SUSTAINABILITY APPRAISAL

The challenge, experience & practice

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This presentation

- Definition
- Why do SA?
- International experience
- SA sourcebook
- SA framework
- Building blocks for SA
- Main approaches
- Who should do SA?
- Issues 7 challenges

Definition

- Any process that provides for

  (a) some form of *integrated analysis* of the economic, environmental and social aspects of development actions, and

- (b) an evaluation of their effects with regard to agreed aims, principles or criteria of sustainable development.

  (at any level from policy to project).

Why undertake sustainability appraisal? 1

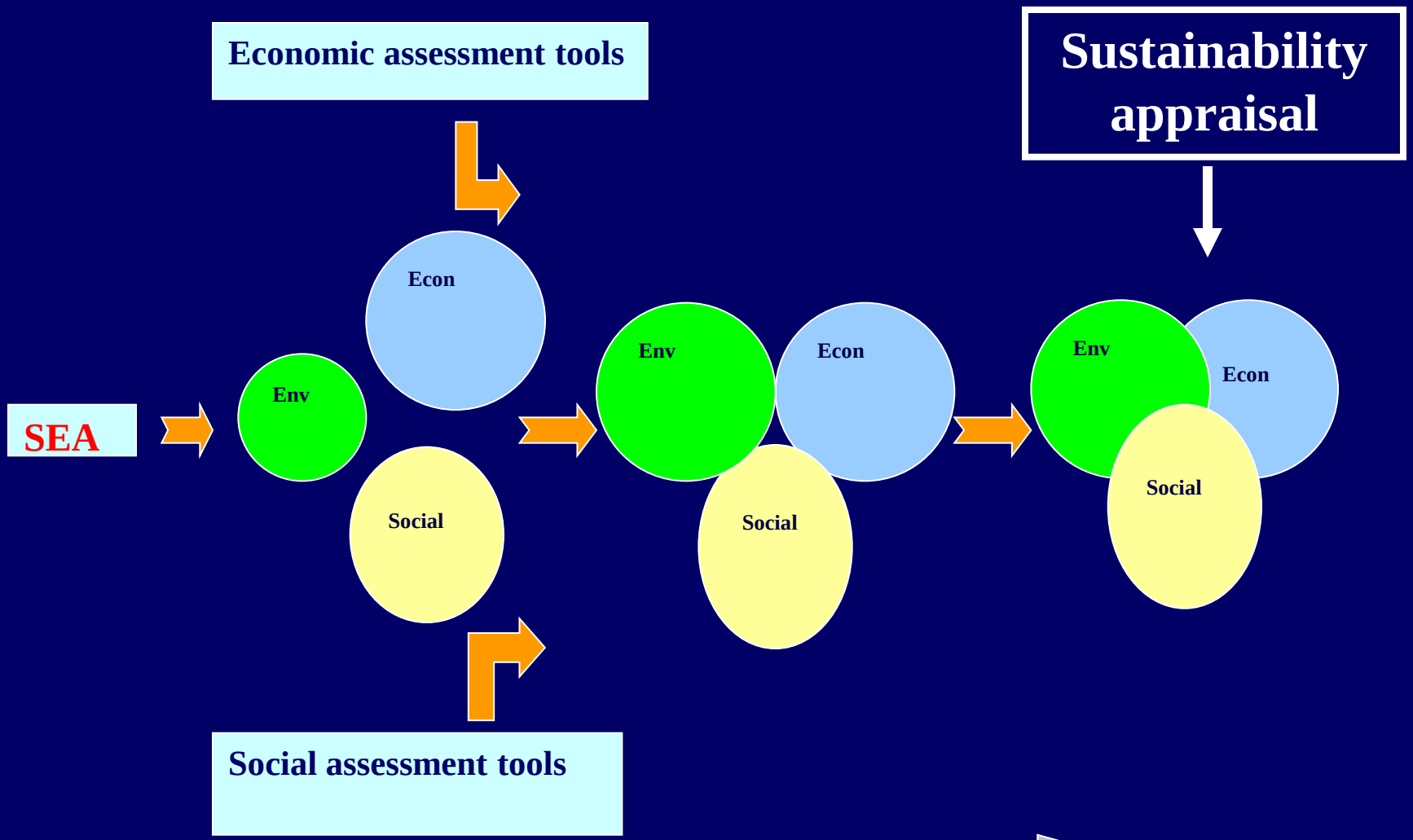
- **To understand how an action – e.g. a policy, plan, programme or project – performs in relation to SD and how its performance might be improved**

- **Interest in SA has recently increased**:
  - Most countries are trying to achieve SD
  - Increasing demand for integration
  - Other assessment methodologies such as Environmental Impact Assessment (EIA) have proved useful but only examine one dimension of sustainable development
  - Even SEA has mainly environmental focus
  - Some formal requirements for SA
    - eg UK land use plans, EC SIAs for negotiation of major trade agreements

