



**Incorporating Principles of
Sustainable Development within the
Design and Delivery of Major
Projects: An international study with
particular reference to Mega Urban
Transport Projects
for
the Institution of Civil Engineers and
the Actuarial Profession**

Survey Report

Omega centre
Centre for Mega Projects in Transport and Development

A global Centre of Excellence in Future Urban Transport sponsored
by Volvo Research and Educational Foundations (VREF)

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1.0 Purpose of Report

This document forms the Survey Report. It is the second main deliverable in the study for the Institution of Civil Engineers and the Actuarial Profession aimed at better incorporating environmental and social factors into subsequent editions of the jointly published RAMP Handbook.

The report contains four sections:

- a report on the operation of the survey
- a brief review of the initial findings from the Pre-hypothesis questionnaire interviews carried out for selected case studies
- review of the main findings from the Hypothesis-led questionnaire interviews carried out with key people in various agencies and institutions and for selected case studies
- some conclusions on the emerging findings

2.0 Report on operation

2.1 Context

This section of the Survey Report describes the operation of the questionnaire surveys carried out for the RAMP project.

A central feature of the Study has been to carry out a set of guided questionnaire-based interviews, in line with the methodology developed for the main OMEGA project. These aim to generate a range of insights and understanding for the Study to complement the reviews of published literature and other sources.

The role of the questionnaire surveys was set out in the Proposal, and the scale and pattern of interviews was defined in the Project Report presented to the 29 May Steering Group. This aimed at 60 interviews in all including:

- 20 Pre-hypothesis interviews and 20 Hypothesis-led interviews, as part of the proposed investigations of case studies in the UK and in Australia, France, Sweden and the USA
- 20 further Hypothesis-led interviews with selected representatives from international development agencies, investment banks, government agencies and consultancy firms as advised by the Client through the Study's Steering Group.

A provisional list of potential interview candidates was discussed at the Steering Group on 29 May and revised to incorporate the Steering Group's suggested priorities.

2.2 Development of the questionnaires

For the main OMEGA project each case study involved two periods of survey work for each case study. One period was of interviews with the Pre-hypothesis questionnaire, effectively a broad framework for interviewees to set out their views and insights on the project's planning and implementation, in the light of their experience and standpoint. The results of these interviews were then used in conjunction with the desk research to construct a set of hypotheses about the reasons behind the decisions on the project which formed the core of a Hypothesis-led questionnaire for a second round of interviews. However, in the timescale for the RAMP Study, this sequential approach was not feasible. Therefore the two questionnaires were developed together.

The Pre-hypothesis questionnaire was developed from that used for most of the OMEGA work. The only real change was to incorporate tight references to the environmental and social aspects of sustainability in the guiding questions.

The hypotheses were developed from the Literature Report and from the Steering Group's comments on the issues this raised. The Hypothesis-led questionnaire used

the general structure of other OMEGA Hypothesis-led questionnaires. It was however somewhat shorter. The aim was to keep the survey interviews more tightly focused on how environmental and social aspects of sustainability have been incorporated in project planning, appraisal, implementation and evaluation.

A copy of the Pre-hypothesis questionnaire is in [Appendix 2.1](#) and of the Hypothesis-led questionnaire in [Appendix 2.2](#).

2.3 Operation of the survey

Development of the survey interviews involved two main strands. Discussions were held with the OMEGA partners in those countries where case study survey interviews for this study were planned. First approaches were made to the various key individuals and agencies proposed. These initial steps enabled the arrangements for the various strands of the survey work to be developed. They also indicated where practical constraints existed.

The actual progress of interviews is described in the following paragraphs, which deal with UK based agency interviews, agency based interviews abroad and case study based interviews. [Appendix 2.3](#) sets out a summary table of interviews, [Appendix 2.4](#) lists all the interviews.

UK based agency interviews

Approaches were made to a number of key figures in public authorities, national agencies, NGOs and commercial companies, or in some cases to the organisations themselves in the first instance. Most of the interviewees sought and obtained were in very senior management positions or specialist roles, thus ensuring a suitably thorough and generally informed level of response. Most UK interviews took place in London: most of the interviewees are based in London, the others have reason to visit London regularly and thus could be interviewed at the OMEGA Centre (UCL lies close to Euston and near St Pancras and Kings Cross). In total 15 interviews were obtained.

Agency based interviews abroad

These were focused on the main decision making bodies at European and world level, and these formed the focus for seeking interviewees. Contact and selection also benefited from the OMEGA Centre's links with a number of major organisations. Most of the interviews were carried out by the Study Director. A good proportion of those interviewed were in world organisations based in New York and Washington, and the Study Director was able to add these on to other work on a visit already committed to New York at the request of university authorities there. Other interviews required trips to Africa and Luxembourg.

In a few cases where key people were interested in taking part but the time and expense of visiting them could not be justified, they agreed to complete and return

the questionnaire electronically. In all 10 interviews plus one electronic response were obtained; another 5 electronic responses are awaited.

Case study based interviews

Each of the case study countries proved to be a different experience. The following points outline the results.

