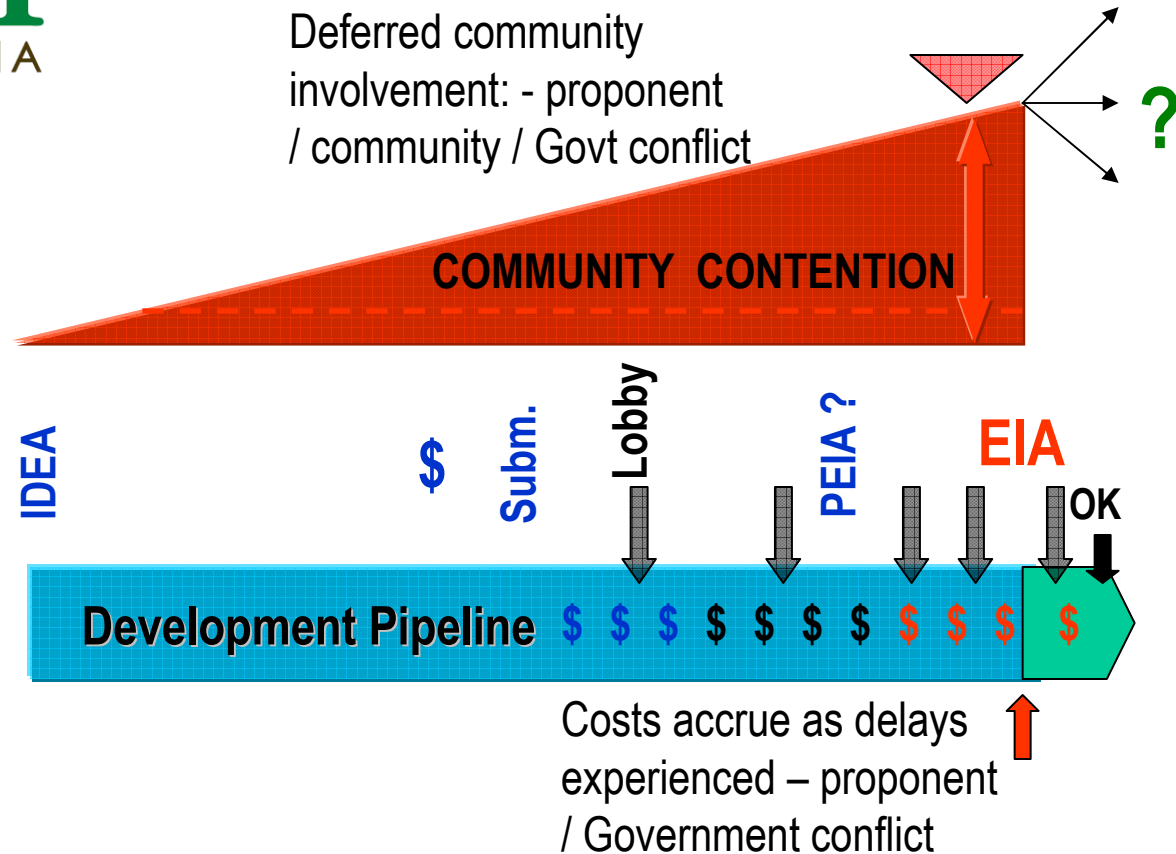
2 groups out of room;

- First Group - look out over the golf course
- Second Group – Look inwards to the hotel

Task: What do you see? Nominate/discuss all forms of 'pollution' (or matters/things that have environmental consequences)

