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**Knowledge, opinions and attitudes regarding Environmental
Assessment in Namibia:
Results of a national survey conducted in 1997**

by

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This series of Research Discussion Papers is intended to present preliminary, new or topical information and ideas for discussion and debate. The contents are not necessarily the final views or position of the Ministry of Environment and Tourism. Comments and feedback will be welcomed.

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Abstract

A national questionnaire survey conducted during 1997 provides insight into the knowledge, opinions and attitudes of the country's decision makers towards Environmental Assessment (EA). Knowledge, opinions and attitudes towards EA varied considerably between categories of Namibia's decision makers. Business people, consultants, donor and development agencies, NGOs and politicians were generally more knowledgeable about EAs than traditional leaders, government and local authority officials, educationists and journalists. Nevertheless, most decision makers recognised EA as an important planning tool and that all sectors of society should participate in the planning process. Since similar surveys were not previously conducted in Namibia, it was not possible to determine trends. Similarly, the paucity of comparable data from elsewhere in the world precludes the drawing of comparisons with other countries. The results of this survey provide a baseline against which to measure future changes.

The data presented in this paper are drawn from an unpublished PhD thesis by the author, entitled "The potential role of Environmental Assessment in promoting sustainable development in Namibia", University of Aberdeen, Scotland, UK. (March 1999).

Acronyms

EA	Environmental Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
MET	Ministry of Environment and Tourism
NGO	Non-governmental organisation
SEA	Strategic Environmental Assessment
TPC	Total Project Cost
WCED	World Commission on Environment and Development

The aim of this paper

The survey reported on in this paper was prompted by a concern that many of Namibia's decision makers are either unaware of, or have no confidence in, planning methods such as EA that could promote sustainable development. The information gained from the survey will assist the Ministry in developing strategies to enhance awareness of EA and on the potential role of EA in promoting sustainable development.

While the results of an attitude survey cannot be used to judge the commitment or actions of people, attitudes are a useful indicator of behaviour. Furthermore, the effectiveness of EA probably depends more on the right attitude than on good science and accurate data. Similarly, an arsenal of legislative provisions and institutional structures is ineffective if there is no will to implement them. The effectiveness of EA thus depends on the right combination of policy, law and information on the one hand, and the willingness of end-users to implement appropriate environmental standards on the other. Dalal-Clayton (1993) points out that "The potential of EA is really an attitude" while Gill-Chin (1985) reports that "the lower level of performance of EA systems can also be explained by the attitude of responsible agencies toward EA".

Namibia's draft Environmental Management Act (EMA) regards EA as a tool for providing decision makers with information on the environmental consequences of policies, plans and projects with a view to minimising negative environmental impacts and promoting sustainable development. Sustainable development has been defined as "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (WCED 1987).

In spite of the evidence that EA (especially when applied at the strategic level) can significantly improve the chances of achieving sustainable development, it is remarkable that governments and developers in most developing countries apparently fail to realise its value as a planning tool. This could be as a result of inadequate knowledge or negative perceptions. Many people regard EA as synonymous with "environmentalism", and environmentalism with "nature preservation". Since nature conservation during colonial times usually resulted in the alienation of indigenous people from their resources, "the environment", "environmentalism" and perhaps "sustainability" are seemingly viewed with suspicion or considered irrelevant by many of today's leaders.

Should this be the case in Namibia, the chances of EA becoming a *way of thinking* in the minds of decision makers, is very slim indeed.

Methodology

There appears to be a paucity of literature on attitude and opinion surveys in the context of EA. Nelissen (1992) believes that there is a need for information on environmental consciousness and reports that opinion surveys are conducted regularly in the Netherlands. Preston (1990) surveyed the attitudes of selected business people in South Africa, but no literature could be found on a national EA survey similar to that reported on in this paper.

Various textbooks on social research enumerate pertinent methods on the science and art of designing questionnaires, and point out the advantages and disadvantages of this data gathering technique (e.g. de Vaus 1991). Prior to the survey, 80 questionnaires (9% of the eventual mailing quantity) were distributed during a pilot phase to a selection of people who reflected the composition of the target respondents. The questionnaire was modified according to their suggestions. A number of filter questions were placed early in the questionnaire to determine whether a respondent was answering consistently or not. When the subsequent analysis revealed inconsistencies, the spoilt questionnaires were discarded (6.6% were eliminated as a result of inconsistencies).

A reference number on each questionnaire allowed for the maintenance of a register that recorded who had returned the questionnaire and who had not, so that a rate of return could be calculated per category of respondent (table 1). However, the covering letter that accompanied the questionnaire alerted respondents to the existence of the reference number, and invited them to remove it in order to remain anonymous. Only 4.3 % of the respondents chose to do this, while 89% both left the reference number in place and wrote their name on the questionnaire.

During June 1997, 875 questionnaires were mailed (Table 1).

A questionnaire (Appendix 1) was sent to every person considered to be a decision maker with regards to development activities in Namibia, or who was in a position to influence decisions. The recipients of the questionnaire were as follows:

- government and parastatal officials with the rank of deputy-director and higher,
- headmasters / headmistresses and their deputies of every secondary school in the country, as well as the heads of tertiary institutions (educationists),
- The mayor, deputy mayor and town clerk of every town and the governor of every region (local authorities),
- parliamentarians and members of the National Council (politicians),
- all the traditional leaders and chiefs recognised by the government,
- the directors/chairpersons of donor agencies and NGOs,
- the managing directors or managers of mines and manufacturing companies (private sector executives),
- the editors and journalists of all national newspapers, and
- the director(s) of all the major environmental and developmental consultancies, including engineering firms, groundwater consultants, geologists, EA specialists, social science consultancies and project implementation consultants.

While educationists, journalists and consultants may not actually make development decisions, they were included in this survey because they have a significant influence over the decision making process. In rural areas, the school is often the community meeting place, and the head is usually an educated and thus prominent person in society. A community's input in the public participation process of an EA could thus be influenced by the leadership provided by the school head.

The same is true for journalists. Most Namibians obtain their news via the radio (87%), with a smaller percentage reading newspapers (11%), and a minority watching television (9%) (L.A. Baker pers.com. 1998). In all cases, the knowledge, attitude and opinion of

journalists could influence the opinion of people who have limited, or no access to, independent or objective information. Lastly, consultants have considerable influence since they produce most of the feasibility studies conducted in Namibia (some of which include an EA). Government currently has the expertise to assess the studies, but this may not be the case in the future since it is increasingly difficult to attract well qualified people to the public sector. This places consultants in a strong position to influence decisions.

Table 1: The number of questionnaires sent to, and returned by, decision makers and influential people during the 1997 survey.

