



Strategic Environmental  
Assessment of the Tourism  
Sector in Cambodia

MITIGATION MEASURES  
AND MANAGEMENT PLANS

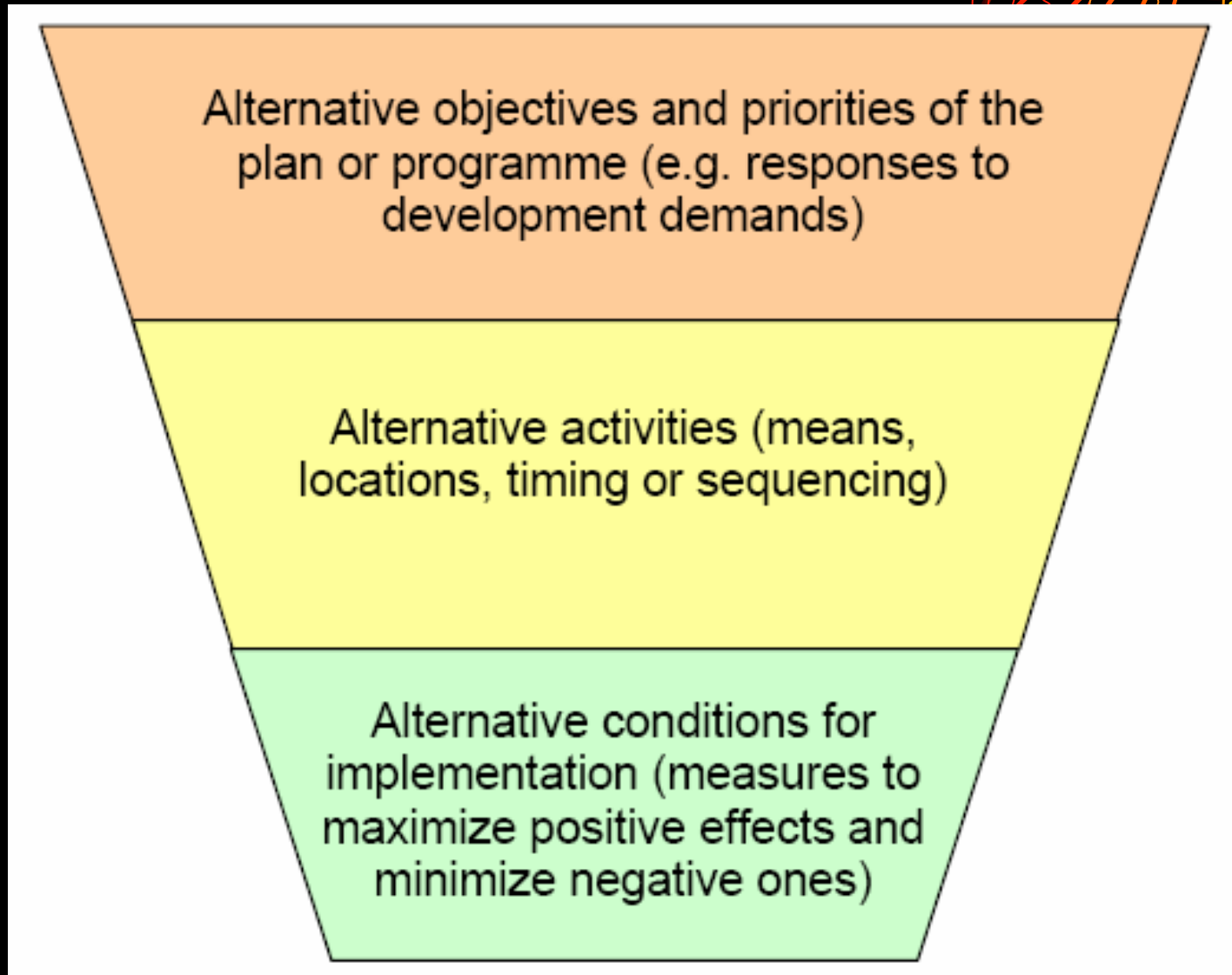
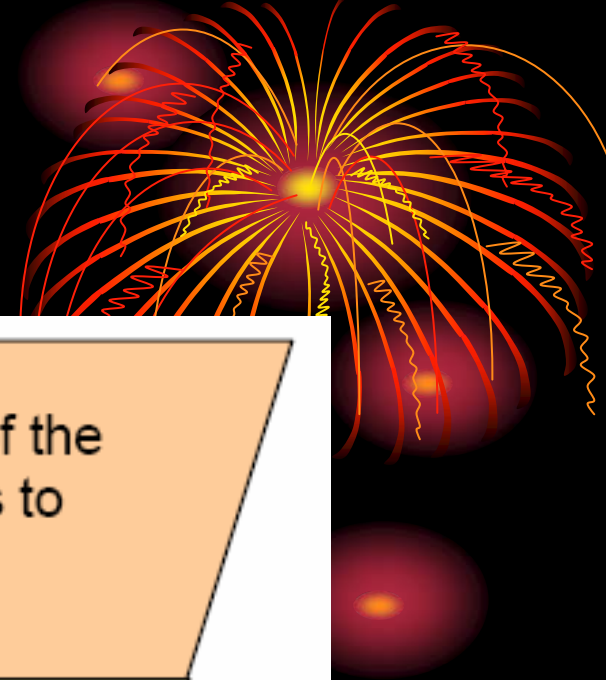
Dr. Peter King  
October 2007