Demand for Integration

- **Increasing calls for integrated approach to achieve SD**
  - **(Brundtland – Rio – WSSD - MDG7 - World Summit)**
- **Slow progress – practice falls well short**
- **Business as usual not an option:**
  - **Rapid globalisation and profound change in economic, social and natural systems**
  - **Demands change in direction of public policy; + way decisions are made**
  - **Move beyond narrow mandates and policy 'silos'**
  - **Implies major reform of institutions and instruments of governance**

Spectrum of integration



Why undertake sustainability appraisal? 2

- The key challenge of SD lies in the identification and pursuit of **win-win-win (WWW) solutions**
  - i.e. solutions which maximise economic, social and environmental benefits
- SA addresses economic, social and environmental issues and can **help to identify potential WWW solutions** and also instances where choices (or '**trade-offs**') between competing concerns may be necessary

Scope of Sustainability Appraisal

- **Broad, generic focus (appraisal) - analysing and evaluating progress toward SD**
  - From overall trend to specific action + all in between
  - Policy-learning, what changes mean, where leading
  - Ex-ante + ex-post approaches
  - All levels of decision-making
  - Concepts, methods and diagnostic tools used.

- **Particularly valuable as mainstream tool (assessment) to proactively address impacts of proposed actions**
  - Decision tool, means of specific input, and vector for potentially effecting longer term policy change.
  - Some form of integrative analysis of ESE aspects of development actions
  - Evaluation of their effects (against agreed aims, principles or criteria of SD)
  - Undertaken through existing processes, eg part of IA / planning.

Why use the overall term 'Appraisal'

- Connotation as a non-denominational, flexible approach
- Does not imply the use of a prescribed procedure or methodology
- But potentially accommodates formal and informal processes.

Review of international experience & practice in SA

- Take stock of progress and experience
- Preliminary scan – nature, characteristics, areas of application
  - Profile current status of SA internationally
  - Highlight potentials and issues associated with its use
  - Identify elements, procedures and methods that work well, show promise
- Input to OECD SEA Task Team and UNEP work on integrated assessment & planning
- Workshops and round tables, eg
  - Australia (Canberra 2003)
  - New Zealand (Wellington, 2003)
  - South Africa (Johannesburg 2004)
  - Victoria and IAIA Vancouver (Canada 2004)
  - Perth, Western Australia (April 2005)
  - IAIA (Prague 2005)

State of play

- Diverse, rapidly evolving field
- Many approaches, many levels, most sectors
- Some promising experimentation
- No real integration of Env/Soc/Econ(but parallelism)

SA soup

Scope of IIED's SA sourcebook - due 2009

Introduction and approaches

- General framework: concepts, definitions, principles, trends, basic approaches
  Integrated assessment

Dimensions of sustainability

- Environmental sustainability assurance
- Economics-based approaches
- Social dimensions of SA

National & international experience

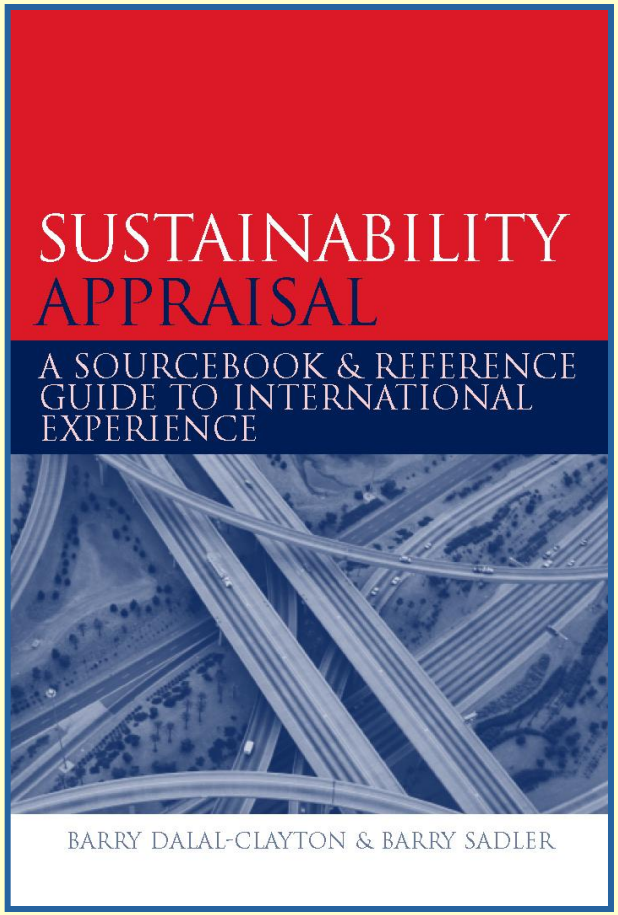
- Experience of developed countries
- Experience of selected donors & developing countries

SA methodologies & application

- Natural resources and land use
- Business, industry & infrastructure
- Sustainable urban development
- Trade policies & applications