Category of decision maker	Total questionnaires sent	Useful questionnaires returned	% useful returns
Government or parastatal official	316	189	59,8
Educationists	163	86	52,7
Local Authority Officials	83	41	49,3
Politicians	76	37	48,7
Traditional Leaders	69	26	37,7
Donor agencies and NGOs	52	35	67,3
Private Sector (company) executives	45	23	51,1
Journalists	42	10	23,8
Development consultants	27	20	74
Total	873	467	53,49

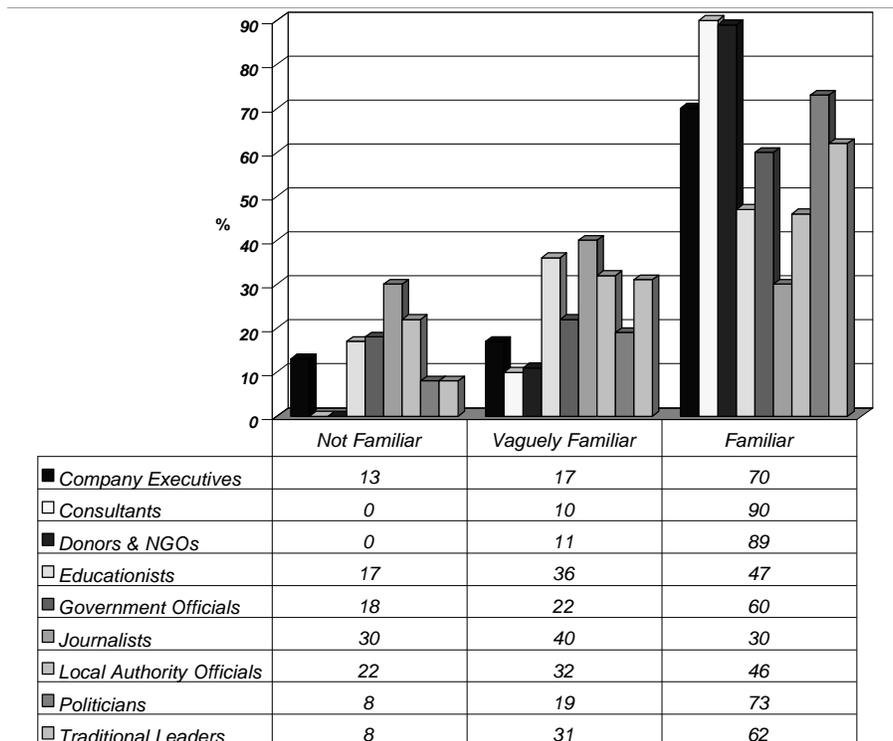
Spoilt questionnaires = 33 out of 500 (6,6 %)

The survey's response rate was 57%, but since 6,6% of all returned questionnaires were discarded because of inconsistent answers, the useful return rate was 53,49%. The Correspondence Analysis Procedure (Inertia and Chi-Square Decomposition) was used in the data analysis, but due to the excellent response correlation's within and between questions, there was no need for cross tabulation (C. Brayshaw pers.com. 1997).

Knowledge of EA

The first set of questions in the survey tested the extent to which decision makers were familiar with the EA concept (figure 1), whether they were aware that Namibia has an EA policy (figure 2) and their knowledge of this policy (figure 3).

Figure 1 : The extent to which Namibia’s decision makers were familiar with the EA concept in 1997



It is not surprising that consultants are best informed since, for many, EAs are their source of income, while for some donor’s, EAs are an important expenditure item on their budgets. NGOs are similarly well informed, presumably because they realise that EAs provide them with an opportunity to participate in decision making. Whilst it is encouraging to note the relatively high level of awareness amongst politicians, it is a point of concern that nearly a third of the country’s highest level of decision makers are either only vaguely familiar with the concept or have never heard of EA. It is possible furthermore, that the answers to this and related questions reflects an over-optimistic picture since people in influential positions are unlikely to admit to not knowing about a concept, preferring instead to describe themselves as being “vaguely familiar”. This assumption is equally valid for the question determining awareness of Namibia’s EA policy (figure 2).

Similarly, donors, consultants and company executives seemed more aware of Namibia’s policy, but it is worrying that many senior government officials and traditional leaders are apparently so poorly informed, given that these officials are the very people who are responsible for planning in the country. The analysis provides an even bleaker picture upon examining people’s familiarity with the content of the policy (figure 3).

On the basis of this evidence, Namibia faces a formidable challenge if it wishes to promote the use of a tool such as EA and enforce its EMA under circumstances where the level of knowledge of the country’s policy is so low. Clearly, the MET has not done enough to publicise EA.

Figure 2: The extent to which Namibia's decision makers were aware, in 1997, that Namibia had an EA policy

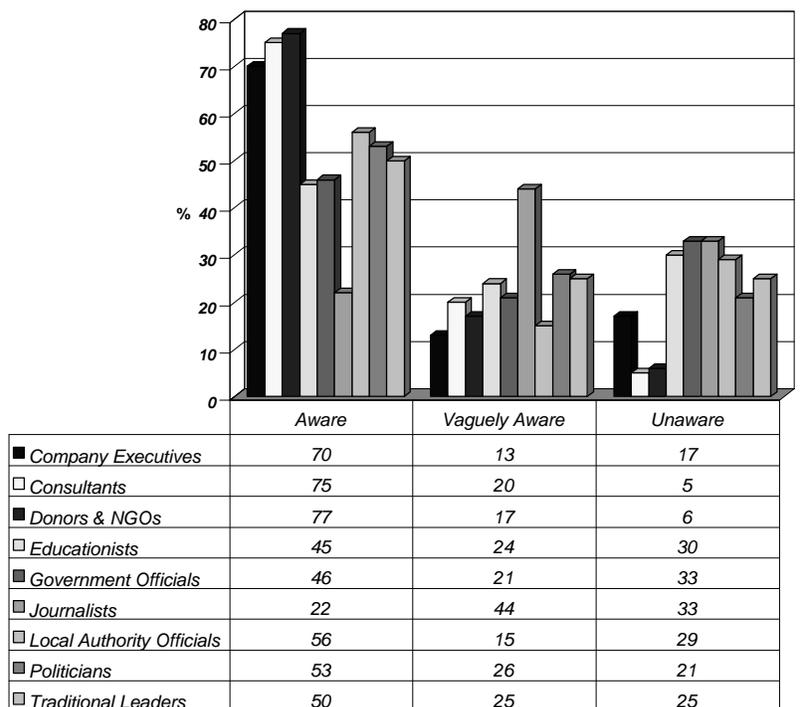
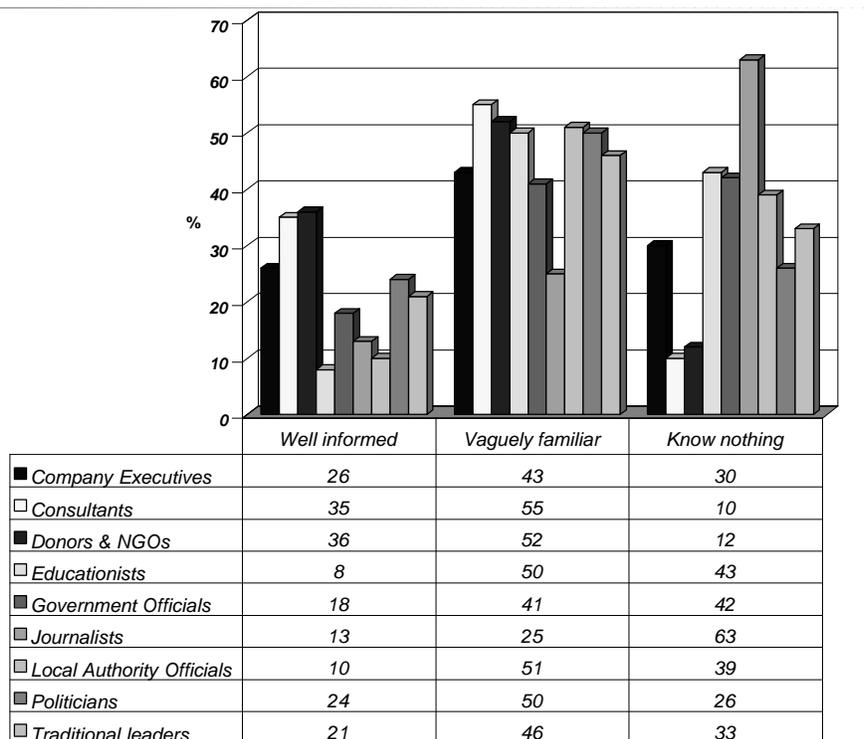


