

SUSTAINABILITY APPRAISAL

An international review

Funded by the Government of Norway



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Purpose and objectives of project

Scope

Analytical, assessment and planning tools that effectively integrate environmental, social and economic considerations

- Take stock of international experience
- Provide preliminary scope of approaches taken:
 - Concepts and definition
 - Empirical review & evaluate practice, procedures and methodologies
 - Benchmark major trends, developments
 & issues
 - Help ground & focus discussion
 - Identify options & directions for improving practice, including guidance and case studies
 - Draft agenda for moving ahead



Phased approach

Phase 1 (Oct 03 – April 04)

- Desk-based review of key sources
- Supplemented by workshops
 - Canberra
 - Wellington
 - Johannesburg (March 04)
 - Victoria (April 04)
- Report to IAIA (ends phase 1)

Phase 2 (2004-2006 ?) [International programme]



Rationale for review

- Repeated demand for integrated approach to SD (Rio-WSSD)
- Increasing reference to SA in literature
- Much discussion lacks cutting edge
- Ideas often restated
- Need for critical assessment of progress and practical applications



Key points

- Diverse, rapidly evolving field
- Many approaches, many levels, most sectors
- Some promising experimentation
- No real integration of ESE (parallelism)
- Challenge is to sharpen focus & apply tools effectively
- Different entry points (eg planning, strategies, impact assessment, SEA)
- Focus of this forum from SEA to SA



Emerging paradigms

- Second generation -- SEA of policy & plans (Rio to Joburg)
- Next generation -- toward ESA and SA (Joburg + 10)
- ESA >> IEM (all env impacts of all actions)
- FCA >> SA (all impacts of proposed actions/ bottom lines)



SEA menagerie





Typology of SEA approaches

Formal: prescribed in international or national EIA-type instruments

Near equivalent processes of environmental appraisal of policies/laws, and broader SEA-type processes/methods

Para SEA: Don't meet formal specifications or strict definitions; but share some charactersitcis or elements and have same overall purpose





Sustainability assessment soup





Towards Sustainability Appraisal

Illustrative examples





Surveying the field

- General frameworks
- Indicator-based
- Policy assessment
- Business
- **Trade**
- Global sectors
- Urban, municipal, community
- Economic
- Land use & natural resources
- Integrated assessment
- Developing countries
- Strategies for SD



Approach	Promoter/User				
General frameworks	Assessing the sustainability of societal initiatives and proposing agendas for change (ASSIPAC)	Free University, Brussels			
	Threshold 21	Millenium Institute, USA			
Indicator-based	Systematic sustainability analysis (SSA) Barometer & Dashboard of sustainability	University of Reading RPA/IUCN & IISD			
Policy assessment	Consistency analysis matrix	Environment Alliance			
	Sustainability test	Land Use Consultants, Bristol			
	Sustainability impact assessment	UNDP			
	Sustainable development appraisal	Ethiopia			



Business	Triple bottom line (TBL)					
	Environmental sustainability assessment	Total Environment Centre, Australia				
	Corporate sustainability assessment (CSA)					
	Dow Jones Sustainability Index					
	Product sustainability assessment (PSA)	Proctor & Gamble				
	Sustainability assessment for enterprises (SAFE)	Wuppertal Institute, Germany				
	Sustainability assessment model (SAM)	Various industries				
	Sustainable project appraisal routine (SPeAR)	Arup				
Trade	UNEP manual for integrated assessment of trade policies & agreements	UNEP				
	Sustainability impact assessment of WTO trade negotiations	University of Manchester				
Global sectors	Paper Cycle study	IIED/WBCSD				
	World Commission on Dams					
	MMSD (mining)	IIED/WBCSD/Partners				



Urban

DOTIS system	Tilburg, Netherlands
TBL toolkit	Melbourne
Quality of life appraisal	Stockport
SD matrix	Forum for the Future, UK
Integrated sustainable cities assessment method (ICSAM)	University of Manchester
Citizen sustainability assessment (CSA)	Empowerment Institute, USA
Sustainability assessment questionnaire (SAQ) for campuses	Association of University Leaders for a Sustainable Future, Washington
Community sustainability assessment (CSA)	Global Ecovillage Network
Municipal project sustainability assessment	Municipalities, eg Islington