Retrospect & prospect

- Scenario planning & SD strategies
- Facing the future



Pro-active approach to SA – reference points

- **Undertaken as an *integral part of a process* of decision-making broadly interpreted to include the series of choices that connect aims to outcomes, whether intended or unexpected;**

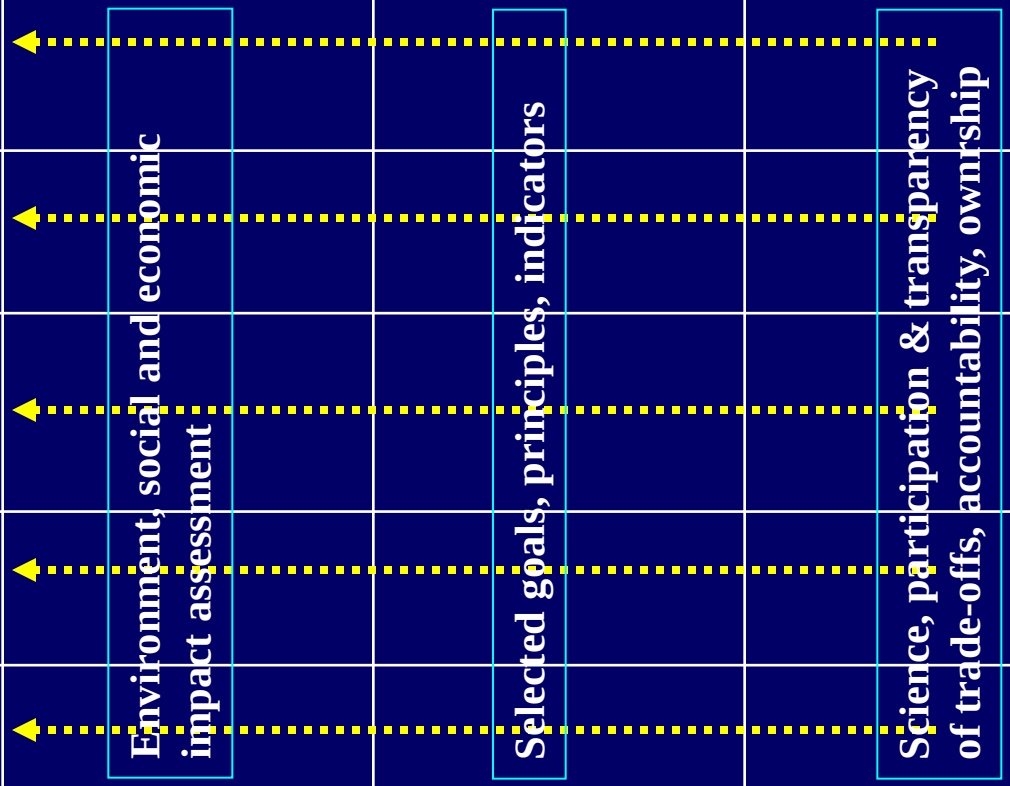
- ***Systematic consideration* of the environmental, economic and social effects of proposals and actions and their sustainability consequences;**

- ***Evaluation conducted against a framework* of objectives, principles and criteria for achieving sustainable development and measuring progress in that direction; and, ideally,**

- **Implemented under a governance regime that includes rules and guidance on accomplishing *policy and procedural integration*.**

Framework for SA

Elements of planning	*Elements of assessment*	*Environmental, social and economic aims and impacts*	*Sustainability reference points and perspectives*	*Rules for decision-making and process governance*
Initiation	*Preliminary assessment (screening and scoping*			
Analysis	*Impact analysis and mitigation*			
Design of strategy/strategic planning	*Comparison of alternatives for significant effects*			
Design of actions/operational planning	*Trade-offs and choice*			
Implementation and monitoring	*Implementation and monitoring of decisions*			
Type of integration		Issues (substantive)	Policy	Process



Example of SA process – modelled on UK

Scoping	***What issues should the appraisal address and to what level of detail?***
Establish objectives and baseline	***What benchmark should the alternatives be assessed against?***
Identify and evaluate impacts	***What are the impacts of the alternatives and how significant are they?***
Propose mitigation measures	***What can be done to ameliorate adverse impacts?***
Monitoring	***How will the plan perform in the future?***

Building blocks for SA - 1

- **Basic conditions for achieving sustainable development** - provide foundation for gauging progress toward goal:
  - Meeting the twin principles of ***intra-generational*** and ***inter-generational equity*** as defined by Brundtland Commission (1987);
  - Maintaining (preferably increasing) net constant wealth as defined by the ***capital stock(s)*** (environmental, social, economic) available (per capita) to meet current and future needs; and
  - Moving toward ***four system conditions*** (Natural Step)) for long-term or absolute sustainability:
    - *Substances from the Earth's crust must not systematically increase in nature*
    - *Substances produced by society must not systematically increase in nature*
    - *The productivity and diversity of nature must not be systematically deteriorated*
    - *Basic human needs must be met everywhere*

  while staying within key ***global environmental thresholds or limits***

Building blocks for SA - 2

- An operational framework for decision-making that meets two key criteria:
  - ***integrative*** – brings together the economic, environmental and social aspects of development options and actions, and
  - ***sustainability centred*** – evaluates effects against core principles for sustainable development