UK The case study adopted was the M6 Toll Road. Developing the list of interviewees and arranging and carrying out the interviews was undertaken on an integral basis with the main (OMEGA 2) case study interviewing. All interviews were carried out by the Project Manager. Pre-hypothesis and Hypothesis-led interviews were held with four people who had played a strong role in the M6 Toll Road's planning (from public authorities, an NGO and the Road's promoters).

France The Omega Partner organisation in France agreed to carry out the required number of interviews. These have now been arranged and most carried out, all handled by the Director of the French research team.

Sweden The OMEGA Centre's sponsors in Sweden provided some contacts among senior politicians and agency directors associated with the Oresund Crossing. Interviews have been carried out, in Sweden (by the Study Director on a visit to Stockholm), in England (visit here by one interviewee) or electronically.

USA The Omega Partner in the USA set up a programme of interviews in Boston among senior politicians and agency directors associated with the Boston 'Big Dig'. These interviews were carried out by the Study Director on an extension of his trip to New York.

Australia Owing to current pressures, the Omega partner in Australia felt unable to commit to this work additionally to other Omega research. In consequence it was decided not to include any Australian case study interviews.

2.5 Results of the survey operation

Appendix 2.3 summarises the results of carrying out the survey. In all 40 Hypothesis-led responses have been completed (39 interviews and one electronic) plus 15 Pre-hypothesis (3 electronic), giving a total of 55 (51 interviews and 4 electronic responses). Another 10 responses are awaited (3 scheduled interviews plus 7 electronic responses). This gives an overall total of 65 in all: 54 interviews and 11 electronic responses.

The overall numbers agreed as part of the Proposal have therefore been achieved. While one non-UK case study has not been obtained, this has been more than balanced by an increased number of Hypothesis-led interviews with major agency directors and specialists and other key players in transport, both in the UK and abroad.

2.5 Transcription and analysis

All the interviews have been transcribed, to produce a text for analysis. Each transcription has been sent back to the interviewee, primarily to give them the opportunity to amend any aspect if they felt it misrepresented what they had said. In practice none have done so, and informal feedback suggests all interviewees are satisfied with the outcome.

2.6 Comments

There are several points to be noted about the survey:

- Logistics and timing formed a key issue throughout. Most of the individuals approached hold very senior posts; a few have a significant specialist role. The interviews were therefore undertaken by the Study Director or Project Manager. In consequence it was not always easy to agree a mutually convenient date and time.
- This was particularly a problem for the overseas interviews, which were naturally limited by funding and very much by time availability too. These were addressed by careful planning, especially for short trips to mainland Europe, and by the Study Director's combining a previously scheduled visit to the Eastern USA.
- The timing of the Study meant that a lot of the initial approaches to interview candidates were made in late June and early July. For a good number of potential interviewees the summer holiday period was already impinging on diary dates in the near future. This tended to slow down the pace at which interview dates could be agreed.
- A few people approached were not interested enough to agree a date. Sometimes it took some time to establish that they would not be willing to contribute and thus delayed any approach to alternative candidates.
- The interviewees were primarily from the public sector – government, local authority or other public agency – but there were a number from commercial companies or trading bodies. They also ranged from those responsible for administration or management of current activities through to those concerned with wider or longer term issues of environmental and social quality of life.

APPENDIX 2.1: RAMP Pre-hypothesis questionnaire (general)

A. Opening Question (to be asked in *all* interviews)

Interviewees' relationship to the project

- “What is your relationship to the [Case Study] Project. Please explain which aspect of the project you were responsible for, involved in or affected by.”

[Index personal characteristics using the “About You” part of the index sheet.]

B. Prompting Questions

QUESTION 1 - (to be asked in *all* interviews)

Looking back, what in your mind were the most pivotal events that shaped the consideration of social and environmental sustainability for the [Case Study] project? (Turning points or triggers of significance, not necessarily project milestones) Please consider:

- Which of these were most surprising? Most predictable?
- Which of these were planned? Which were unexpected?
- Specify the date the event occurred, who were the main people involved, where it took place and why it took place.

QUESTION 2 - Tell me about a time when the social and environmental sustainability aspects of the project were rescued or sabotaged?

QUESTION 3 - When were the moments of stagnation or breakthrough concerning the social and environmental sustainability considerations of the project? What happened?

QUESTION 4 – Imagine the social and environmental sustainability outcomes of this project, 10 years ahead, are perceived as:

- as a total disaster - or
- a resounding success

What stories would you share with others to convince or dissuade those who felt that way?

APPENDIX 2.2: RAMP Hypothesis-led questionnaire (general)

HYPOTHESIS 1 – Economic growth is essential, sustainability is not

Sustainability visions should not affect ‘real investment decisions’ for mega transport projects¹. These must by necessity be led by meeting demand and supporting economic growth. In circumstances where sustainability visions matter enough to take precedence over demand growth, this priority should be established solely by governments. Governments and other public authorities should then set clear and firm policies and targets for environmental and social factors of sustainable development to establish how they might be treated in the appraisal of mega transport projects.