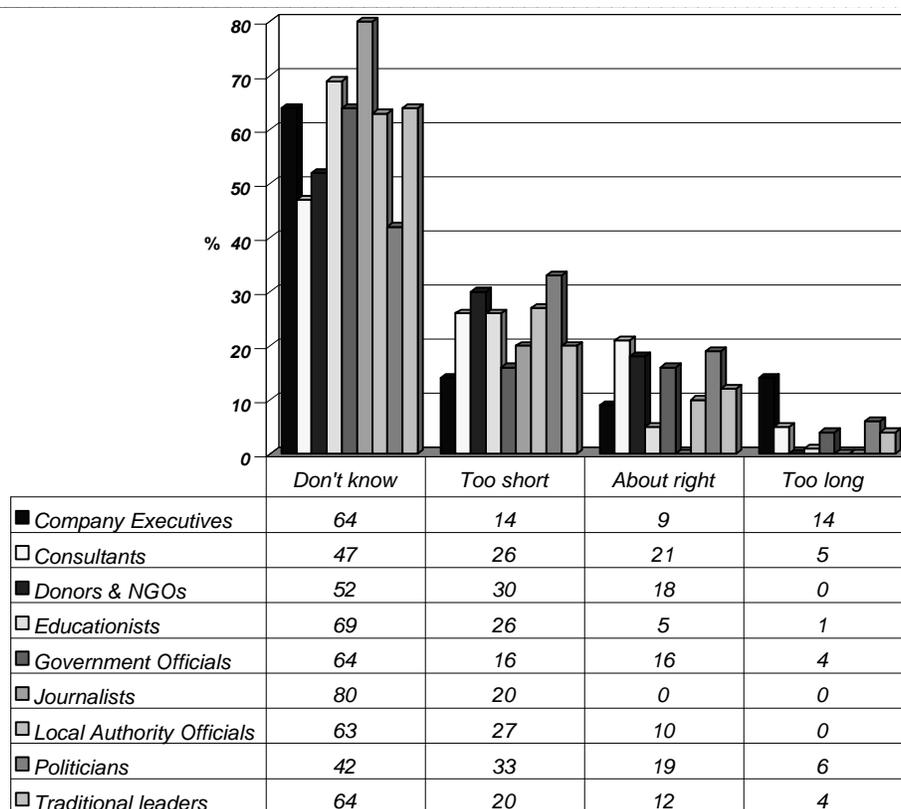
Figure 3: The extent to which Namibia's decision makers were knowledgeable, in 1997, about Namibia's EA policy



Opinions on time wastage and delays

To some extent, this survey supports the views of Sadler (1996) who reported that “The traditional perspectives of key participants are well known, and often break down along “proponent” versus “opponent” lines: developers and development agencies are concerned about time, cost, and uncertainty of EA and seek a minimal process, while affected communities and environmental interest groups, concerned about the substantive role of EA in altering proposals and influencing decision making, seek a maximum process”. The concern that an EA will delay the implementation of an important project is expressed by proponents and government officials throughout Namibia and southern Africa, both at official meetings, and in private discussions. However, it is possible that these reservations reflect a concern that an EA might lead to a marginal project being stopped, rather than delayed. Most decision makers in Namibia did not express an opinion on this issue during the survey, probably because few have been involved in EAs to date. It seems, however, that those with practical experience either feel that more time should be allocated for EAs or that the time spent is appropriate (figure 4).

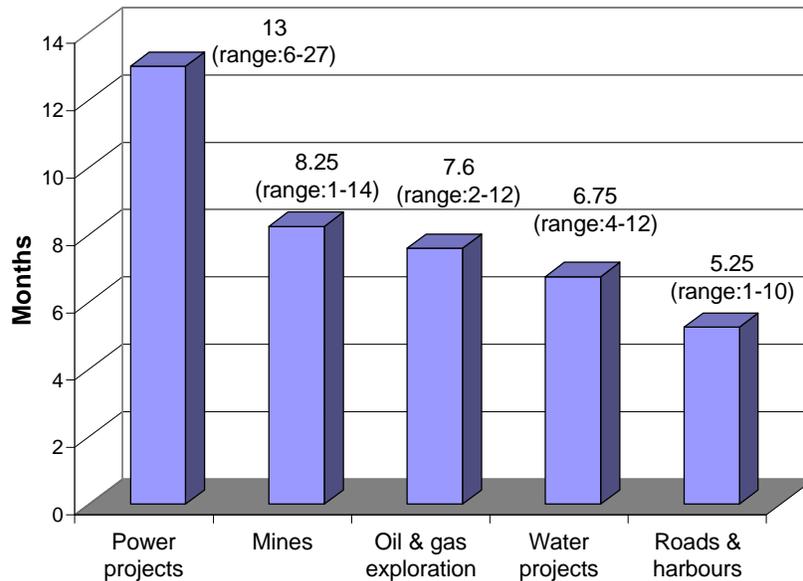
Figure 4: Opinions of Namibia’s decision makers in 1997, on whether the amount of time allocated for conducting EAs is appropriate or not



For most projects, it was not possible to isolate the amount of time spent on an EA, since most planning activities integrate the EA within the feasibility or planning process. Nevertheless, some consulting companies and programme managers keep a separate account of EA activities, usually because they are sub-contracted and are thus reflected as a specific budgetary item. Data from South Africa reveals that the time

taken to complete EAs varies from between 6 weeks and 2½years, depending on the complexity of the project, data requirements and the extent to which public participation is required (Weaver pers.com.1997). The situation is similar in Namibia (figure 5).

Figure 5 : Average time spent conducting EAs in Namibia between 1986 – 1998



The time needed for EAs is highly variable, making it difficult to set a guideline figure. In Namibia, the most time consuming activities are data gathering and public consultation. Due to the paucity of baseline data for the country, EA teams must spend months in the field gathering biophysical and socio-economic data. This has often led to the discovery of new species of plants and animals. Another constraint in arid areas is the fact that many plants lie dormant during dry cycles, and it is often not possible to delay an EA (and thus a development proposal) until the arrival of the rains.

With the exception of the Epupa EA, which required approximately two years to complete, most EAs were completed within 12 months.