Building blocks for SA - 3

- **A systematic process of analysis** that when undertaken as part of a planning or assessment framework provides for both:
  - ***Substantive integration*** of the economic, environmental and social dimensions of sustainable development measured against one or both of the following:
    - Agreed objectives and principles (normative values to aim for), and/or
    - Bottom-line standards (safe minimums to stay within or warning signs to avoid)
  - ***Process integration*** of analysis, opportunities for stakeholder participation and procedures/policy responsibilities for decision-making. This demands that :
    - agreed principles of good practice regarding the steps and elements of planning or assessment are followed;
    - (ii) an established framework of objectives, principles and criteria for sustainable development is in place against which effects can be evaluated (2 above); and
    - (iii) a set of rules for integrating and weighing different objectives in evaluation and decision-making in the context of the above framework
  - ***Policy integration***, bringing together science, values and decision-making

Building blocks for SA - 4

- **Practical applications** of this generic approach that demonstrate how it can contribute or add value to decision-making under different contexts and circumstances.

  In general, 3 inter-related options for integration:

  - (A) Using a legally prescribed or institutionalised ***process*** as an entry point (eg EIA or SEA)
  - (B) Extending or combining established, widely used ***instruments*** **(eg CBA,** multi-criteria analysis) to take account of wider range of issues and impacts;
  - (C)Developing a ***new, innovative procedure*** or methodology, drawing on (A) or (B).

Building blocks for SA - 5

- **Tools for analysis** - means to apply concepts and approaches of SA.
- Key concern = establish general rules for using tools, eg:
  - ***Flexibility*** – there is no single 'best' methodology for conducting sustainability analysis;
  - ***Adaptation*** – all tools need to be adapted to the geo-political context and circumstances of the application;
  - ***Interdisciplinarity*** – it is important to ensure that economic, environmental and social information and inputs are integrated or interrelated at key stages in the process,
  - ***Linkage*** – to other forms and methods of sustainability appraisal including trend analysis, ex-post review and monitoring, audit and reporting

WHAT HAVE WE FOUND?

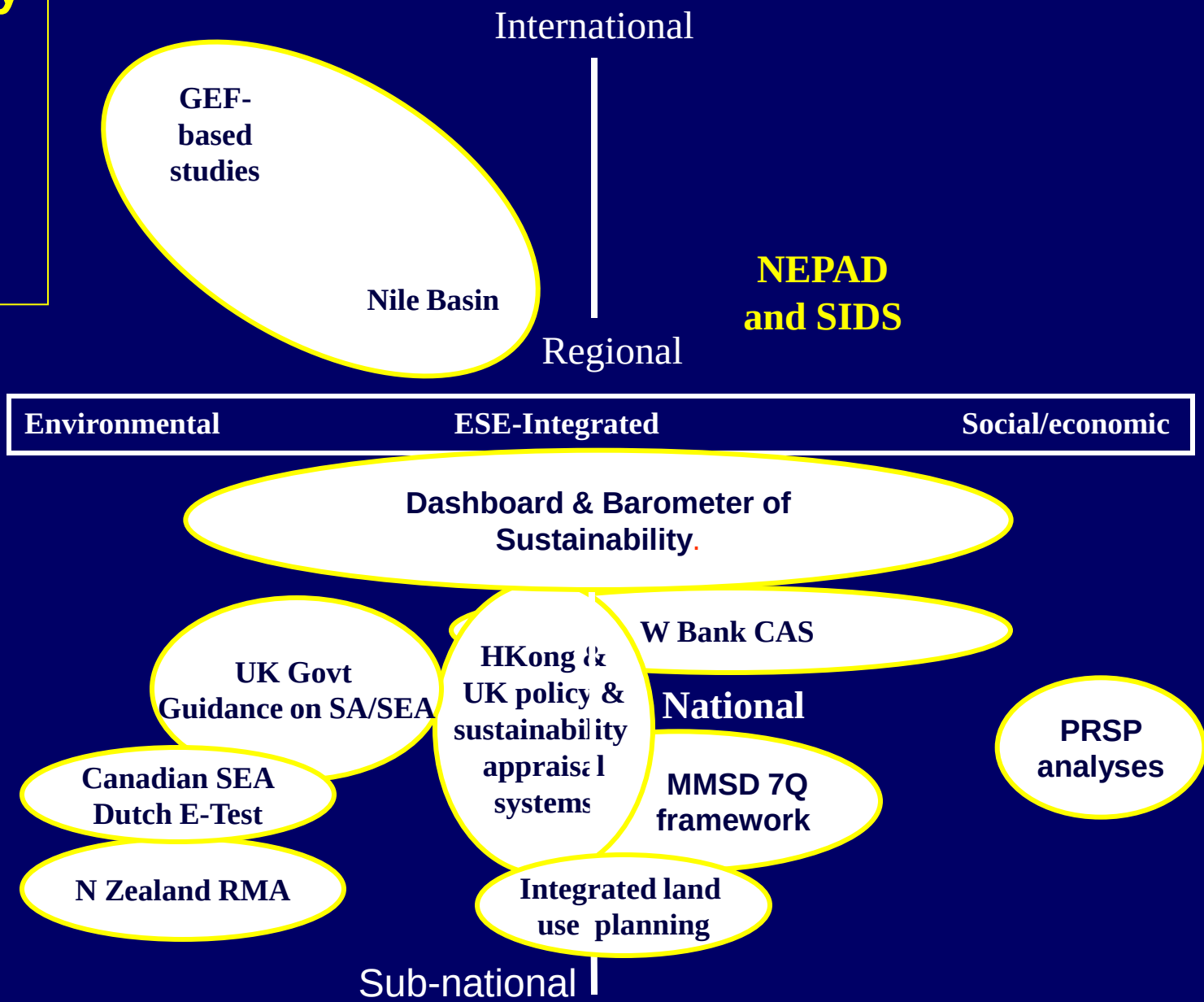
Main approaches in use- *Most combine several approaches and characteristics*