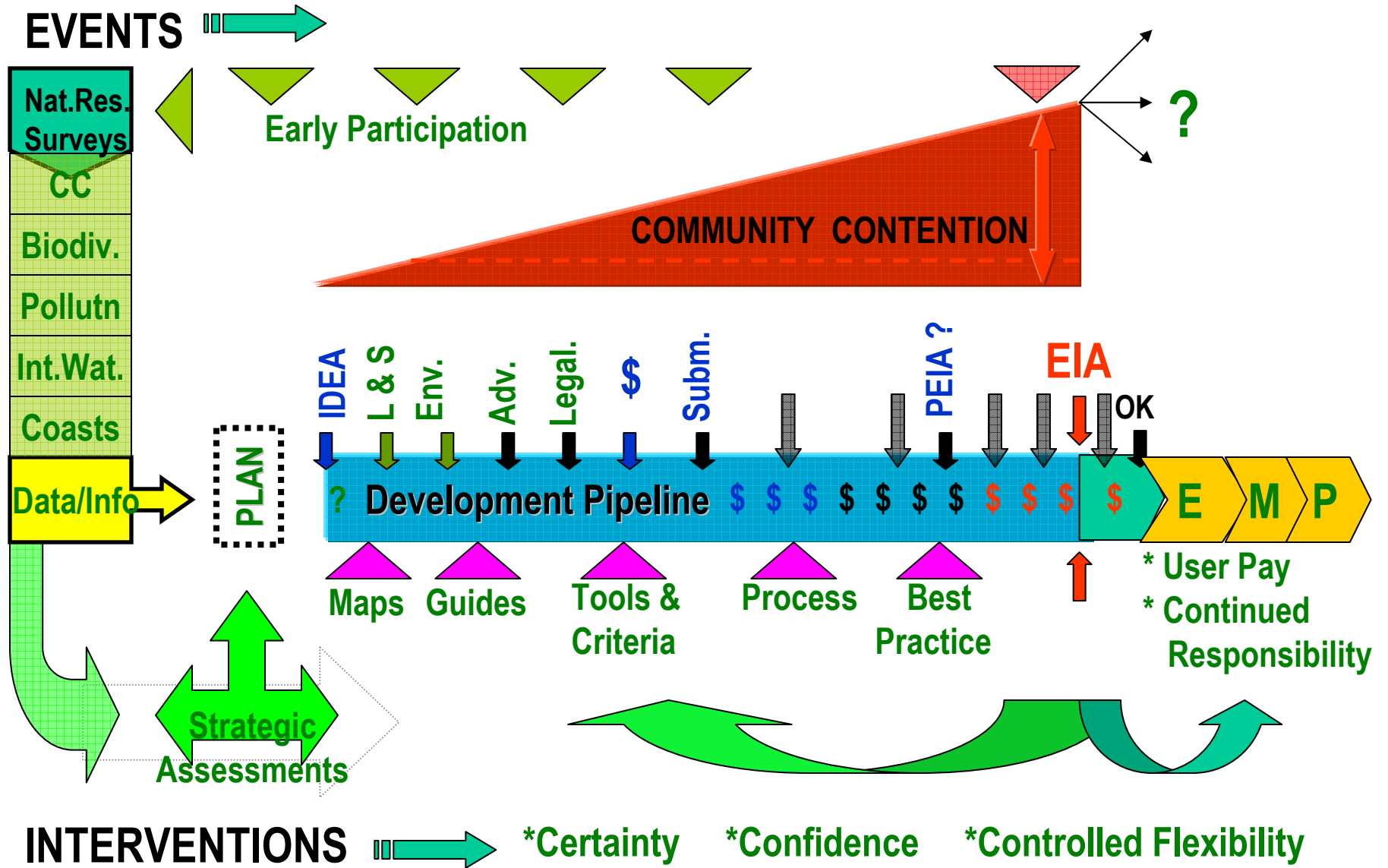
Time: 10 mins while having another coffee