Opinions on the costs of EA

The paucity of data on the costs of EAs is remarkable given the volume of EAs being conducted world-wide and the fact that developers are generally concerned about costs. Sadler (1996) reported that estimating the costs of compliance with the EA process has typically been a creative accounting exercise, while (Canter 1996), points out that there has never been any systematic development of a cost algorithm which could be used for EA cost estimation purposes. Whilst it is hard to separate EA costs from those incurred in planning and data gathering for other purposes (e.g. feasibility design) the main costs for EAs typically involve data gathering, undertaking technical work, public consultation and preparing documentation. Few agencies keep any type of records or track costs but the accepted rule of thumb is that EA costs are 1% or less of total project costs (Sadler 1996, Canter 1996). In South Africa the cost of EAs is estimated to be less than 1% of total project costs (TPC), with an average probably

being about 0.4% (Weaver pers.comm.1997). He reports that about 80% of EAs in South Africa cost between US\$25 000 – US\$50 000. Raimondo (pers.comm.1997) estimates that the EA for a recently established Ethanol refinery in South Africa cost US\$ 20 000 (<0.5% of TPC), a local road US\$ 3000 (<0.1% of TPC) and a large mine US\$ 50 000 (<0.01% of TPC). A recent study by the South African based consulting firm Van Niekerk, Kleyn and Edwards (VKE) concluded that the costs of EAs in that country averages 0.25% of TPC and should rarely exceed 2% (Faure pers.comm.1997).

The estimated direct costs of doing an EA in Australia are generally less than 1% of total project costs, and range from about 0.1% to 1.5% in Taiwan (Gilpin 1995). This corresponds with the World Bank’s experience in Africa (table 2).

Table 2 : The cost of EA as a Proportion of Total Project Cost (TPC): Experience From World Bank Supported Projects

Project type	Cost of EA (US\$)	Project Cost (US\$)	% of TPC
Thermal Power Generation Development, Ghana	250 000	400 000 000	0.06
Forest Management, Tanzania	131 000	26 000 000	0.5
Energy Sector Development, Kenya	510 000	1 000 000 000	0.05
Energy Sector Development, Malawi	180 000	231 300 000	0.08
Petroleum Industry Development, Guinea Bissau	20 000	20 000 000	0.1

Source : Mercier (1995)

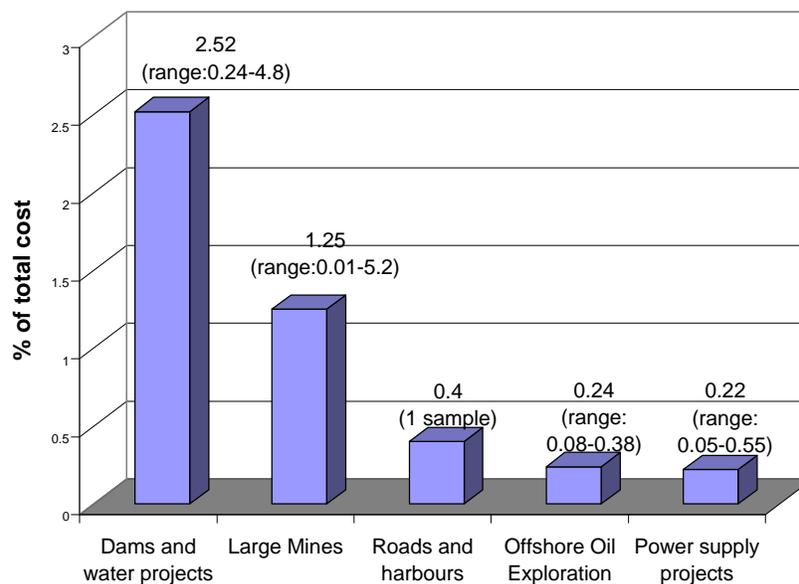
Bell (1988) notes that EA has proved to be expensive, while Biswas and Qu Geping (1987) point out that costs depend on a number of factors, such as the complexity and scale of an EA, the thoroughness with which it is done, the data requirements, locality, the time requirement and the calibre of the experts or consultants employed. Abel and Stocking (1981), Klennert (1984) and Kennedy (1988), confirm that the cost of EA is one of the limiting factors in its implementation in developing countries. Stevenson (pers.comm. 1996) considers the lack of adequate financial resources made available for EA as one of the most serious constraints to EA performance in Tanzania.

Ayanda (1988) argues, however, that the cost should not be regarded as a major constraint, particularly since the EA should in any case be an integral part of a feasibility study. He points out that authors on this subject should consider cost-effectiveness as the real issue, since the costs involved are an investment into assessing viability and sustainability. In general, the cost of reducing pollution is between 1-2% of GDP in the USA and expenditure on environmental protection and restoration around 10% in Germany (O’Riordan 1995). From his World Bank perspective, Goodland (1995) points out that project EAs often result in many proposed developments being shelved after a costly study. He argues that it would be more cost-effective to evaluate broader plans, which would generally include a range of projects. If the plans or programmes were favourably reviewed by means of strategic assessments, the resources required for detailed (project) assessments would be put to better use.

Unfortunately, a comprehensive cost-benefit analysis of EA vs Strategic Environmental Assessment (SEA) has not been done, and it is similarly extremely difficult to obtain data on cost savings (if any) of implementing an EAs recommendations. This is why the cost effectiveness of EA is so frequently questioned.

As in most parts of the world, proponents in Namibia seldom keep a separate account of the financial resources allocated to EA although the financial managers of companies were able to make good estimates of expenditure (figure 6). However, it was not possible to determine the cost of implementing EAs, since good housekeeping at a mine, for example, is usually integrated into programmes such as environmental health and safety, waste management, training and human resource development and public relations.

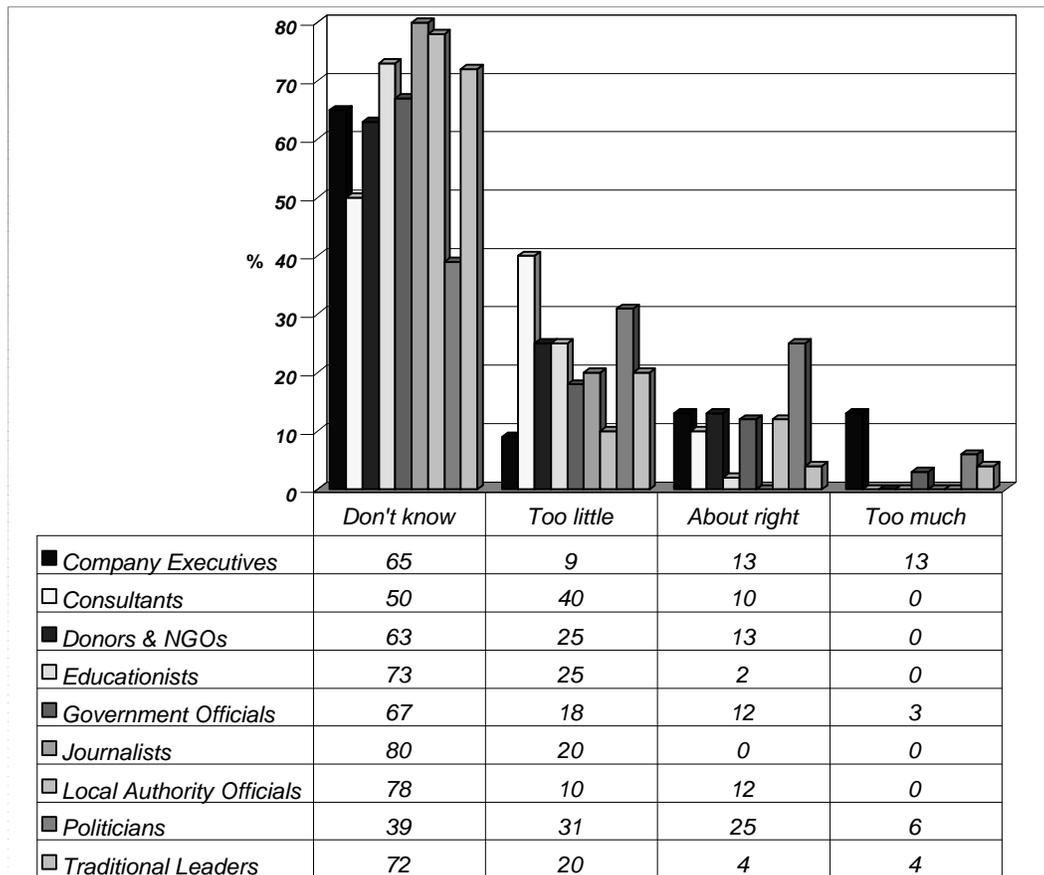
Figure 6 : Actual cost of EAs as a percentage of total project costs, for projects implemented or planned in Namibia between 1990-1998