- **Focus**
  - Country
  - Policy/strategy
  - Plan/programme
  - Project
  - Enterprise/business
  - Product
  - Process
- **Assesses**
  - Performance
  - Opportunities & risks
  - Impacts
  - Trends and scenarios
- **Employs**
  - Checklists of questions
  - issues & concerns
  - Indicators / indices
  - Sustainability criteria (& weightings)

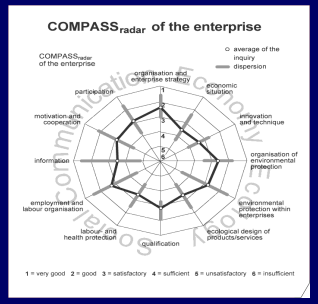
- **Employs**
  - Cost accounting
  - Visual models
  - Computer software
  - Computer modelling
  - Computer-based tools
  - Toolkit approach
  - Classification systems
  - Matrix methods
- **Involves**
  - Stakeholder and interest
  - group participation (including workshops)
  - Quantifying resource use (inputs/outputs)
  - Fieldwork/surveys
  - External verification

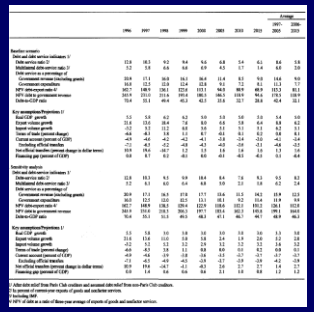
Towards Sustainability Appraisal

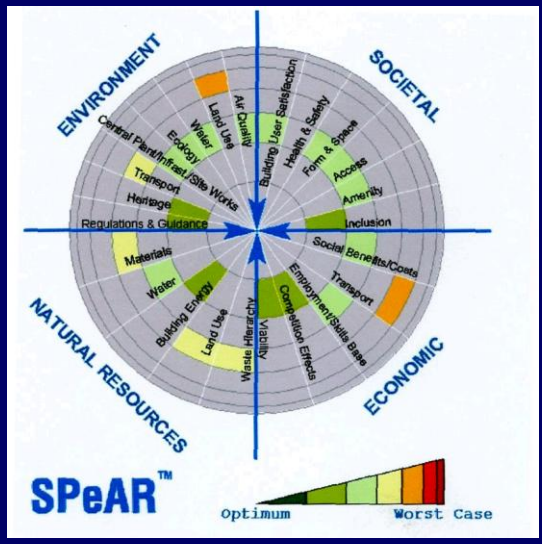
Illustrative examples

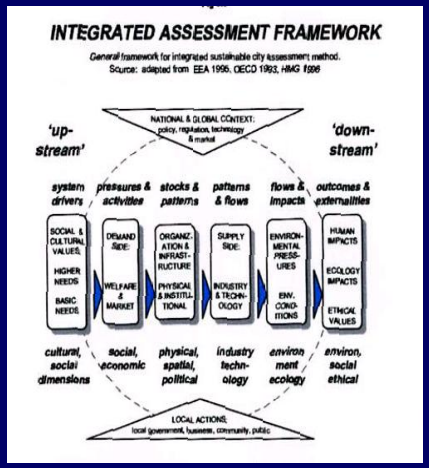


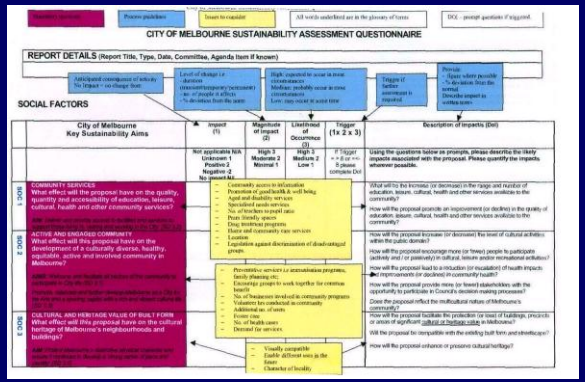
