

Appendix 5. Trade-off rules

1. **Maximum net gains** (Gibson *et al.*, 2005; Pope *et al.*, 2004)

Seek to attain mutually reinforcing, cumulative and lasting contributions that bring the most positive overall results in sustainability (including ecological, social and economic aspects)

2. **Burden of argument on trade-off proponent** (Morrison-Saunders, 2011; Gibson *et al.*, 2005)

Burden of proof rests on the proponent of the trade-off who has to prove that the trade-off is unavoidable and acceptable

3. **Avoidance of significant adverse effects** (Gibson *et al.*, 2005; Gibson, 2006)

No trade-off that causes significant adverse effects on any sustainability areas (ecological, social, economic) can be justified unless the alternative is worse

4. **Protection of the future** (Gibson *et al.*, 2005; Morrison-Saunders., 2011)

No displacement of significant adverse effects from the present to the future can be justified unless the alternative is of an even more significant adverse effect

5. **Open Process** (IAIA & IEA 1999; Morrison-Saunders., 2011; Gibson *et al.*, 2005)

Proposed trade-offs must be addressed through open involvement of all stakeholders, particularly those who will be affected by the trade-offs

The trade-off rules mentioned above are retrieved from researches on sustainability and environmental assessments (Gibson *et al.*, 2005; Gibson, 2006; IAIA & IEA 1999; Morrison-Saunders., 2011; Pope *et al.*, 2004). Yet, the trade-off rules have the potential to be applied in situations where people need to resolve conflicts and enhance the resilience of social-ecological systems. The application of trade-off rules will differ in various circumstances and contexts. It is important to recognize the specific circumstances and priorities. In some cases, the greatest threat is the exploitation of natural resources while in another case; a greater concern is corruption and poverty (Gibson *et al.*, 2005). Hence, the application of trade-off rules “will not always lead to the same conclusions about what trade-offs should be accepted or rejected” (Gibson *et al.*, 2005: 138). For instance, it will be acceptable to allow job losses to reduce resource exploitation, but it will not be acceptable if the most poor will lose their jobs (Gibson *et al.*, 2005). Therefore, the application of trade-off rules must attune to local circumstances and contexts.