Namibia’s experience confirms the variability of EA costs, which collectively range between 0.01%-5.2%, rendering attempts at determining an average all but meaningless. Generally, the relative costs of EAs for large, expensive projects, are low, while the opposite is true for smaller projects. For example, the 1998 total cost estimate for building the Epupa Dam was N\$ 2.5 billion. The cost of the EA (easily Namibia’s most expensive) was N\$ 14 million, a mere 0.55% of the TPC. By contrast, the cost-estimate to build the proposed Khan dam was N\$ 25 million, with the EA costing N\$1.2 million (4,8%).

While the majority of Namibia’s decision makers appear to have insufficient experience with EAs to form an opinion on the costs, those familiar with the process generally agree that, if anything, more resources should be allocated for conducting EAs (figure 7).

Figure 7: Opinion of Namibia's decision makers in 1997 on whether the amount of money spent on EAs in Namibia is appropriate or not



Opinions on what activities should be subjected to an EA

There has been considerable debate in Namibia as to what activities require an EA. The EMA contains a list of activities that require an EA, but specifies no thresholds. This has led to arguments being advanced by the rural water supply sector, for example, that emergency projects and programmes (such as drought relief) should be exempt from EA because response to an emergency must be rapid. The counter-argument is that droughts can be predicted and that the sector policy needs a SEA which should assist in the development of rapid EA techniques and guidelines that can be applied to individual boreholes, even in emergency situations. Secondly, drought relief boreholes have thusfar not been decommissioned once a drought has been broken, which means that drought relief is nothing more than inadequately planned, long term rural water supply (UCT 1997). Thirdly, it is argued that the drilling of boreholes is often an inappropriate and misguided response to drought anyway, since the problem is usually a lack of grazing rather than a lack of water (UCT 1997). The attitude survey amongst Namibia's decision makers addressed this question and it is noteworthy that an overwhelming majority expressed the opinion that EAs should be compulsory for major projects (figure 8) and emergency programmes (e.g. drought relief boreholes and pipelines) (figure 9).

Figure 8 : The opinion of Namibia's decision makers in 1997, on whether EAs for major projects should be compulsory or not.

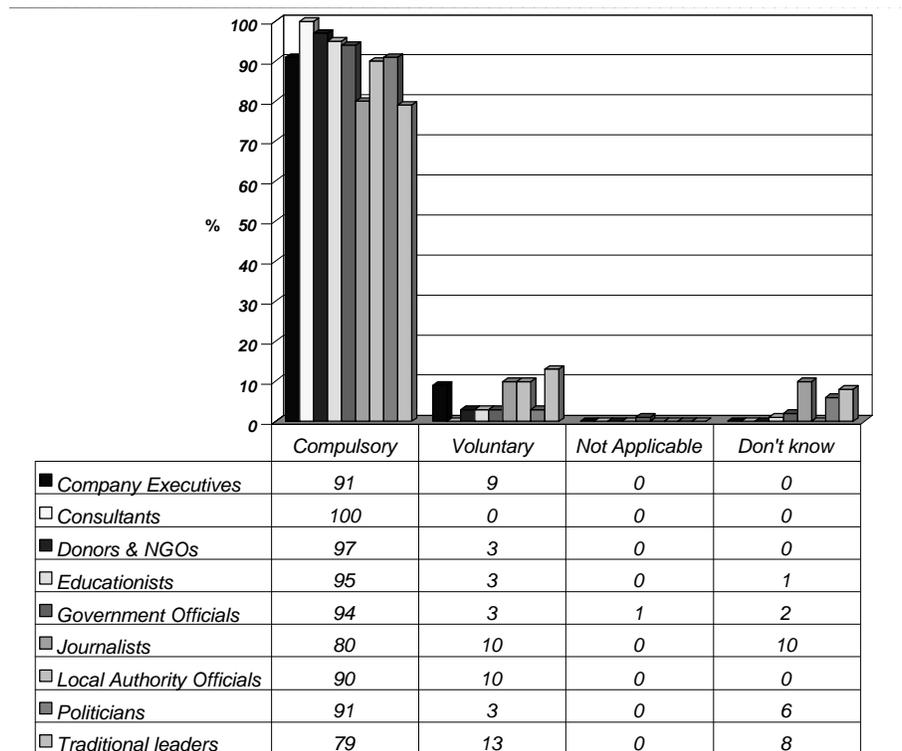
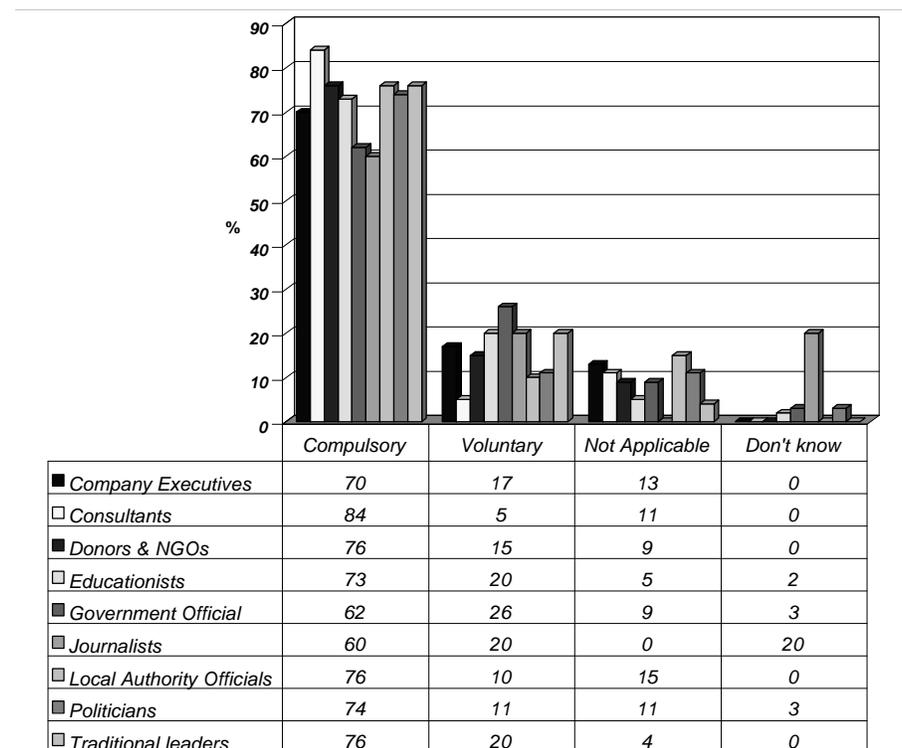


Figure 9 : The opinion of Namibia's decision makers in 1997, on whether EAs for emergency projects should be compulsory or not.