Visual models



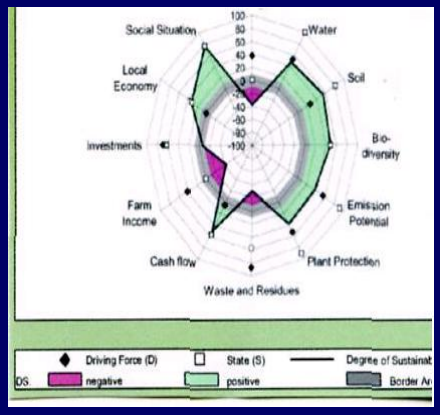


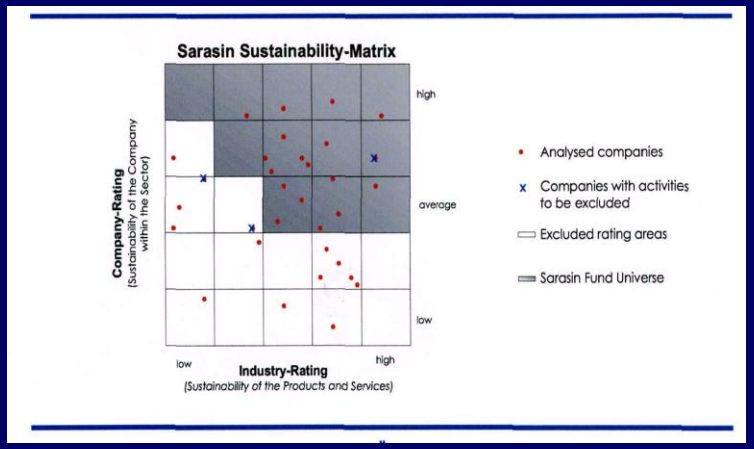


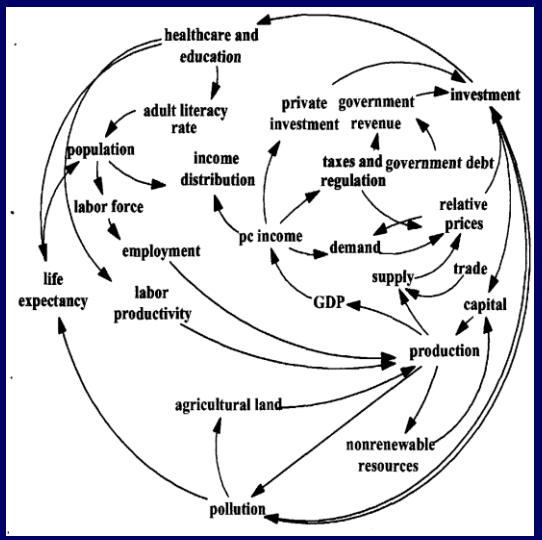




Threshold 21





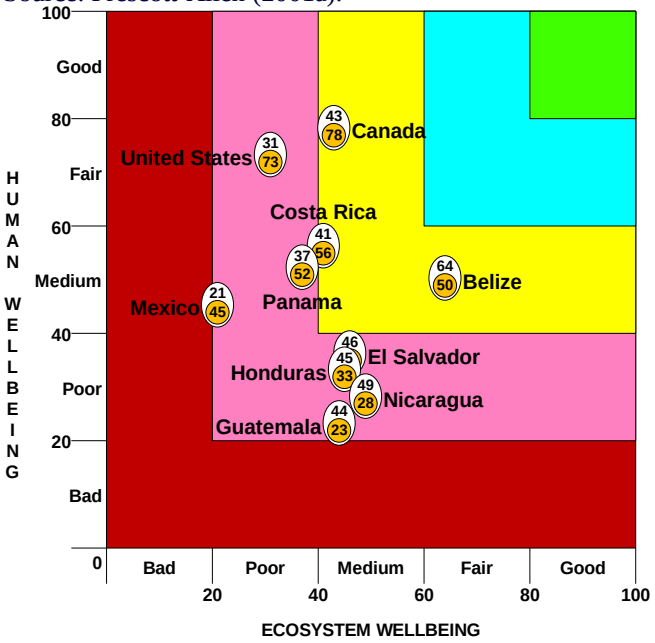


Barometer of sustainability

Figure 13.3: Group Barometer of Sustainability, showing the well-being of North and Central America.

The Human Well-being Index (HWI) is in the yolk of the egg; the Ecosystem Well-being Index (EWI), in the white. (El Salvador's HWI is 36 and EWI 46.) The Well-being Index (WI) is the position of the egg—the point on the Barometer where the HWI and EWI intersect. Sustainability is the square in the top right corner. Note that the Barometer clearly shows the relationship between human and ecosystem well-being, the wide spread of performance among countries, and the distance to sustainability. Belize was assessed on fewer indicators than the other countries: a fuller assessment might move its position to between Costa Rica and El Salvador.