Q.1 Do you support this hypothesis? If yes, why? If no, why not?

RELATED QUESTIONS

Q.2 Do sustainable mega projects exist?

Is it possible to conceive of a truly sustainable mega transport project? Or, among the main aims that must be addressed for such projects, are there always going to be potential contradictions that are too great to be readily overcome?

Q.3 Policy context for appraisals

- 3a Much is said about the desirability of environmental and social enhancement. But is environmental and social enhancement only worthwhile if such aims can be appraised realistically against other key aspects of mega transport project development? Doesn't this require relevant public authorities to set clear and firm indications of priorities for different contexts within which projects are developed?
- 3b How significant is it for the appraisal of mega transport projects to have a firm spatial planning (geographic) dimension? If so, why? If not, why not?

¹ For the purposes of this Study, MTPs are defined as large-scale (typically complex) land-based transport infrastructure link projects (and any services they may incorporate), including: bridges, tunnels, highways, rail links and their related transport terminals, within or connecting urban areas, plus combinations of such projects; with construction costs *in excess* of US\$ 0.5 billion at 1999 prices.

HYPOTHESIS 2 – Monetization is essential to sound appraisal

Environmental and social factors of sustainability are important because ultimately they impact on everyone, directly or indirectly (through climate change or degradation of city life, for example). If these impacts are real, they can be measured and therefore they can be expressed in monetary terms. This enables them to be properly accounted for within the project appraisal. In contrast, impacts that cannot be measured are vaguely defined or irrelevant and therefore need not be included in the appraisal.

Q.4 Do you support this hypothesis? If yes, why? If no, why not?

RELATED QUESTIONS

Q.5 The economic basis of project appraisal (CBA)

Should the appraisal of mega transport projects be primarily focused on the Cost Benefit Analysis (CBA) approach? How well do you consider this approach addresses the environmental and social dimensions of sustainable development?

Q.6 Monetizing environmental factors

- 6a Which environmental risks and opportunities can be converted into monetary terms and incorporated into project appraisal?
- 6b What might be the best way to take into account those environmental factors which cannot be monetized? Or should they be omitted from the main appraisal?

Q.7 Monetizing social factors

- 7a Which social risks and opportunities can be converted into monetary terms and incorporated into project appraisal?
- 7b What might be the best way to take into account those social factors which cannot be monetized? Or should they be omitted from the main appraisal?

HYPOTHESIS 3 – Objectives are more important than economic rationalism

Achieving sustainability in environmental and social terms should be a crucial aim of mega transport projects. However, it is usually impossible to obtain all the information necessary for a reasonable assessment of most of the factors that matter. Project appraisal becomes more straightforward and easier to implement if the objectives for a mega transport project can be set firmly within the framework of established spatial and economic strategies.

Q.8 Do you support this hypothesis? If yes, why? If no, why not?

RELATED QUESTIONS

Q.9 Assessing the key environmental and social factors of sustainable development

9a What are the key factors which need to be covered in environmental and social appraisal of a mega transport project? Are they readily measurable? How do you decide which ones might be included and prioritised?

9b How valuable are the current Environmental Impact Assessment and Social Impact Assessment processes as set out in official documentation?

Q.10 Appraisal through Multi Criteria Analysis

10a Would the appraisal of a mega transport project more effectively employ the use of Multiple Criteria Analysis (MCA), to cover all factors (both quantitative and qualitative) within a single framework? How well do you consider this approach addresses the environmental and social dimensions of sustainable development, particularly those that cannot be monetized?

10b Should CBA be used to inform MCA based appraisal, rather than as a principal tool for decision making?

Q.11 The significance of context

How important is context – cultural, political, commercial, temporal - in (a) planning, appraisal and delivery and (b) judgements about success? How does it influence judgements regarding the value of a mega project and its treatment of risk, uncertainty and complexity? Or are decisions context free?

HYPOTHESIS 4 – Engagement of all stakeholders in the appraisal process is essential

In the appraisal of a mega transport project, open engagement of all stakeholders is more likely to create understanding on all sides of the project's aims and design and to generate information which otherwise might not have been available. In this way such engagement can lead to a project succeeding far more in meeting its commercial and operational objectives.

Q.12 Do you support this hypothesis? If yes, why? If no, why not?

RELATED QUESTIONS

Q.13 Engagement of stakeholder groups in the appraisal process

- 13a To what extent do you think that the various different stakeholder groups should be engaged in the environmental aspects of the appraisal process?
- 13b To what extent do you think that the various different stakeholder groups should be engaged in the social equity aspects of the appraisal process?

Q.14 Modification of promoters' criteria

Is there scope for mega transport project stakeholders, including promoters, to modify their assessment criteria for appraisal of their projects in light of their own concerns? And, if so, do you know of mega transport projects for which such forms of assessments have been used in the appraisal process where this was helpful to the final outcome?

Q.15 Concluding the engagement process

How do you conclude the debate raised by the engagement of stakeholders in the appraisal process and so bring the considerations to the point of decision?