Opinions on the implementation of EA

Namibia's Green Plan envisaged that EA would persuade government to “*permit only those developments that do not restrict the development options of future generations of poor people*”. The EMA stipulates that the principle objective of EA is to “*minimise negative impacts on the environment, maximise benefits and promote compliance with the principles of environmental management*”. The principles of environmental management include *inter alia*, inter-generational equity, the application of the precautionary principle and the promotion of sustainable development. It follows therefore that in accordance with the EMA, the Sustainable Development Commission (the institution to be established to oversee the implementation of the EMA) should advise a sector Ministry not to allow a project to proceed if the EA finds that the activity may jeopardise sustainable development.

Namibia's decision makers apparently agree that a project should not go ahead if an EA predicts that it will have significant negative effects on the environment (figure 10).

Figure 10: The opinion of Namibia's decision makers in 1997 on what should be done if an EA predicts that a proposed project will have significant negative impacts on the environment

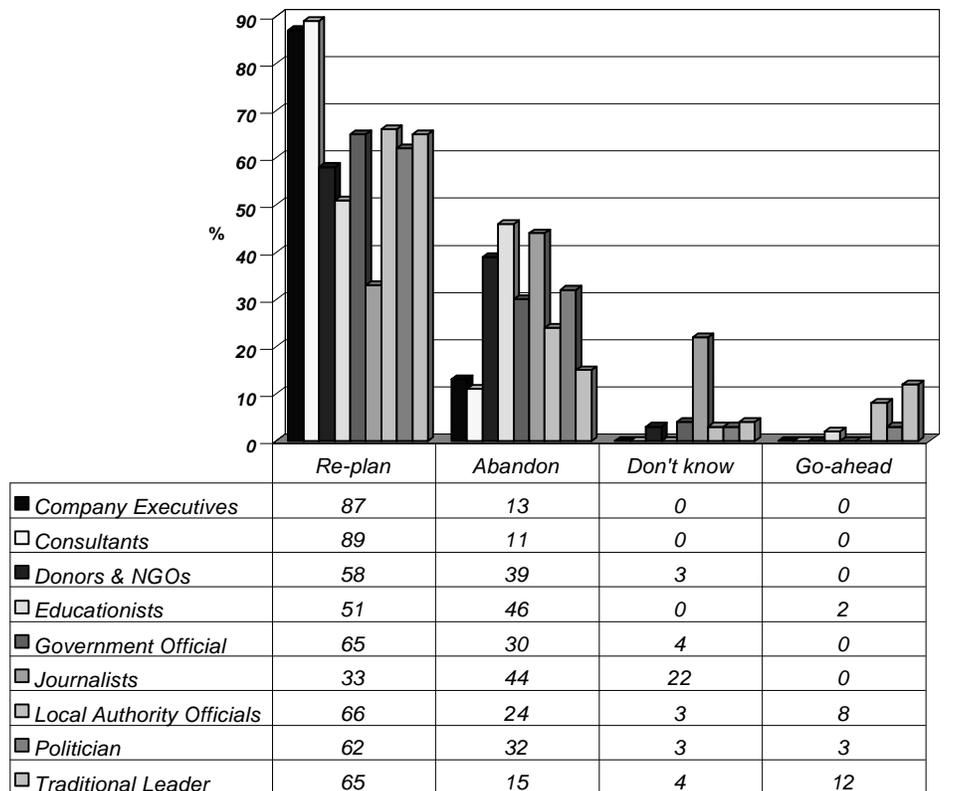
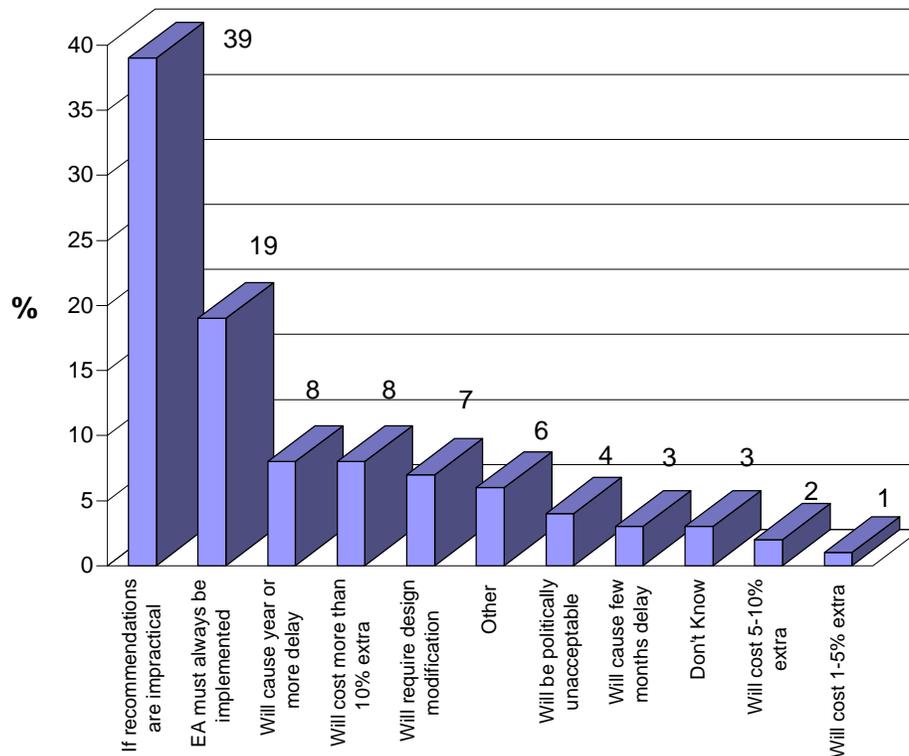


Figure 10 suggests that EA is accepted as a mechanism to influence decision making, but experience has shown that its influence is limited when the “no project scenario” becomes a possibility. A number of decision makers appear intolerant of EA (and environmental issues generally) when high-profile projects are in jeopardy. A typical complaint under these circumstances is that EA is a mechanism invented by the rich

North to deny poor countries their right to develop. However, most decision makers responded cautiously when asked to choose which circumstances would justify disregarding an EAs recommendations (figure 11). In answering this question in the survey, the consensus view was that the suggestions made by an EA should always be implemented unless they were thought to be impractical. It is interesting to note that time delays of a few months, extra costs of up to 10% and political considerations were not rated as important reasons for ignoring an EAs suggestions.