Project EIAs: Reactionary, end-of-pipe Practices- Unsustainable



INTERVENTIONS

Strategic EIAs: Early intervention/participation: Sustainable

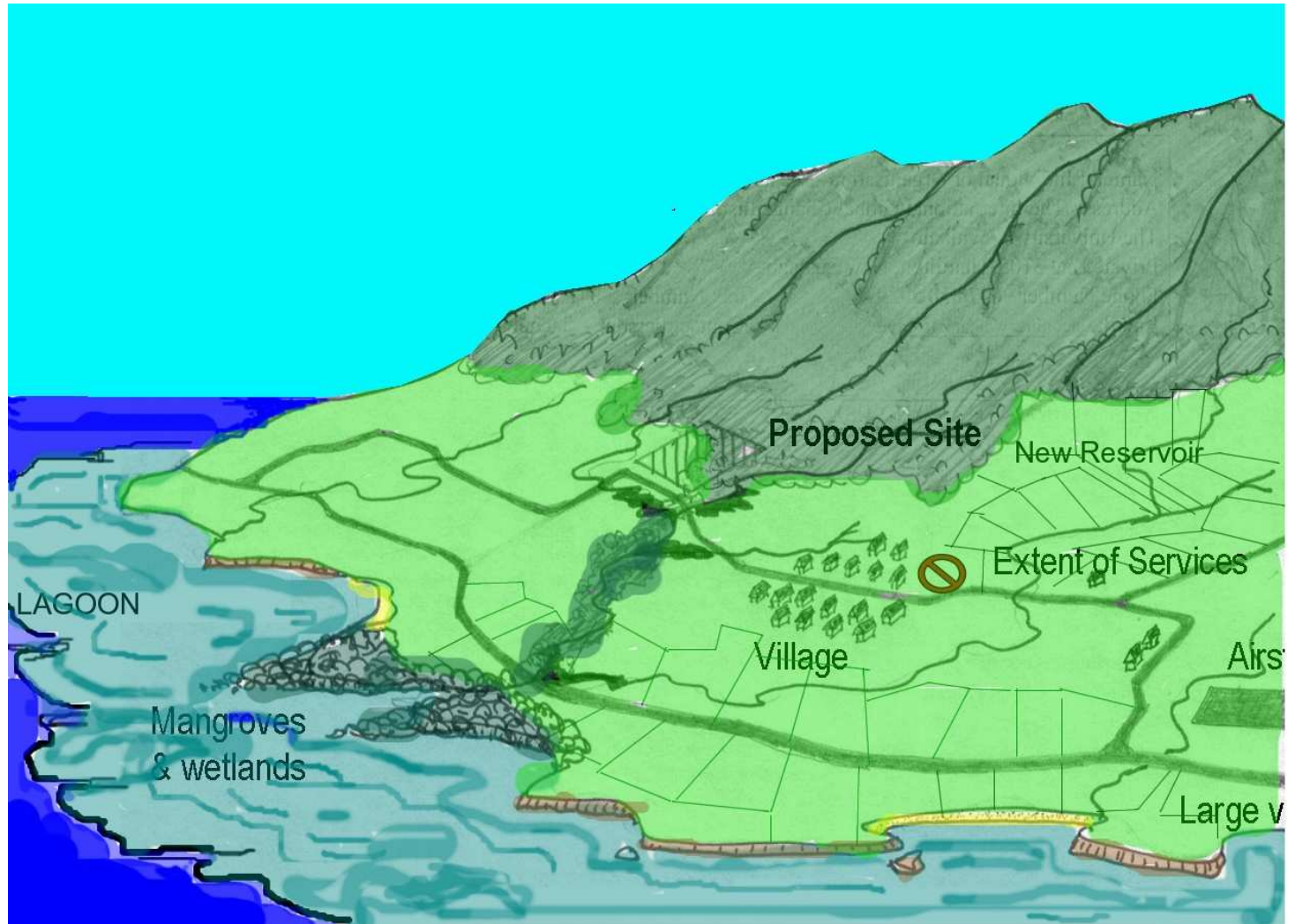


Planning platforms – ‘balance’ in decision making

- ❑ ‘Planning’ frameworks enable ‘the treating of the cause, & not the symptoms’; also allow the drawing out of opportunities & not just the constraints!!
- ❑ Based on providing a platform for better decision making through early intervention in the ‘development pipeline’.
- ❑ Provides the vehicle for better use of EIA as well as other tools eg SEA, environmental economics, user pays.
- ❑ Provides mechanisms for equitable access to resources & benefit sharing.
- ❑ A passive conflict management approach.