CONCLUDING QUESTION

- Q.16** What lessons could be learned about the environmental and social dimensions of the sustainable development process?

APPENDIX 2.3: Summary of interviews**RAMP – Stakeholders interviewed as at 4 December 2009**

	UK	Overseas	TOTAL
Hypothesis-led: Agencies / Institutions			
Already held	14	11	25
Agreed, date scheduled	2	0	2
E-response agreed / invited	0	5	5
TOTAL	15	16	32
Hypothesis-led: Case studies			
Already held	4	11	15
Agreed, date scheduled	0	1	1
E-response agreed / invited	0	1	1
TOTAL	4	13	17
Pre-hypothesis: Case studies			
Already held	4	11	15
Agreed, date scheduled	0	1	1
E-response agreed / invited	0	1	1
TOTAL	4	13	17
ALL INTERVIEWS			
Already held	22	33	55
Agreed, date scheduled	2	2	4
E-response agreed / invited	0	7	7
GRAND TOTAL	23	42	66

APPENDIX 2.4: List of Hypothesis-led interviewees

Notes:

1. Interviewees' contributions to this Study reflect their own professional views and not necessarily those of the organisation with whom they are affiliated or employed.
2. All interviews remain confidential to the Study team and the interviewee.
3. All case study interviewees also provided a Pre-hypothesis interview.

Title	First Name	Surname	Position	Organisation	Comments
			UK agency		
Mr	Stephen	Joseph	Director	Campaign for Better Transport	
Mr	Tom	Worsley	Deputy Director, Network Analysis & Modelling	Department for Transport	
Ms	Chris	Dewey	Associate	Forum for the Future	
Mr	Joseph	Lowe	[Author, the Green Book]	HM Treasury	
Mr	Lewis	Neil	Director, Infrastructure	HM Treasury	
Ms	Rachael	Miller	Head of Railways	HM Treasury	
Ms	Fiona	Lee		HM Treasury	
Mr	Derek	Turner	Director of Network Operations	Highways Agency	
Mr	Mark	Lemon		HSBC Bank	Interview tba
Mr	Iain	Coucher	Chief Executive	Network Rail	
Mr	Neil	Scales	Chairman / Director General	Passenger Transport Executives Group / Merseytravel	Interview scheduled
Ms	Alex	Elson	Project Finance Environment and Sustainability Adviser	Shell	
Mr	Jim	Steer	Director	Steer Davies Gleave / Greengauge21	
Mr	Bernie	Bulkin	Commissioner	Sustainable Development Commission	
Prof	Phil	Goodwin	Centre for Transport & Society	UWE	
Dr.	Peter	Jones	Professor of Sustainable Transport	UCL	
			International agency		
Mr	Todd	Litman	Principal	Victoria Transport Policy Institute, CANADA	Electronic response
Mr	Marcel	Rommerts	Transport Directorate	European Commission, BELGIUM	
Ms	Eva	Mayerhofer	Environmentalist, ESO	European Investment Bank, LUXEMBOURG	

Ms	Evelin	Lehis	Head of Social Assessment, ESO	European Investment Bank, LUXEMBOURG	
Mr	Piers	Vickers	Transport Division	European Investment Bank, LUXEMBOURG	
Mr	Hans	Rat	Secretary General	International Union of Public Transport, BELGIUM	Electronic response awaited
Dr.	Elliot	Sclar	Professor	Columbia University, USA	
Mr	Jos	Dings	Director	European Federation for Transport & Environment, BELGIUM	Electronic response awaited
Dr.	Walter	Hook	Executive Director	Institute for Transport and Development Policy (IDTP), USA	
Mr	Peter	Freeman	Lead Evaluation Officer	World Bank, USA	
Mr.	Sergio	Margulis	Environmental Economist	World Bank, USA	Electronic response awaited
Dr.	Suzanne	Fainstein	Professor Urban Planning, Graduate School of Design	Harvard University, USA	
Dr.	Tom	Sanchez	Head of Committee on Socio & Economic Factors of Transportation	Transportation Research Board, USA	Electronic response awaited
Dr.	Ralph	Gakenheimer	Professor of Urban Planning & Transportation	Massachusetts Institute of Technology, USA	
Mr	Naison	Moutizwa- Mangiza	Head of Policy Analysis Branch	United Nations- HABITAT, KENYA	
Ms	Yan	Zong		Asian Development Bank, PHILIPPINES	Electronic response awaited
			Case studies		
Mr.	Ingvar	Carlsson	Former Prime Minister of Sweden	Retired, SWEDEN	
Mr.	Stig	Larsson	Director General of the Swedish State Railways (1988- 98)	Retired, SWEDEN	
Mr.	Per Anders	Örtendahl	Director General, National Road Agency (1982-1995)	Retired, SWEDEN	Electronic response awaited
Mr.	Lars	Tobisson	Former Member of Parliament / Parliamentary coordinator for planning and implementation of Oresund Link	Retired, SWEDEN	
Mr	Ulf	Dahlsten	Former advisor to 2 Swedish Prime Ministers with special responsibility for Oresund Link	Retired, SWEDEN	
Mr	Jean	Bethier	Formerly Director of Roads, Chairman CNISF	Ministry of Construction &	