Figure 11 : The opinion of Namibia’s decision makers in 1997, on when an EAs suggestions should not be implemented



Opinions on who should participate in the EA process

The importance of this question lies in the well documented correlation between public participation in the decision making process and the achievement of sustainable development. Redclift and Sage (1994) argue that “ultimately, sustainable development is only practicable when it is endorsed by local communities and groups, whose own experiences of managing the environment are forged through contact with outside development agencies, government departments and local policy institutions”. Most authors and development agencies agree, and the World Bank reports that “projects planned to involve beneficiary participation in Africa have often led to disappointing results. This is largely because people’s participation in project execution has been sought without their corresponding involvement in project selection, planning and design” (World Bank 1991). It follows then, that if EA improves opportunities for public participation, it contributes to the achievement of sustainable development.

Ridl (1994) regards the fundamental purpose of EA as being “to ensure that the public interest is best served in any development proposal” but that “consultation should take place at all stages of the process, but most importantly, it should take place at the earliest opportunity”. He reports that “in all but a few of the major EAs which have been undertaken in South Africa, the public has only become part of the process after there has been public criticism of the development proposal”, meaning that the developer has had to deal with a “hostile, uninformed public”. This has resulted in the process becoming “adversarial rather than consultative”. Unfortunately the conditions and circumstances in apartheid South Africa (and Namibia) precluded the effective implementation of any form of proper environmental management, not to mention a process such as EA, which is rooted in principles such as democracy, equal representation, freedom of speech and local, public and community participation.

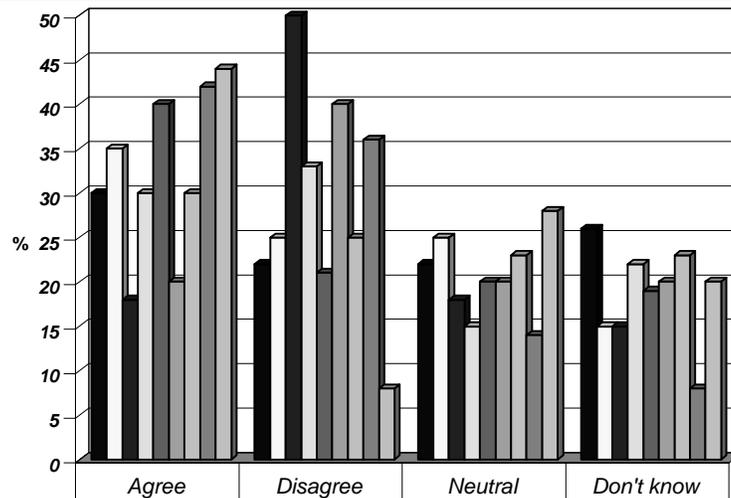
Bowonder and Arvind (1989), Campbell (1993), Kakonge and Imevbore (1993), Mercier (1995) and others agree that public participation is neglected in developing countries, including those in Africa. Most ascribe this to the fact that governments often lack transparency, information is kept secret so as to reduce possible pressure by various interest groups, the system of public enquiry is not institutionalised and there is as yet no public perception that EA is an integral component of the link between environment and the goals of sustainable development. Another factor is that many proponents, including governments, are usually nervous of engaging the public in case public participation will reduce the chances of marginal or un-viable proposals, which might be politically attractive, from going ahead.

However, experience has shown that the public cannot, even if properly consulted, participate fully if they are poverty stricken. O’Riordan (1995) sees little hope as economies in poor countries deteriorate and the gap between the rich and poor widens. He observes that there is a “very subtle but persistent erosion of freedom, denying people any vestigial ability to cope with the slow but steady loss of health, nutrition and wealth. This is the issue of creeping powerlessness and exclusion” Unfortunately, disadvantaged communities are usually illiterate and easily coerced into agreeing to proposals that certainly will do nothing to improve their long term development. NGOs often play an important role under such circumstances. In Namibia, communities such as the Ovahimba and San have received considerable assistance from NGOs and Legal Aid centres who have helped ensure that people’s rights are upheld.

O’Riordan (1995) is of the opinion that “even the most effective co-ordination can do little if governments do not listen and party political ideologies refuse to embrace the social and egalitarian aspects of sustainable development - the success of Agenda 21, in essence, hinges on the willingness of governments to create both the educational and political conditions for global citizenship to flourish”.

Most politicians, traditional leaders and government officials who expressed an opinion on this issue in the survey, perceive NGOs and pressure groups as interfering in the EA process (figure 12).

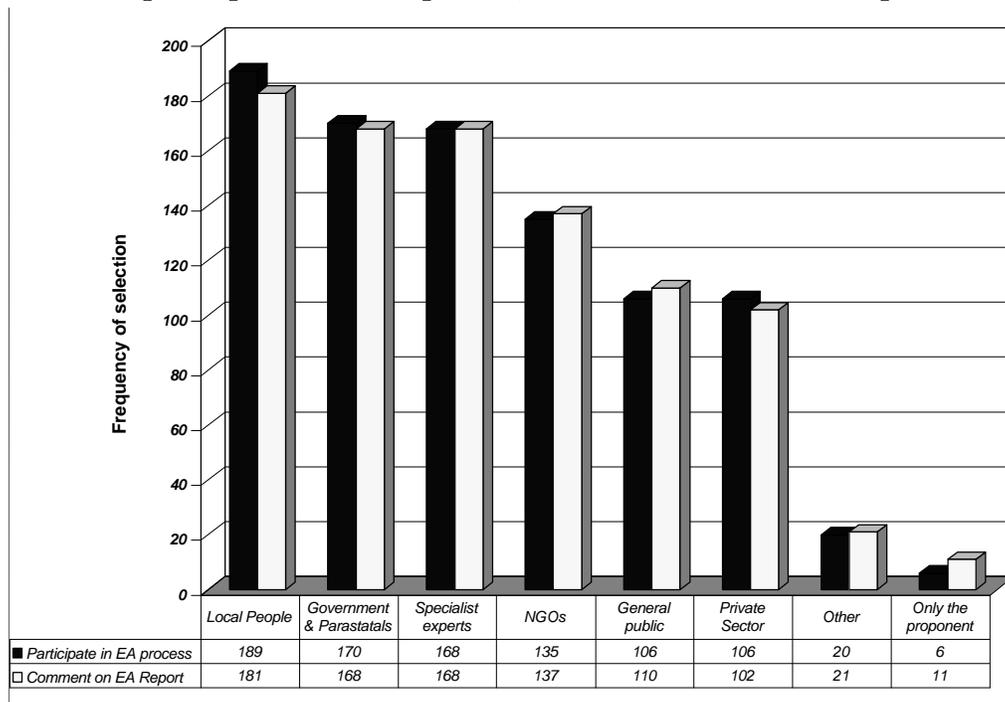
Figure 12 : Opinions of Namibia’s decision makers in 1997, on whether EAs are being abused by interfering pressure groups and NGOs



	Agree	Disagree	Neutral	Don't know
■ <i>Company Executives</i>	30	22	22	26
□ <i>Consultants</i>	35	25	25	15
■ <i>Donors & NGOs</i>	18	50	18	15
□ <i>Educationists</i>	30	33	15	22
■ <i>Government Officials</i>	40	21	20	19
■ <i>Journalists</i>	20	40	20	20
□ <i>Local Authority Officials</i>	30	25	23	23
■ <i>Politicians</i>	42	36	14	8
□ <i>Traditional Leaders</i>	44	8	28	20

However, Namibian decision makers still apparently feel that NGOs should be allowed to participate in the EA process and comment on a completed EA report (Figure 13). It is encouraging to note the acceptance amongst decision makers on the need for local people to participate in the process and their rejection of the notion that decision making should be the exclusive domain of proponents and sector ministries.