Integrated Planning Approaches:-

- *Elements affecting impact of land use, development or resource use:-:*
- **Activity Allocation and Distribution: Types, Location**
- **Activity Quantity or economic resource potential: Scale, volume, intensity.**
- **Activity Quality and/or side effects: kinds of inputs, or outputs**
- **Activity Rate and/or temporal scheduling (timing): acceptable rates, permitted time periods**
- *Integrated Frameworks - Balancing Utility and Sensitivities.*
- *Understanding Sensitivities:*
 - Uniqueness: Rarity, frequency, cultural importance**
 - Transformation: change from original state**
 - Vulnerabilities & Resistance: to damage, impacts, to change**
 - Associations: links and synergies required with other elements and/or components**
- Needs Assessments balanced with Capability & Suitability Assessments (EIA, SEA)





Burgeoning interest in Integrated Assessments and Planning- Why?

- **'No' legal, institutional or policy systems dealing with the environment AND development assmt/ planning;**
- **Momentum: realization that 'integrated planning systems' can provide platforms for development equity & conflict resolution;**
- **Systems need to be unique to customary land holding systems – absolute resource rights;**
- **Over-use of nuisance based EIA over last 15 yrs**
- **Interest in SEA approaches as a first step into integrated planning systems**

Need for Better Enabling Environments

- **Institutional Arrangements:** linkages and synergies; coord policy, Criteria & actions, case studies- choices; mechanisms for participation.
- **Legislative Frameworks:** Plethora of laws not the answer – integrated simple & strategic legal bases required;
- **Training, Awareness and HR Capacity Development** – at regional /national level: local ownership of direction necessary
- **Land Use / Environmental Planning Systems** – support to current & Planned activities: SEA, Mainstreaming env, land suitability, soil conservation, resource use.
- **Information:** Support GIS/ RS capacity development & Clearinghouses. Assist with Indicators, benchmarks & strategic reporting processes
- **Technology & Expertise:** Exchanges + energy efficient alternatives
- **Financial Support:** Strategic consistent, streamlined & coordinated



The Context

Previous Endeavors!

Provide Data: Biodiversity, CC etc



Provide Law: EIA Emphasis



Expect Sustainable Development ??

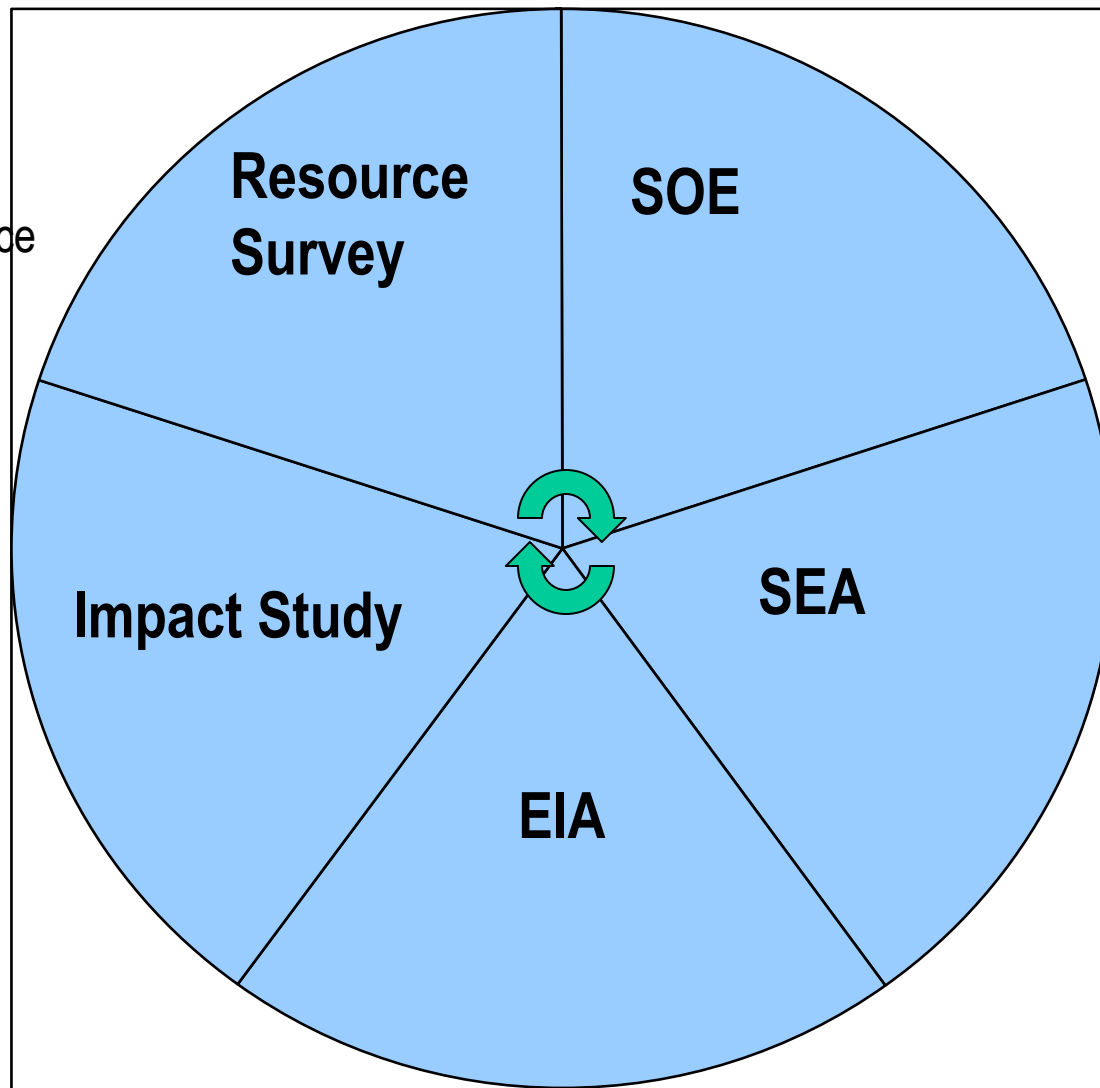
Various forms, scale and tiers of Environmental Assessments