				Transport, FRANCE	
Mr	Michel	Deffayet	Director, Centre d'Etudes des Tunnels	Lyon, FRANCE	
		[to be advised]	Director, Centre d'Etudes des Tunnels	Lyon, FRANCE	
Ms	Sandrine	Chotard	Director of EIA studies, Milau Viaduct	FRANCE	Interview tba
Mr	Frederick	Salvucci	Godfather of Big Dig & Advisor to Mayor, then State Secy of Transn & Constn for 3 gubernatorial terms	Senior Lecturer, Massachusetts Institute of Technology, USA	
Mr.	Glen	Weisbrod	President	Economic Development Research Group Inc., USA	
Mr.	Steven	Landau	Director of Strategy Planning	Economic Development Research Group Inc., USA	
Dr.	Alan	Altshuler	Professor of Urban Planning & Government - Past Sec. of Transportation for State of Mass.	Harvard University, USA	
Mr.	Chris	Haynes	Head of Transportation Strategy	Birmingham City Council, UK	
Mr.	Chris	Crean	Campaigner	Friends of the Earth, West Midlands, UK	
Mr.	Stephen	Kelly	Head of Policy	FTA Midlands & South-West, UK	
Mr.	Colin	Mercer	Planning Manager	Highways Agency, Regional Office, West Midlands, UK	

3.0 Pre-hypothesis questionnaire interview surveys – emerging findings

3.1 Context

The Pre-hypothesis research phase involved the collection of narratives from a selection of 17 interviewees (Appendices 2.3 and 2.4) concerning their experiences of the treatment of social and environmental factors in the planning and appraisal of Mega Projects. Interviewees were asked a series of open ended prompting questions (Appendix 2.1) free from guiding hypotheses in order to illicit context rich narratives to identify key issues surrounding social and environmental factors for subsequent analysis using a specialist software package.

The transcripts from these interviews have been transcribed and are currently undergoing a sense making analysis using the NVivo Software Package. Each anecdote is indexed against a set of filters, which are dynamically assigned during the process, and the resulting patterns of knowledge are identified. These patterns of knowledge will then be compared to the findings of the conventional hypothesis led investigation to highlight any critical concepts which were not exposed by the more focussed hypothesis led questions.

This section briefly reports on some initial findings from the Pre-hypothesis questionnaire surveys carried out for the RAMP project whilst a more in-depth analysis will be undertaken in the coming months. It focuses on the key factors and processes related to the incorporation of environmental and social factors in development of the case study projects.

3.2 Key factors and processes identified

- Mega projects generally take a long time moving from the original idea to a fully established project. During this time the shape and purpose may change but they may also remain consistent with the original idea.
- In mega projects a great deal of supporting work in development needs to be done and this often involves other stakeholders whose position and priorities may differ from the principal promoter.
- Relationships between and within decision making bodies are not always straightforward. It does not follow that all individuals or groups wholeheartedly support a project that their organisation is promoting.
- Establishing and maintaining a strong consistent view is likely to be a dominant factor in project development. This applies particularly to promotion of the project. But it can also apply to the strength of the role played by other parties (supporting, opposing).

- Viewpoints may change if the potential benefits or disbenefits to a group are understood to change.
- Individuals and organisations not (apparently) affected by a proposed project are unlikely to react strongly to it, if at all.
- Attitudes to environmental and social factors have been changing over a long period of time. Environmental factors are now far more important than ten or twenty years ago.
- Changing the focus and responsibility for a project can change the priorities for appraisal and the outcome.
- With a mega project the scale and distances involved mean that many organisations and individuals are affected and thus there are many stakeholders with differing views.
- The results may be seen as different from the viewpoint of different stakeholders.
- Major decisions taken by elected decision makers can sometimes be surprising, through being taken rapidly or running contrary to expectations.
- A mega project may potentially involve solutions to problems in several different fields. Understanding these, bringing the relevant parties on board and appraising the multiple effects are very complex.

4.0 Hypothesis-led questionnaire interview surveys - review of main findings

4.1 Context

This section of the Survey Report outlines the results from the Hypothesis-led questionnaire surveys carried out for the RAMP project.

It has two parts. The first pulls together a statistical analysis of the responses to the hypotheses and questions. The second sets out some wider points which emerged in the recorded views of the interviewees.

4.2 Statistical analysis of responses

The recordings from all questionnaire interviews were transcribed into text files. A list of key indicators was drawn up to reflect the main questions in the questionnaire. On the basis of these, a database was constructed (using Excel), into which a key passage relevant to each question could be copied from the transcription for each respondent. Each response was then indexed accordingly. Most responses related to the respondent's viewpoint on each question (e.g. did the respondent agree / disagree with Hypothesis 1?). A few responses developed a listing of the factors mentioned by respondents.

The results are set out in [Appendix 4.1](#), taking each question in order. Figures in the tables are percentages, rounded, of all responses offered (in some cases no response was offered to a particular question). Some of the key points that emerge from this are discussed in the following paragraphs.