Figure 13 : Opinions of Namibia’s decision makers in 1997, on who should be allowed to participate in the EA process, and comment on the EA report



Given Namibia’s oppressed past, it is understandable that public participation in decision making is immature at present. People are unaccustomed to challenging authority and some proponents are similarly uncomfortable with democratic decision making. However, processes such as the Epupa debate have influenced participatory planning in that they have starkly illustrated the positive changes in the country, where opportunities for open discussion are now being created. Most EAs in the country include public consultation, and some effort is made to obtain opinions from communities in the project area. Examples of this include the Walvis Bay and Lüderitz developments, the Möwe Bay harbour study, all power and road projects, the Sesfontein / Khowareb land use plan and North-East Parks project, the Khan River Dam project and others. These processes have generally been positive and the public have made good contributions.

Both strategic and project-level EAs can claim considerable credit for having promoted public consultation against quite formidable odds. The potential role of EA in this regard is significant, since the draft Environmental Management Act makes public consultation compulsory and requires an EA report and a new or revised sector policy, to provide a separate document that explains how the project, plan, policy or law is likely to affect people generally, including local communities, how the public was consulted, a summary of public input, and the extent to which such input has been considered by the proponent. Furthermore, all EA reports shall be accessible to the public, and the recommendations of the Environmental Commissioner and the Sustainable Development Commission will be published in the government gazette.

Conclusion

Decision makers who have had more experience with EAs appear to be more knowledgeable about EA and better informed about Namibia's policy than others. Donor agencies and NGOs, company executives and consultants seem well informed since they generally fund, execute and participate actively in all stages of the EA process. By contrast, traditional leaders, government and local authority officials have been less involved and display a lower level of awareness. Educationists and journalists are seldom directly involved in EAs and seem relatively ignorant of EAs and Namibia's initiatives in this regard. However, it is encouraging to note that EA is generally accepted as an important component of development planning in Namibia and that time and cost are not perceived to be major constraints.

Whilst the information gathered during this survey underlines the need for providing information to all levels of decision makers, it does not show how knowledge, opinions and attitudes have changed over time. Had this survey been conducted a decade ago, it is likely that almost no-one would have heard of EA. Similarly, awareness should be considerably higher in the future.

The results of this survey thus serve as a valuable baseline for the future monitoring of one of the most important aspects of EA, namely the knowledge, opinions and attitudes of the country's decision makers.

References

- Abel, N., and Stocking, H. (1981):** Experience of environmental impact analysis with underdeveloped countries. In project appraisal and policy review, O'Riordan, T. and Sewell, D. (eds.). John Wiley and Sons. Chister, United Kingdom.
- Ayanda, J.O. (1988):** Incorporating environmental impact assessment in the Nigerian planning process. *Third World Planning Review*, 10 (1). February 1988.
- Bell, A. (1988):** Environmental impact assessment in forward planning. The Cheshire experience. In: *The Role of Environment Impact Assessment in Planning Process*. Clark, M. and Herington, J. (eds.). Mansell Publishing, London.
- Biswas, A.K., and Qu Geping (eds) (1987):** Environmental assessment for developing countries. Tycooly-International. London.
- Bowonder, B. and Arvind, S.S. (1989):** Environmental regulations and litigation in India. *Project Appraisal*, 4 (4). December 1989.182-196.
- Brown, C.J. (ed) (undated – circa 1992):** Namibia's Green Plan. Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET).Government of Namibia.
- Campbell, I. (1993):** Environmental impact assessment - where to from here? Discussion paper at the UNEP consultative meeting on the future of EIA in developing countries. Paris, 27-28th October 1993.
- Canter, L. (1996):** Environmental impact assessment, Second Edition. McGraw-Hill, Inc.
- Dalal-Clayton, B. (1993):** Modified EIA and indicators of sustainability: First steps towards sustainability analysis. *Environmental Planning Issues*,(1). International Institute for Environment and Development (IIED).
- De Vaus, D.A. (1991):** Surveys in social research (third edition). UCL Press Limited, London, UK.
- Gill-Chin Lim (1985):** Theory and practice of EIA implementation: a comparative study of three developing countries. *Environmental Impact Assessment Review*, Vol.5, No.2, June 1985.
- Gilpin, A. (1995):** Environmental impact assessment – cutting edge for the twenty-first century. Cambridge University Press, United Kingdom.
- Goodland, R.J.A. (1995):** Environmental sustainability and the empowerment of women in South Africa. *Impact Assessment*. International Association for Impact Assessment. June 1995.
- Government of the Republic of Namibia (1995):** Namibia's Environmental Assessment Policy. Directorate of Environmental Affairs. Ministry of Environment and Tourism.
- Government of the Republic of Namibia (1999):** Draft Environmental Management Act (in prep).
- Kakonge, J.O. and Imevbore, A.M. (1993):** Constraints in implementing environmental impact assessments in Africa. *Environmental Impact Assessment Review*, 13:299-308.
- Kennedy, W.V. (1988):** Environmental impact assessment and bilateral development aid: An overview. In: *Environmental Impact Assessment: Theory and Practice*. Wathern, P. (ed). Unwin Hyman Publishers. London, United Kingdom.
- Klennert, K. (1984):** Environmental impact assessment for development. DSE / UNEP international seminar, Feldafing, W.Germany.

Mercier, Jean-Roger (1995): Environmental assessment and review in sub-Saharan Africa. World Bank (AFTES), Building blocks for Africa, Paper no.7.

Nelissen, N. (1992): Business strategy and the environment. The need for information about environmental consciousness and behaviour. *Business Strategy and the Environment*, 1(2). Summer 1992.

Preston, G.R. (1990): Attitudes of professional ecologists and business leaders toward conservation and development in southern Africa. Unpublished PhD thesis, University of Cape Town, South Africa.

O’Riordan, T. (1995): Environmental science for environmental management. John Wiley and Sons, Inc., New York

Redclift, M. and Sage, C. (eds) (1994): Strategies for sustainable development – local agendas for the south. John Wiley and Sons, England.

Ridl, J. (1994): IEM:Lip-service and license? *The South African Journal of Environmental Law and Policy*. Vol.1, No.1, March 1994

Sadler, B. (1996): International study of the effectiveness of environmental assessment. International Association for Impact Assessment and Canadian Environmental Assessment Agency.

UCT (University of Cape Town) (1997): A retrospective assessment of the environmental impacts of emergency borehole supply in the Gam and Khorixas areas of Namibia. Report for the Namibian Programme to Combat Desertification. April 1997.

World Bank (1993 b): Sectoral environmental assessment. *Environmental Assessment Sourcebook* Number 4. October 1993.

(WCED) World Commission on Environment and Development. (1987) : *Our Common Future*. New York: Oxford University Press.