Resource Surveys

- Scientific Surveys
- Ecological surveys
- For science or Resource Management plans

Impact Studies

- Impact or effect is Repetitive eg oil spills
- Study of impacts under changed conditions eg visitation on Biodiversity
- To develop impact Models
- More particular study of types of impacts eg Effect of land clearing on sediment loads



State of Env

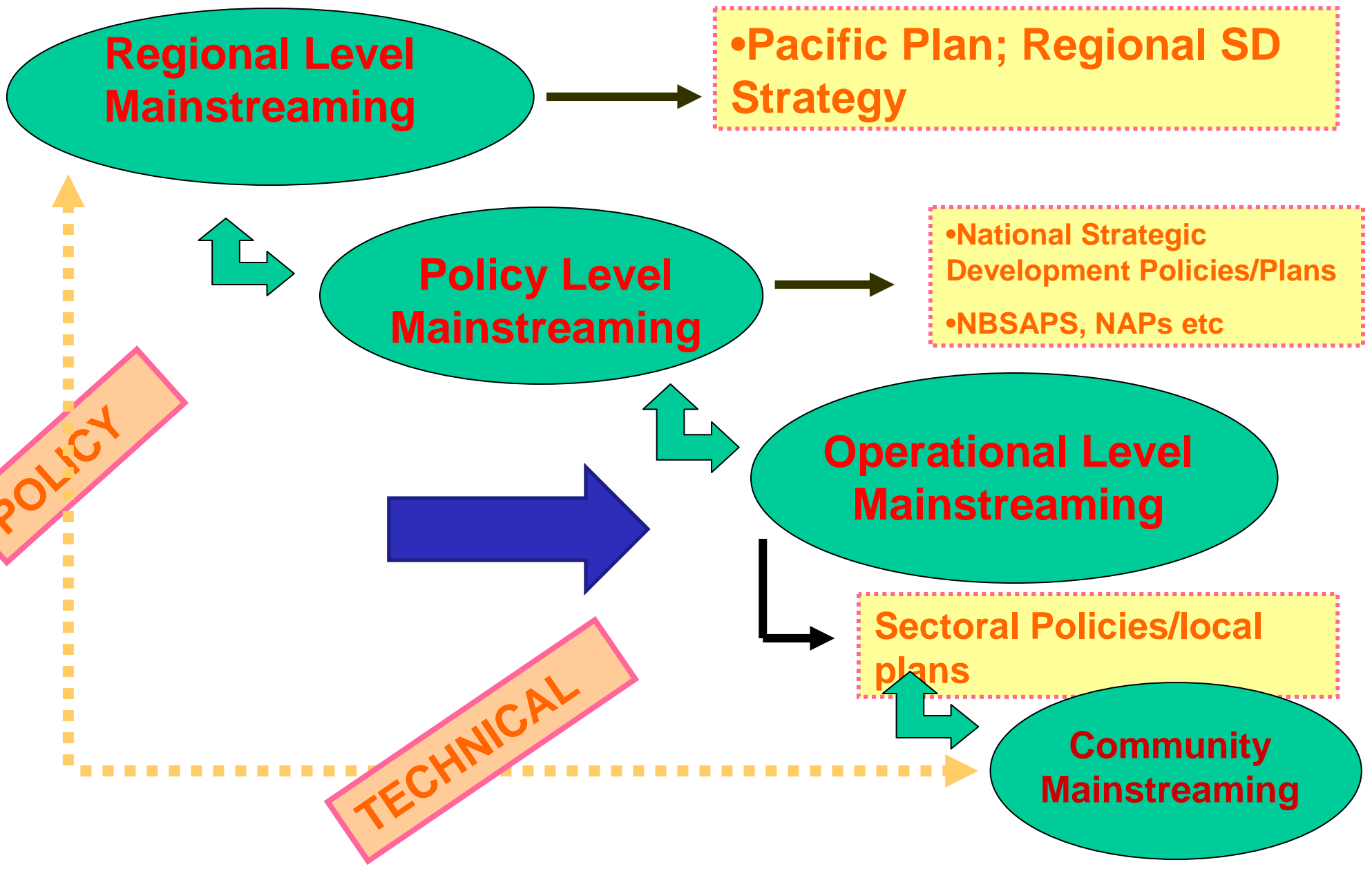
- Resource Inventory
- National englob trend analysis
- Use of key Indicators (SPIR)
- GIS databases