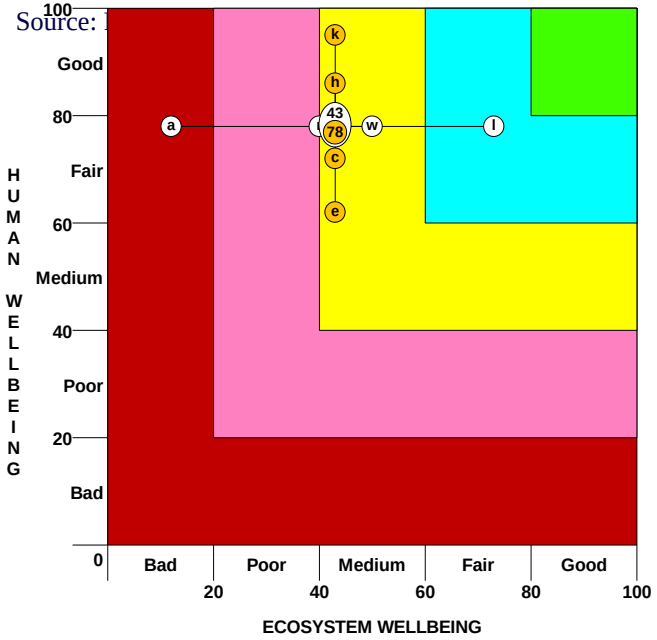
Source: Prescott-Allen (2001a).



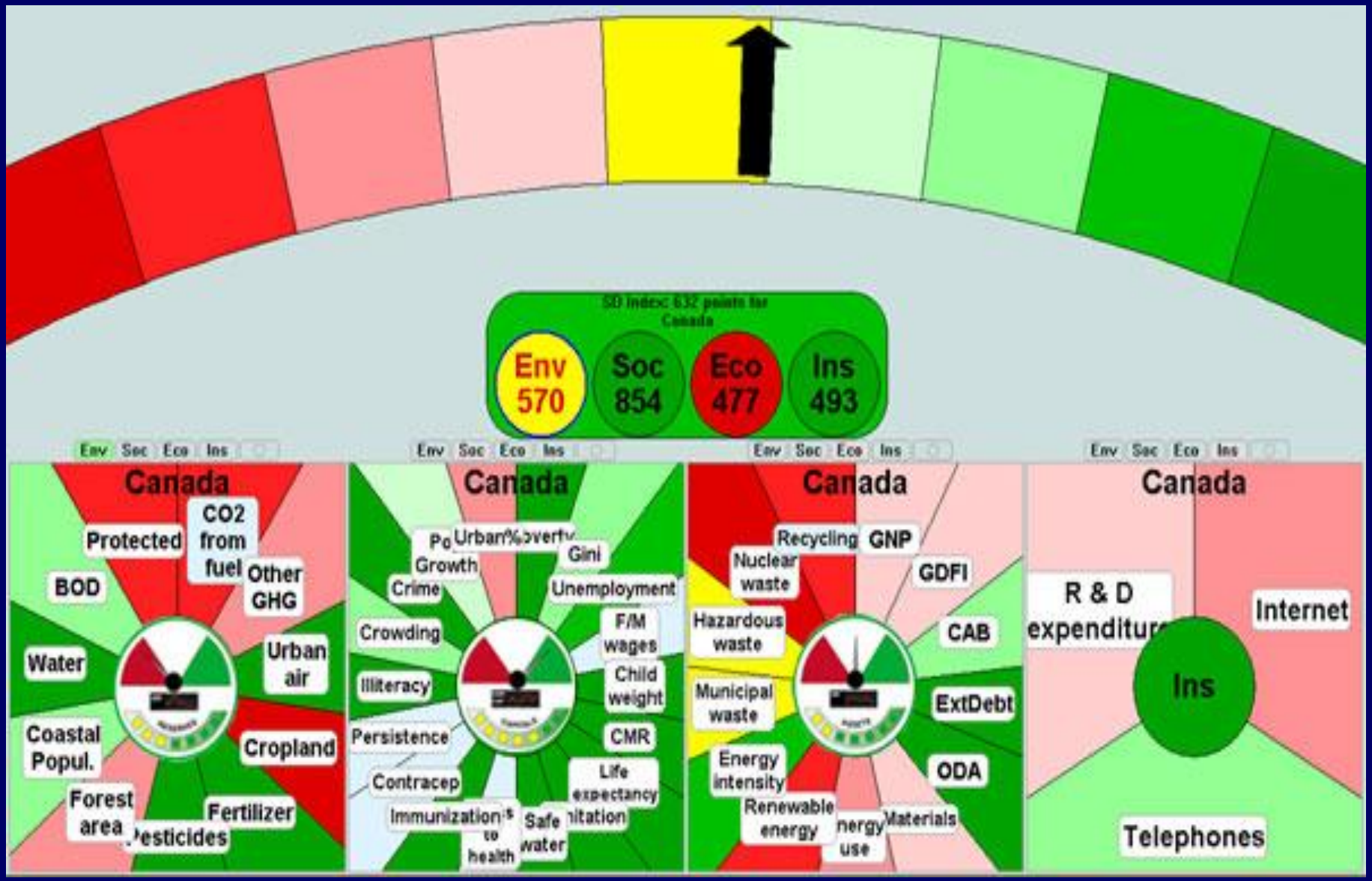
showing the well-being of Canada.