Overall views on the four hypotheses

Table 4.1: Balance of agreement on four hypotheses

Hypothesis	(% of responses)			
	<i>Agree - fully</i>	<i>Agree - with conditions</i>	<i>Agree - all</i>	<i>Do not agree</i>
1. Economic growth is essential, sustainability is not	3	13	16	81
2. Monetization is essential to sound appraisal	6	36	42	55
3. Objectives are more important than economic rationalism	33	30	63	37
4. Engagement of all stakeholders in the appraisal process is essential	67	25	92	4

The overall views on the four hypotheses are set out in [Table 4.1](#). This brings out quite a distinct pattern moving through the hypotheses. The majority of respondents did not agree that economic growth is essential at the expense of sustainability. About a third agreed conditionally that monetization is essential to sound appraisal

but only a couple felt able to agree fully with this, the rest disagreeing. A third of respondents agreed fully that objectives are more important than economic rationalism and one third agreed conditionally but one third also disagreed. Two thirds agreed that stakeholder engagement in appraisal is essential, a quarter agreed conditionally. The overall picture is that respondents consider that rational discipline is valuable for appraisal of projects and reaching decisions but that having clear sighted objectives and engaging all stakeholders in processes is far more important.

Hypothesis 1: Economic growth is essential, sustainability is not

While most respondents supported the main hypothesis, there was much less definite direction over the complementary questions. No respondent considered that sustainable mega projects could not be conceived, but only one third fully supported this position. There was no clear opinion on whether environmental and social enhancement are worthwhile if they cannot be clearly appraised. There was a tendency to agree that public authorities should set clear goals for them. The most strongly supported view (two thirds fully in agreement) was that spatial planning (geography) is highly significant. Overall the implication is that respondents strongly support the aim of sustainability but are not always consistent about its treatment in appraisal compared to economic growth.

Hypothesis 2: Monetization is essential to sound appraisal

Complementing the general disagreement with this hypothesis, questions on Cost Benefit Analysis (CBA) drew mostly negative views. Half disagreed that CBA should be the prime focus for mega project appraisal. Four fifths considered that the CBA approach to environmental and social facets gave them poor treatment. Asked to define which environmental and social risks could readily be converted to monetary values, the main items listed by respondents were physical aspects of the environment (air pollution, carbon, noise, climate, land impact) and definable social measures (relocation, education, jobs). Overall this indicates a knowledge and perhaps acceptance of the present focus on CBA methods and the related measuring but also considerable doubts as to its effectiveness for sustainability.

Hypothesis 3: Objectives are more important than economic rationalism

Factors mentioned by respondents as key environmental and social factors were very limited. About half thought that some were measurable, the remainder expressed various opinions. About half considered that current EIA and SIA processes were of some or limited value, the rest expressed various opinions. There was strong support (at or above two-thirds in all instances) for Multi Criteria Analysis as covering all factors in a single framework, for its effectiveness in so doing and for CBA being used to inform an MCA appraisal rather than as a principal tool on its own. Almost all respondents considered that context is important and three fifths thought that it was influential. Overall this indicates doubts over the effectiveness of

current processes for environmental and social and strong preference for a clear framework for assessing indicators for a range of relevant objectives.

Hypothesis 4: Engagement of all stakeholders in the appraisal process is essential

Complementing the strong support for good stakeholder engagement, half of all respondents thought that stakeholders should be fully engaged in both environmental and social aspects of appraisal and a third thought they should be partially engaged. Over a third fully agreed that promoters' assessment criteria should be changed in the light of concerns generated by the engagement and two fifths thought that they might be so changed. Overall there is clear support for stakeholder engagement being open and effective.

4.3 Other points to emerge from interviews

The passage of time

A theme that emerged from both agency and case study interviews was that of changes that have occurred over time. The views now held on environmental and social aspect of sustainability were not usually held one or two decades ago. There has been a significant shift in methodologies and objectives, at least in formally recognised terms; how far this has changed decisions is less clear. The terminology is changing too: though that does not necessarily indicate changing actions. This shift is continuing, albeit at a slow pace. The pace of change and the significance may differ for different industries and professions (e.g. building as against transport). Changes in attitudes and importance may reflect changing fashions. We may now be in a more hurried time, with accelerating speed of change. There is no clarity over future scenarios for society and hence it is almost impossible to understand the longer term impact of mega projects, even though they have a very long time cycle.

The objectives of growth

Economic growth is not necessarily an end in itself. The objectives of growth are often not clearly defined: more is not necessarily better. This especially applies to specific projects: are the benefits of identified growth opportunities achieved by society as a whole, by particular communities or by the project promoters? Or are benefits gained by all of them? The promoters' attitudes and approach may have a strong influence here. Focusing on economic growth may prevent externalities being addressed; but external effects can constrain growth (peak oil may turn out to be a particular example). This reflects the principle adopted that sustainable development consists of integrated advance in economic, environmental and social terms. Thus economic success should properly be seen as achieved only within a sustainable framework. It is up to governments to set and lead on this: companies need to follow conventional growth criteria.

