

## THREAT ASSESSMENT FOR NBSAP

### A Concept Note

Conservation and development projects are generally difficult to assess for impact because of their complexity in design and implementation. Most conservation and development projects are designed to decrease the excessive pressure that various forces and factors put on natural resources or in other words, to reduce the direct threats and indirect threats to biodiversity. Threats could be of various kinds, i.e. they could lead to a decline in genetic diversity, there could be a risk of extinction etc. The success and failure of a conservation and development project can thus be measured by the extent to which these threats are reduced.

The Threat Reduction Assessment (TRA) approach focuses on key threat factors while planning for the monitoring and evaluation of a project. If both direct and indirect threats are measured at the very beginning, then the project's success at tackling these threats can be measured over a period of time. By accurately identifying the threats, measuring their status before project implementation, designing and implementing appropriate interventions, and monitoring the impact of these interventions over time, one can determine the extent to which the project has been successful or not, and necessary changes can be made.

Ranking of threats is generally done as group exercise. This ensures participation as also takes into account the view of different sections of the community.

Threats can be ranked in terms of their importance by building a Threat Assessment Matrix. However, since the community's perceived importance of a certain threat could be very different from that of researchers, intervenors from outside the community and other stakeholders, this exercise should be carried out separately with all the stakeholders. It would be interesting to compare the end results after the exercise is carried out with different target groups and is a good topic for discussion with all the stakeholders. In terms of process, this is a good way to get the community involved in the entire process of project planning and implementation. The matrix is based on the ranking of threats but this also allows for evaluation of factors against specific criteria<sup>1</sup>. The following criteria can be used:

**\*Scale:** Scale of the threat, i.e. the total area and /or number of and/or biodiversity components that the threat affects.

**\*Intensity:** The strength of the impact of the threat on the habitat or local biodiversity and the extent of destruction that this threat is causing or could cause.

**\*Urgency:** The need to take immediate action to meet the threat.

**\*Political Feasibility:** A realistic estimation (given the local, national and international political situation) of the feasibility of meeting this threat.

**\*Economic Feasibility:** A realistic estimation (given the local, national and international economic situation) of the economic feasibility of meeting this threat.

**\*Legal/policy Feasibility:** A realistic estimation (given customary, national, and international laws and policies) of the legal and policy feasibility of meeting this threat.

**\*Social Feasibility:** The practicality of meeting this threat, given local and national social and cultural conditions.

**\*Organisational Ability:** The capability of the local and/or external organisation to meet this threat.

With each group of stakeholders, list the threats that affect a target area and then arrange them from top to bottom them in terms of their relative importance perceived by the target group/stakeholders. The threats now have to be ranked against each of the criterion listed in the two matrices. The highest score that any threat can get for each criterion is equal to the total number of threats in the matrices. In other words, if there are three threats to a target area, the greatest threat will get a score of 3. The lowest score will always be '1'. The higher the rank, the greater the score it gets. Considering that the scale/intensity/urgency of a threat may be at variance with the feasibility of tackling it, these criteria should be ranked in different tables. It would be useful to first determine the rank of each

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<sup>1</sup> There is of course a presumption here that there is adequate level of information about the threats to the biodiversity component, which is not always the case. Inadequate levels of information will hamper the validity of the threat assessment approach, and should always be mentioned as a limitation in the assessment exercise. In particular, common sense or "gut feelings" based on qualitative observations, are likely to be important in the ranking exercise, and should be explicitly mentioned as the basis if used.

threat according to scale, intensity and urgency, and then separately the feasibility of tackling it. This is illustrated with an example Please note that these threats are for the Sariska Tiger Reserve. The threats could be more or less and different in nature for different regions.

**Threats to Sariska Tiger Reserve**

Table 1: Nature of Threat

CRITERIA					
Threat	Scale	Intensity	Urgency	Total Score	Rank
Mining	3	3	3	9	A
Fire	2	2	2	6	B
Tourism	1	1	1	3	C

Table 2: Feasibility of Tackling Threat

CRITERIA								
THREAT S	Political Feasibility	Economic Feasibility	Legal/political Feasibility	Social Feasibility	Organisational Ability	Total Score	Rank	
Mining	1	1	1	3	1	7	C	
Fire	3	2	2	2	3	12	A	
Tourism	2	3	3	1	2	11	B	

According to these rankings, Mining emerges as the biggest threat based on scale, intensity and urgency, while Fire emerges as the most feasible in terms of tackling it according to the feasibility criteria. This, in itself is an indication of how difficult management decisions are if all the criteria are taken into consideration. The TRA will provide good fodder for discussion. Discussion can also focus on differing rankings that may have come from exercises done with different sets of people, e.g. local communities may rank threats in a different manner than outside scientists or wildlifers. A process of reconciling different rankings, based on dialogue and an understanding of the evidence/biases that each group has used to do the ranking, would then also have to follow.

This multiple ranking, and efforts to reconcile them, should be done both before and after measures are taken to tackle the threats, in which case it would be possible to understand if there is a reduction or increase in overall threats, or a change in the 'importance' of each threat. Though a reduction in threats or the importance of each threat is not necessarily an indication of improvement in the situation (i.e. it is not necessary that biodiversity status will improve), this could be one of the critical factors in determining the change in status of biodiversity, and the success or failure of a conservation initiative.

Recommended Reading Material

Margoluis,R. and N.Salafsky. 1998. *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects*. Island Press, Washington, D.C.