Grey circles (vertical axis) are the points on the scale of the human dimensions (major components of the HWI): c = community; e = equity; h = health and population; k = knowledge; w = wealth. White circles (horizontal axis) are the points of the ecosystem dimensions (major components of the EWI): a = air; l = land; r = resource use; s = species and genes; w = water. Some dimensions are hidden by the egg (wealth, species and genes, resource use). The dimensions that need most attention are air (reduce carbon emissions), resource use (reduce energy consumption), and species and genes (expand habitat protection for wild species, and conserve agricultural diversity).

Source:



Dashboard of sustainability



Policy assessment

Consistency analysis matrix

	Economy	Culture and language	Natural environment	Built environment	Energy	Pollution
Economy	–					
Culture and language	✓?	–				
Natural environment	✓?	✓?	–			
Built environment	✓?	✓?	✓	–		
Energy	✕?	O	✓	✓	–	
Pollution	✕?	O	✓	✓?	✓	–

✓, compatible; ✓?, probably compatible; ✕?, probably incompatible; O, no relationship.

Policy impact matrix for forecasting

Environmental Objectives →	Global Sustainability				Natural Resources				Local Environmental Quality		
Policy Elements ↓	Transport energy: Efficiency: trips	Built environment: Energy efficiency	Renewable energy potential	Rate of CO_2 fixing	Air quality	Water conservation and quality	Land and soil quality	Landscape and open land	Urban liveability	Cultural heritage	Public access to open space
To provide a network for open space corridors	•	•	•	✓	✓	•	✓	✓?	✓	✓	✓
To concentrate residential development on an existing public transport corridor of the city	•	✓	•	•	x	•	•	✓?	✓	✓?	x
To concentrate residential development on a new rural "green" settlement	x	✓	✓?	✓?	•	✓?	x	x	✓	✓?	x

Legend:

• No relationship, or insignificant impact	✓ Significant positive impact	✓ ? Likely, but unpredictable impact	X Significant negative impact	? Uncertainty of prediction or knowledge

Policy record sheet

Policy No.	Original Policy Statement 1					
	Policy Revision 2					
	Policy Revision 3					
	1		2		3	
Environmental Sub-objectives	Original Policy Impact	Commentary/ Action required where impact is significant	Revised Policy Impact	Commentary/ Action	Further Revised Policy Impact	Commentary/ Action
1						
2						
3						

TOOLKIT FOR SUSTAINABILITY APPRAISAL

PURPOSE	EXAMPLES OF TOOLS
Economic appraisal	Benefit-cost analysis, contingent valuation, NR accounts
Social Appraisal	SIA, HIA, Preference elicitation PSIA
Environmental appraisal	EIA, SEA, Ecological footprint analysis
Integrative tools	Options appraisal, multi-criteria analysis, ecosystem well-being, dashboard of sustainability

Who should undertake SA ?

	Advantages	Disadvantages
Internally (by the strategy makers themselves)	• Ideas may be appraised as they emerge; the appraisal has the potential to become a fully integrated part of the strategy development process • Generates an awareness of SD issues within the strategy team and may constitute a 'learning exercise' • There may be few appropriate 'windows' for independent appraisal	• The team may not have the knowledge of sustainability issues necessary to identify all possible impacts of the strategy • The strategy making team may be unable to predict the impacts of the strategy objectively
Independently (by, for example, consultants)	• The strategic options and policies may be viewed more critically • A team with knowledge and expertise in all aspects of SD may be assembled so that all the impacts of the strategy are more likely to be identified	• An independent team may not have a full working knowledge of the strategy or the issues at stake particularly if the team is drawn from outside the region • Appraisal may have to be carried out a discrete stages in the strategy's development (given the resource implications) and will be difficult to integrate throughout

ISSUES & CHALLENGES

- What constitutes ‘close enough’ SA?
- Do we need a framework approach (eg principles, basic steps, tool kit)? – what are main building blocks?
- Is integration achievable methodologically, or is the key in improving planning/decision-making processes?
- How to define the triple bottom line, thresholds broadly defined?
- How and when ESE should be integrated?
- Does this vary with level of decision-making?
- Does the new paradigm demand new skills?
- How to address multi-disciplinarity?
- Integrating quantitative and qualitative information

Thanks