SEA

- Systems approach
- Systems characterisation, site selection.
- Vulnerability assmts
- Change detection
- Multiple land & resource uses unknown
- Can include Plans & Policy assmt.
- Can plan allocation, Intensity & quality aspects

EIA – Development is known, impact prediction to suggest remediation

Levels of Capacity Building & Mainstreaming





Brain tease No 2

EIA and SEA Exercise

Various Groups

Task:

- 1) Look at the diagrams on the proposed waste site: consider what broader impacts may arise than a site specific assessment;
- 2) Consider the 'Catchment' diagram. See the site of the proposed waste site. What are some critical issues. Are there some solutions;
- 3) For the latter: what are some key capacity needs of your community that would help you assess such development proposals. Are there some that could be stimulated by the implementation of your NBSAP?

REFLEXIONS

☐ **What is it?**

- An extended EIA appraisal procedure that examines the likely environmental impacts of policies, programmes, plans, strategies and action plans; or
- An environmental assessment that is undertaken over a large area eg catchment, conservation area, forest;
- A multiple site assessment using integrated assessment of social, cultural, economic, governance and environmental parameters.
- Studies done for NBSAPs, CC, UNCCD etc – can be seen as SEAs, or key inputs to same

☐ **Benefits**

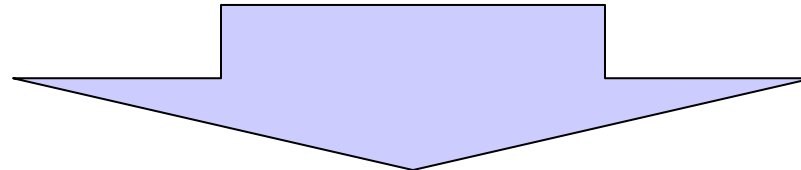
- The best systems are those that combine SEA and EIA as commensurate components of an integrated planning or resource use management regime;
- Recent advocacy argues that SEA is a better tool for the pursuit of sustainable development, as it allows and supports earlier intervention, and enables the identification of opportunities for good development.
- SEA at the Land Use Policy or Economic Policy level will assist in reducing the complexities of EIA.
- Use of EMPs (ISO 14,000) post approval will assist in forcing prediction of impacts when sometimes they are difficult to predict.