Generating and choosing projects

The choice of a project is itself a crucial step. A narrow view of projects within their own field may limit the amount of thought given to different possible schemes. If however consideration is given to the wider context within which improvements are being sought, then a range of possible schemes, not necessarily all in the same field, may be generated. If this is done in coordination with early assessment of issues and engagement of stakeholders, then it is more likely that a project can be developed that can be appraised as positive and taken forward. Projects which lose money may nonetheless be the right priorities if there are valid reasons for their choice.

Establishing values

Establishing monetary values for analysis requires substantial amount of work and understanding; proper monetization needs sensitive variables. Considerable research has been undertaken over the last two or three decades; how far has this moved towards more certainty? It does not follow that measuring factors allows a useable monetary value to be obtained (though the measure may be used in assessment). Furthermore, the values developed so far tend to be the easier ones to establish on a measurable basis, and these are (in transport projects) mostly the straightforward ones of cost, time and revenue; thus the environmental and social ones tend to get left and therefore undervalued. There is also the question of what might be the right value. Monetary values are often derived from assessments against current patterns of income distribution: since these are not equal, using the resulting sets of values in appraisal may generate inequitable outcomes. Pricing the quality of life involves ethical factors.

Absolutes v. measures

The simple principle of compensation built into economic models may be highly inappropriate in many cases: it may not be possible in practice to compensate some groups who lose out and they might not find compensation acceptable in any case. So decisions in some fields might better be driven by adherence to particular standards or actions determined as essential to quality of life. This concerns, for example, achieving formally adopted safety levels or keeping within established levels of pollutant emission. Once these have been adopted, seeking to value them has no point. Projects or parts of them may be assessed on a simple pass/fail basis: if a project cannot address a particular regulatory constraint established to protect or enhance standards of life, then it cannot proceed. Climate change may offer particular examples of this approach. In more localised examples, there may be opportunities to seek a balance between absolute achievement and its cost.

Environmental v. social

While the two main aspects of sustainability have been treated as equal throughout, there remains generally a wide difference between the approaches to environmental and social factors respectively. Environmental factors tend to be seen as physical attributes that can be measured and assessed in neutral terms. This particularly

applies to the most discussed ones, such as air quality, water and land attributes. Social factors are mostly far more difficult to deal with, as they imply social and perhaps political choice of priorities; effectively they concern quality of life rather than simple matters of time saving. Some environmental factors which require more judgement, such as landscape and heritage, also pose more difficult and potentially political issues of choice. Even some measurable ones, such as noise, actually have a primarily social impact, affecting people's well-being.

Consultation and engagement

Real consultation can play a strong role in establishing local values. However, some groups may not be able to engage effectively because of unequal powers. So proper and fruitful engagement means an open approach to stakeholders, including the general public, involving trust. Stakeholder engagement can be painful for promoters and for other stakeholders. It is most likely to be effective if it is started early; in this way it also allows local values to come forward. However well they understand, disagreement is bound to remain between stakeholders. Ultimately a satisfactory resolution of key issues may rest on compromises being achieved. There is always a risk that consultation may polarise opinion rather than lead to consensus.

Professional practice and leadership

Management of processes and identification of possible costs and values is the responsibility of professional analysts, who have a substantial and important role in defining inputs and values. How are their skills developed? How is best practice evolved and what is it? Professional analysts and managers in principle lead through the process. They cannot set the values; this is up to politicians. But inspired leadership, in any field, can play a major part in guiding views and influencing the final decision.

International v. national

Sustainability is a global issue, thus international consensus on ways to achieve it is also essential. However, different countries have different positions, reflecting their national cultures.

APPENDIX 4.1: Summary of findings from Hypothesis-led questions

Question 1

Respondent supported the hypothesis: <u>Economic growth is essential, sustainability is not.</u>	%	%
yes - all		16
yes	3	
yes but conditional	13	
no		81
don't know		3

Question 2

Respondent believed it was possible to conceive a truly sustainable mega project.	%	%
yes - all		68
yes	32	
yes with contradictions	36	
no		0
don't know		32

Question 3a

Respondent felt environmental and social enhancement only worthwhile if such aims can be appraised realistically against other key aspects of mega transport project development	%	%
yes - all		42
yes	23	
yes but conditional	19	
no		32
don't know		26

Question 3a

Respondent felt public authorities should set clear and firm priorities for appraisal of environmental and social enhancement	%	%
yes - all		69
yes	41	
yes but conditional	28	
no		3
don't know		28

Question 3b

Respondent felt having a firm spatial planning element was highly significant for the appraisal of mega projects	%
high importance	68
medium importance	16
low importance	6
not important	10

Question 4

Respondent supported the hypothesis: <u>Monetization is essential to sound appraisal</u>	%	%
yes - all		42
yes	6	
yes but conditional	36	
no		55
don't know		3

Question 5

Respondent felt appraisal of mega transport projects should be primarily focused on the Cost Benefit Analysis (CBA) approach	%	
yes - all		42
yes	23	
yes but conditional	19	
no		52
don't know		6

Question 5

Respondent felt the CBA approach addresses well the environmental and social dimensions of sustainable development	%
good treatment	3
poor treatment	84
don't know	13

Question 6a

Environmental risks most commonly seen as readily be converted into monetary terms and incorporated into project appraisal. [% of respondents]

- Air pollution 26
- Carbon 16
- Noise 13
- Climate change 13
- Impact on land 10

Question 7a

Social risks most commonly seen as readily be converted into monetary terms and incorporated into project appraisal. [% of respondents]

- Relocation 13
- Education 13
- Jobs 13

Question 8

Respondent supported the hypothesis Objectives are more important than economic rationalism.