Economic	Regional SD assessments	Tinbergen Institute, Netherlands		
	Debt sustainability assessment	IMF		
·	Advanced sustainability assessment (ASA)	Academic		
Land use & natural	Land evaluation & parametric methods	FAO, governments		
resources	Land use sustainability assessment (LUSA)	India, UNDP		
	Response inducing sustainability evaluation (RISE) – for farms	Swiss College of Agriculture		
	Sustainability assessment of renewable energy projects	English Countryside Agency/UK consultants		
Integrated assessment	Integrated environmental assessment	European Environment Agency		
	Computer-aided sustainability evaluation evaluation tool (CASET)	Hong Kong govt.		
	Integrated EIA process	Environment Canada		
	Sustainability appraisal	UK govt.		
	Asia-Pacific Integrated Model	Environment Congress for Asia & Pacific		



Main approaches Most tools

combine several of the following 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

- Questionnaires
- 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



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Visual models



















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).

Figure 13.4: Individual Barometer of Sustainability, 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 (majorcomponents 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).





Dashboard of sustainability





Policy assessment:

Consistency analysis matrix

	Economy	language	environment	environment	Energy	Pollution
Economy	_					
Culture and language	√?	-	(A) Tes for a hy	ting the consiste pothetical land-u	ncy of policy el use plan	lements
Natural environment	√?	√?				
Built environment	√?	√?	~	_		
Energy	X ?	0	✓	1	-	
Pollution	X ?	0	✓	√?	×	<u></u>

 \checkmark , compatible; \checkmark ?, probably compatible; \times ?, probably incompatible; O, no relationship.

(B) Example of a policy impact matrix for forecasting

(C) Example of a policy record sheet

Environmental Objectives>	Global Sustainability				Natural Resources			Local Environmental Quality			
Policy Elements	Transport energy: Bfficiency: 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	•	•	•	1	*	•	*	√?	*	*	~
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
No relationship, or insignificant impact	end: relationship, or Significant positive ? Likely, but X Significant ? Uncertainty of inficant impact unpredictable impact regative impact ? Uncertainty of prediction or knowledge										

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									



Directions of change

- 3EIA still emerging, not clear how this will work
- equity dimension weak but poverty now driving aid?
- emerging approaches at the World Bank include PSIA
- structural convergence within policy / planning frameworks
- policy scenarios -- ecological footprint of development trends



Trade-offs and decisionmaking

World Commission on Dams Identify rights and interests affected by a proposal and involve stakeholders

Assess risks and impacts and ensure participation is commensurate with loss

Reconcile competing interests through negotiation process



Some results of Victoria round table on SA

- Integrated IA is a necessary but not sufficient condition for SA
- Reference framework of principles, criteria, measures
- Consensus-based policy and planmaking best proxy
- But demanding, resource intensive and easily derailed
- Bottlenecks are institutional and political not methodological



Seven key questions

1: Do we need SA and is SEA the best entry point?

- 2: Are there core elements / characteristics ?
- 3: Do we need a framework approach? (eg principles, key steps, tool kit)
- 4: Do we need methodologies for integration; or is it best achieved through planning/decision-making processes; or both?
- 5: How to define critical baselines/thresholds for sustainability?
- 6: How to integrate quantitative and qualitative information?
 - 7: Where do we invest our effort? (bench marking good practice, testing approaches, etc?)



Proposed International partnership initiative

> The real power of applying the ideas of sustainability comes from a capacity to integrate and synthesise rather than split apart in bounded categories" MMSD

Phase 2 (2004-2006?)

- Further explore experiences (examine opportunities & challenges)
- Modular approach (regions, sectors, interest groups) (+ varying content, focus, scope, duration) eg African framework for SA, small islands
- Coordination, networking, comparative review (spine)
- Develop and test approaches
- Interest?