# MITIGATION MEASURES



- Mitigation measures are any planned response to overcome or reduce the adverse environmental impacts of the proposed policy/plan/program (PPP) or enhance the positive impacts
- Typically mitigation measures are expected to make the PPP more acceptable. If not possible, then the PPP should be reconsidered.

Note that mitigation measures may also be identified in the process of examining alternatives.....



# MANAGEMENT PLAN



- A Management Plan is expected to contain all of the proposed measures to deal with the environmental consequences of the proposed PPP.
- The Management Plan will also include the proposed the mitigation measures and a monitoring plan.
- Costs and responsibilities for implementing the plan are included.

# EXAMPLES OF MITIGATION MEASURES



- New legislation or regulations
- Standards or limits to be applied
- Infrastructure design guidelines
- Improved waste management
- Training or certification of staff
- Performance bonds
- Insurance/indemnity agreement
- Compensation for affected parties

# Examples from Case Studies



- UNECE Protocol

7. Measures to prevent, reduce or mitigate any significant adverse effects on the environment, including health, which may result from the implementation of the plan or programme.

This is to ensure that the report discusses how the significant adverse effects it describes are to be mitigated. The measures envisaged are not specified further and they could be measures envisaged or prescribed in the plan or programme or measures discussed in the report. It should be remembered that mitigation measures may themselves have adverse environmental effects and these should be recognized. There exist methods of mitigation in connection with EIAs that could also be helpful for assessments of plans and programmes.

# Examples from Case Studies (cont.)



## UNEP Guidelines

1. Preventing or minimizing impacts before they occur
2. Reducing or eliminating an impact over time
3. Rectifying an impact by repairing, restoring, or rehabilitating the environment
4. Compensating for an impact with equivalent replacement of resources
5. Optimizing beneficial effects through additional action

# Examples from Case Studies (cont.)



## Belarus Tourism Development

1. Build local wastewater treatment plants
2. Develop water protection actions for new gas stations
3. Develop an emergency prevention and management plan
4. Add key areas for eco-tourism development
5. Link historical and cultural sites restoration to tourism development
6. Conserve natural features of canal reconstruction

# Examples from Case Studies (cont.)



## Resort Development SEA

1. Sprinkling haul roads to reduce dust
2. Creating a sod farm to provide grass cover
3. Monitoring coastal water quality to identify waste problems
4. Monitoring of groundwater quality
5. Allocate land to contain surface runoff
6. Temporary storage of solid wastes on-site
7. Round up of snakes and other wildlife and release into forest areas
8. Include a buffer zone for shoreline structures.



# SOUTHERN COASTAL ZONE



How to mitigate:

- Linear development along the beach front
- Restricting access to local people
- Waste discharged to coastal waters
- Solid waste (including broken glass and needles) on the beach
- Horse riding (and associated manure) on the beach
- Zoning for swimmers and ski-jets
- Conflict with urban and industrial development