	%	%
yes - all		63
yes	33	
yes but conditional	30	
no		37
don't know		0

Question 9a

Key factors which need to be covered in environmental and social appraisal of a mega transport project. [% of respondents]

- Noise 13
- Impact on urban environment 13
- Impact on urban community 13

Question 9a

Respondent considered that key factors are readily measurable	%
yes, all of them	11
all or mostly	3
some	54
no, not usually	11

don't know	21
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Question 9b

Respondent considered current Environmental Impact Assessment and Social Impact Assessment processes as set out in official documentation as very valuable	%
very valuable	12
of some or limited value	56
of no value	20
don't know	12

Question 10a

Respondent considered appraisal of a mega transport projects would more effectively employ the use of Multiple Criteria Analysis (MCA), to cover all factors (both quantitative and qualitative) within a single framework	%	%
yes - all		65
yes	41	
yes but conditional	24	
no		7
don't know		28

Question 10a

Respondent considered Multi Criteria Analysis (MCA) covers all factors well	%	%
yes - all		76
yes	36	
yes but conditional	40	
no		0
don't know		24

Question 10b

Respondent felt CBA should be used to inform MCA based appraisal, rather than as a principal tool for decision making	%	%
yes - all		70
yes	67	
yes but conditional	3	
no		19

don't know		11
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Question 11

Respondent felt context – cultural, political, commercial, temporal - was important for the planning, appraisal and delivery of MUTPs	%	
important	92	
not important	4	
don't know	4	

Question 11

Respondent felt context – cultural, political, commercial, temporal - was influential in judgements regarding the value of a mega project and its treatment of risk, uncertainty and complexity	%	
influential	59	
not influential	8	
don't know	33	

Question 12

Respondent supported the hypothesis: <u>Engagement of all stakeholders in the appraisal process is essential</u>	%	
yes - all		92
yes	67	
<i>yes but conditional</i>	25	
no	4	4
don't know	4	4

Question 13a

Respondent thought that the various different stakeholder groups should be highly engaged in the environmental aspects of the appraisal process	%	
highly engaged	52	
partially engaged	32	
not engaged	4	
don't know	12	

Question 13b

Respondent thought that the various different stakeholder groups should be highly engaged in the social equity aspects of the appraisal process.	%
highly engaged	52
partially engaged	30
not engaged	4
don't know	14

Question 14

Respondent thought that there is scope for mega transport project stakeholders, including promoters, to modify their assessment criteria for appraisal of their projects in light of their own concerns	%
yes - all	76
yes	35
<i>yes but conditional</i>	41
no	18
don't know	6

5.0 Conclusions

5.1 Conclusions on survey operation

In overall terms the survey is judged to have worked well. It has produced the targeted number of interviews and responses. It has also generated significant interest among interviewees, so that the interviews carried out were for the most part well focused and provided comprehensive responses. This has helped to yield a solid body of information and insights.

5.2 Conclusions on emerging findings

The findings emerging from the initial analysis of the questionnaire interviews offer a considerable number of insights that could prove of significant value to the revision of the RAMP handbook. These include

- Concerns over properly addressing environmental and social aspects of projects have grown substantially over the last two decades and continues to increase.
- Most respondents have serious doubts over adopting a narrow focus on economic growth, especially as reflected in simple appraisal models; sustainability aspects should form a crucial part of the process.
- Project appraisal needs to reflect a wide range of environmental and social factors. Most current appraisal methodologies are limited, sometimes seriously, in their ability to weigh such factors properly.
- Appraisal systems that rely primarily on monetization of factor values (particularly in Cost Benefit Analysis) cannot reflect all the important aspects of a project properly, if at all. Use of a comprehensive framework approach, Multi Criteria Analysis, is essential.
- Consideration of environmental and social factors and how to incorporate them as an integral part of the appraisal process should be established very early in the project.
- Different players have different roles in project development. This can bring serious challenges for achieving results that might be deemed universally successful.
- The context for projects is very important. Government should take a central role in setting framework and standards within which projects are developed if these are to really contribute to sustainability.
- While politicians take the decisions and should set the standards, professionals have a crucial role in managing the appraisal processes to provide a clear basis for an effective outcome.
- There is very strong support for engagement of all stakeholders in the decision making (and hence appraisal) process in an effective and open way. This is seen as very necessary to an optimum outcome but also potentially difficult.