EIA

- Project based
- Site and locality specific
- Not system based
- Does not create good resource inventory information
- Non-cumulative
- Snapshot in time & space
- Reactive, Negative process- ie looks at constraints & issues then suggests mitigation.

SEA

- Area, catchment, systems based
- Cumulative
- Provides good data – cheaply
- Good data enables better planning, plus monitoring schemes
- Forward looking, state – scenario based
- Can take on board temporal variations
- Proactive, positive process – can map out opportunities for development

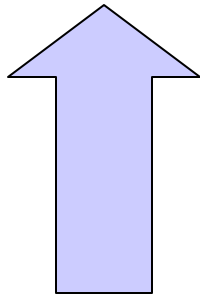


Both are Data Reliant – SEA is also data creative

- **Resource or Land Needs Assessment**
- **Surveys / Studies /Assessments**
- **Models and Analysis methods**



SEA

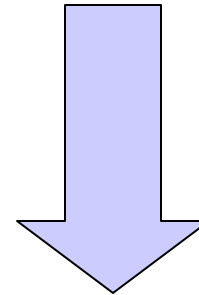


•Cost and Effort

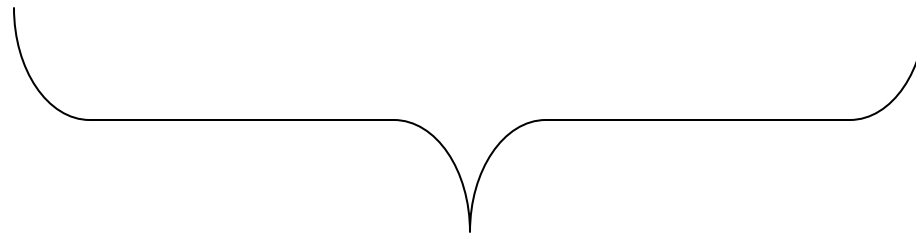
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EIA



•Cost and Effort



Post Approval: Better EMPs – reduces burden on Governance

Some common Questions and Concerns surrounding EIA

Who pays?

- The government, the proponent or developer

What's the cost

- From US\$ 2k to 100k for large developments eg large resort
- Could be as high as US\$1m for large mining, sea exploration or space development

How long to do an EIA

- Depends on the complexities, whether there are prior studies or resource surveys
- Depends on whether integrated Planning has occurred
- On average a PER : 10 –30 days ; full EIA: 30 days to 6 months

Who does the EIA

- The proponent but best done by independent consultant, engaged by the Regulatory Authority – with payment by bonds from the Developer/proponent

How are biases controlled

- Brokering of Consultant through the Regulatory Authority (see over)
- Reputation of the consultants – members of professional associations

Are EIAs Anti-development?

- No, but:**
 - Delays and lack of acceptance of EIA can result when:
 - Bureaucracy reigns: accentuated by:-
 - marginalised EIA processes, not part of day-day governance
 - Lack of instituted processes, no suitable screening mechanisms/guides.
 - Over-reliance on Project based EIA without commensurate use of data/information, standards, guidelines, planning systems, development & policy plans, community participatory methods etc. EIA is a reactive-negative process: it does not reveal opportunities.
 - Having no certain process or system to coordinate EIA as part of other planning, favors biases and corruptions – influence on outcomes of EIA.
 - No Strategic or integrated planning approach leaves little wide area technical data upon which to base Project based EIA.
 - Poor knowledge of the development process and environmental interactions – leads to poor TORs for EIA.
 - EIA not instituted early enough in the development pipeline.
 - All of the above breeds uncertainty and non-confidence. Bad for attracting development, bad for Sustainable Development.



Summary

- There is a role for SEA and integrated planning approaches to ensure the equitable allocation & use of Natural Resources;
- NBSAPs and CBD & UNFCCC Implementation can assist in developing SEA approaches and improving planning;
- There are very few PICs with holistic land use/ environmental planning systems;
- There is over-reliance of project based EIA - laws and policy;
- Thematic sector or 'silo' based approaches predominate;
- Long term 'nurtured' capacity building is required;
- SEA (sustainability appraisal) approaches offer a good lead into planning systems development.